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- 21 PG Course: Essentials of Robotic Surgery
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- 22 PG Course: MIS Colorectal Surgery
- 23 Social Media for Surgeons
- 24 The Sixth Annual SAGES Foundation Awards Luncheon
- 29 Upcoming Changes with Medical Reimbursement
- 29 Hands On: Transanal Colorectal and Single Port Surgery
- 30 Endoscopic and Surgical Alternatives for Benign Pancreatic Disease
- 30 SAGES Top 21 Videos
- SAGES/SSAT Minimally Invasive Hepatobiliary & Pancreatic Surgery Next Frontier

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- 35 Resident/Fellow Scientific Session
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- 36 Posters of Distinction
- 37 Surgery in Space
- 38 Video Session: Best of NOTES from around the World
- Stories of SAGES Heroes
- 39 PG Course: Per Oral Endoscopic Myotomy (POEM)
- 40 PG Laparoscopic Ventral Hernia with Endoscopic Component Separation
- 41 Education and Training in Crisis
- 41 SAGES/IPEG Joint Panel "My Way is Better Than Yours"
- 42 Educators Lunch Milestones in MIS
- 42 Hands-On: Per Oral Endoscopic Myotomy (POEM)
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- 44 SAGES/ALACE Innovations in Obesity and Metabolic Surgery
- 46 SAGES/CAGS Therapeutic Endoscopy Panel
- 46 Video Session: Oops Now What?
- 47 Industry Education Events
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- 48 FSF, FC and SAGES Reception

49 FRIDAY, MARCH 9, 2012: SCIENTIFIC SESSION

- 51 SAGES/IPEG Great Debates in Pediatric Bariatric Surgery
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- 54 Simulation: New Paradigm for Competency
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- 56 Karl Storz Keynote Lecture
- 58 Fellowship Council Luncheon
- 59 Do You Know More Than Your Fellow?
- 60 Emerging Technology Session
- 61 Inquinal Hernias: Treating the Other Guy's Complications
- 63 Solid Organ: MIS Endocrine and Spleen
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66 SATURDAY, MARCH 10, 2012: SCIENTIFIC SESSION

- 70 Champions for New Operations Lessons Learned from Change Agents
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Surgical Spring Week

Location

The San Diego Convention Center

111 W. Harbor Drive, San Diego, CA 92101

Hosted By

Society of American Gastrointestinal and Endoscopic Surgeons (SAGES)

11300 W. Olympic Blvd., Suite 600, Los Angeles, CA 90064 Phone: 310-437-0544 Fax: 310-437-0585

Website: www.sages.org

Email: sagesweb@sages.org On-Site Office: 619-525-6325

SAGES Registration Hours

Tuesday, March 6, 2012	12:00 PM - 8:00 PM
Wednesday, March 7, 2012	6:30 AM - 6:00 PM
Thursday, March 8, 2012	6:30 AM - 5:30 PM
Friday, March 9, 2012	6:30 AM - 5:30 PM
Saturday, March 10, 2012	7:00 AM - 2:00 PM

Exhibit Dates and Times

Wednesday, March 7, 2012	
SAGES Opening Reception	5:30 PM - 7:30 PM
Thursday, March 8, 2012	9:30 AM - 3:30 PM
Friday, March 9, 2012	9:30 AM - 3:30 PM
Saturday, March 10, 2012	10:00 AM - 1:00 PM
Free Lunch for All Attendees	12:00 PM - 1:00 PM

SAGES exhibits will take place at the San Diego Convention Center in Exhibit Hall C.

SAGES 2012 Meeting Corporate Supporters

DIAMOND DONORS

COVIDIEN ETHICON ENDO-SURGERY, INC.

PLATINUM DONORS

KARL STORZ ENDOSCOPY **OLYMPUS AMERICA, INC.** STRYKER ENDOSCOPY

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SAGES HELPS

Humanity, Education, Leadership, Perspective, Support

Again this year SAGES will be involved in several projects to support the community in which we host our annual meeting. This is an extraordinary way for registrants and guests to help repair the world one tiny step at a time.

Bone Marrow Testing - An easy way to save a life

Thursday, March 8, 10am - 4pm, Room 7AB

The Match Registry will be on site to collect entries to the national bone marrow registry. This important database has helped spare the lives of thousands of patients suffering from blood and bone marrow related illnesses. Please take advantage of their presence and stop by room 7AB of the Convention Center. **No appointments necessary and it only takes a few minutes!**

Operation Homefront Baby Shower

Thursday, March 8, 12:30 - 3:30pm, Room 8

There is a lot of talk about supporting our men and women in uniform. SAGES is doing much more than talking this year. We've partnered with the Naval base in San Diego to throw a baby shower for 10 expectant military moms. Please join us to give 10 military wives a gigantic baby shower. You may still sign up until Wednesday 4PM at the SAGES membership booth. The fee for lunch is \$45.00 plus any donation you want to make to the shower gifts.

Luncheon & Clothing Drive for Battered Women

Friday, March 9, 12-3pm

Undisclosed location and transportation provided. It is about one hour drive each way to the shelter. Imagine the unimaginable. Abused women and children don't have to imagine it. They live it very day. SAGES members and guests will brighten the lives of more than two dozen women and children at a local shelter for survivors of domestic violence by sharing a meal and bringing them clothing and toys. The SAGES staff has handled the purchases. Please join us for the visit to their shelter and for lunch. You may still sign up until Thursday at 3PM at the SAGES membership booth. If you already signed up, meet us at the convention center exhibit hall B/C entrance at 11:00 AM. Lunch: \$35.00 plus a contibution to the clothing and toys we are bringing.

Visit a Vet

Saturday, March 10, 10am - 12pm

End your stay in San Diego with a visit to the local Veterans' Hospital. Our sick or injured service men would love to sit with you! Opportunities to show your appreciation include singing a song, reading a book, or just listening to their stories. If you have already signed up, meet us at the Convention Center Exhibit Hall B/C entrance at 9:30. You may still sign up until Friday at 4PM at the SAGES membership booth. No fee. Just bring a smile.



SAGES Recognition of Excellence Award

Log onto SAGESPAGES during the Annual Meeting to learn To Whom, From Whom and Why. SAGES will announce recipients of the 2012 SAGES Recognition of Excellence Coin daily.

www.sages.org/sagespages



Save the Date!

SAGES Scientific Session & Postgraduate Course April 17 - 20, 2013, Baltimore, MD

SAGES Scientific Session & Postgraduate Course April 2 - 5, 2014, Salt Lake City, UT

SAGES Scientific Session & Postgraduate Course
April 15 - 18, 2015, Gaylord Opryland Hotel, Nashville, TN

General Information

Speaker Prep Hours Room 10

3/6/12 8:00am - 5:00pm 3/9/12 5:30am - 5:30pm 3/7/12 5:30am - 5:00pm 3/10/12 5:00am - 4:00pm

3/8/12 5:30am - 5:30pm

A Gentle Reminder About Safety/Security:

We have taken every precaution to assure the safety and security of our guests and their possessions. However, we urge you to be aware and take simple steps to guard your possessions.

- Do not leave your purse or briefcase unattended.
- Do not leave your iPad, laptop, phone or other electronic devices on the floor or out of your sight in a darkened room
- Be aware of your surroundings, in the convention center, in and around the downtown San Diego area.

Have a safe & secure meeting!

Coming in 2013: SAGES Childcare Services Available!

Full time and age appropriate child care for ages 6 months through 17 years will be provided for a small fee at the Headquarters Hotel for SAGES 2013 Meeting in Baltimore. More details will be available in Fall, 2012. We encourage parents to bring their children with them to the meeting!

Childcare Services in San Diego:

Destination Sitters

(858)-336-1999 http://www.destinationsitters.com/info@destinationsitters.com

The fee charged for one or two children from the same family will be \$20.00/hour with a four-hour minimum. \$2.00 per hour extra for each additional child from the immediate family. \$4.00 per hour extra for each additional child from separate families. \$2.00 per hour additional after midnight to 8 AM. \$2.00 per hour additional for more than 8 hours. SITTER must be paid for a minimum of four hours per sit. Payment by credit card or cash.

Marion's Childcare

(619) 303-4379 http://hotelchildcare.com/ amy@hotelchildcare.com

\$17.00 for 1-2 children in the same family. \$18.00 for 3-4 children in the same family. \$19.00 for combined families, up to 4 children (age restrictions may apply). There is a four hour minimum each time of service. \$1.00 per hour surcharge for North County locations. Client is responsible for any parking charges. Payment is in cash, directly to the caregiver.

Your Opinion Counts!

When you see folks in *pink shirts* with iPads, please take one minute (literally) to answer their questions.

They are working for SAGES to help us learn what you want from the SAGES meeting and the Society.

Please participate because...YOUR OPINION COUNTS!

SAGES Mission Statement

"Our mission is to provide leadership in surgery, particularly gastrointestinal and endoscopic surgery, to optimize patient care through education, research and innovation."

- SAGES has evolved over the last 30 years into a leading society for gastrointestinal surgery, endoscopy and minimal invasive technology.
- Not only does SAGES provide leadership in clinical care, but it also helps surgeons optimize patient care by providing direction for cutting edge technology, basic and translational science, and educational opportunities.
- SAGES represents leadership in the surgical world for gastrointestinal disease.
- SAGES is the society to improve your clinical skills.





SAGES 2012 Schedule at a Glance

Program Chairs: Daniel B. Jones, MD, MS & Daniel J. Scott, MD

Time	Session	Location
Wednesday, N	March 7, 2012	
7:30 AM - 9:30 AM	SAGES Panel: Foregut: Dysmotility from Mouth to Anus	Room 6D
7:30 AM - 11:30 AM	SAGES Half-Day Postgraduate Course: Fundamentals of Endoscopic Surgery (FES)	Room 6F
7:30 AM - 11:30 AM	SAGES Half-Day Postgraduate Course: Essentials of Robotic Surgery	Room 6B
7:30 AM - 11:30 AM	SAGES Half-Day Postgraduate Course: MIS Colorectal Surgery	Room 6A
9:30 AM - 11:30 AM	SAGES Symposium: Social Media for Surgeons	Room 6D
11:30 AM - 1:00 PM	SAGES Foundation Awards Luncheon	Room 11AB
1:00 PM - 3:00 PM	SAGES Symposium: Endoscopic and Surgical Alternatives for Benign Pancreatic Disease	Room 6F
1:00 PM - 3:00 PM	SAGES Symposium: Upcoming Changes with Medical Reimbursements	Room 6A
1:00 PM - 5:30 PM	SAGES Half-Day Hands-On Course: Robotic Surgery	UCSD
1:00 PM - 5:30 PM	SAGES Half-Day Hands-On Course: Transanal Colorectal and Single Port Surgery	UCSD
1:30 PM - 5:30 PM	SAGES Session: SAGES Top 21 Videos	Room 6B
3:00 PM - 5:30 PM	SAGES/SSAT Symposium: Minimally Invasive Hepatobiliary and Pancreatic Surgery	Room 6A
5:30 PM - 7:30 PM	Welcome Reception	Exhibit Hall C
Thursday, Ma	rch 8, 2012	
7:30 AM - 12:00 PM	SAGES Half-Day Postgraduate Course: Metabolic Surgery and Cure of Diabetes	Room 6A
7:30 AM - 10:00 AM	SAGES Resident/Fellow Scientific Session	Room 6B
7:30 AM - 8:30 AM	SAGES Session: Posters of Distinction	Room 4
7:30 AM - 8:30 AM	SAGES Concurrent Session SS01: Basic Science	Room 6E
7:30 AM - 8:30 AM	SAGES Concurrent Session SS02: Instrumentation/Ergonomics	Room 6F
7:30 AM - 8:30 AM	SAGES Concurrent Session SS03: HPB (Hepatobiliary and Pancreas)	Room 6D
8:30 AM - 9:30 AM	SAGES Concurrent Session SS04: Quality Outcomes	Room 4
8:30 AM - 10:00 AM	SAGES Panel: Surgery in Space	Room 6E
8:30 AM - 9:30 AM	SAGES Panel: Stories of SAGES Heroes	Room 6D
8:30 AM - 10:15 AM	SAGES Video Session: Best of NOTES® from Around the World	Room 6F
9:30 AM - 10:30 AM	SAGES Concurrent Session SS05: Education	Room 4
9:30 AM - 3:30 PM	Exhibits, Poster Session, Learning Center Open	Exhibit Hall C
10:00 AM - 12:00 PM	SAGES Postgraduate Course: POEM	Room 6B
10:00 AM - 12:00 PM	SAGES Postgraduate Course: Lap Ventral Hernia with Endoscopic Component Separation	Room 6D
10:00 AM - 12:00 PM	SAGES Panel: Education and Training in Crisis	Room 6E
10:15 AM - 12:00 PM	SAGES Concurrent Session SS06: NOTES	Room 6F
10:30 AM - 12:00 PM	SAGES/IPEG Panel: "My Way is Better Than Yours"	Room 6C
12:00 PM - 1:30 PM	Educator's Lunch – Milestones in MIS	Room 11AB
1:30 PM - 5:30 PM	SAGES Half-Day Hands-On Course: POEM	UCSD
1:30 PM - 5:30 PM	SAGES Half-Day Hands-On Course: Lap Ventral Hernia with Endoscopic Component Separation	UCSD
1:30 PM - 5:30 PM	SAGES Half-Day Postgraduate Course: Fundamental Use of Surgical Energy (FUSE)	Room 6F
1:30 PM - 3:30 PM	SAGES/ALACE Session: Innovations in Obesity Surgery	Room 6D
1:30 PM - 3:30 PM	SAGES Concurrent Session SS07: Solid Organ	Room 6B
1:30 PM - 3:30 PM	SAGES Concurrent Session SS08: Video – Obesity Surgery	Room 6E
3:30 PM - 5:30 PM	SAGES/CAGS Panel: Therapeutic Endoscopy	Room 6B
3:30 PM - 5:30 PM	SAGES Video Session: Oops – Now What?	Room 6E
3:30 PM - 5:30 PM	SAGES Concurrent Session SS09: Obesity Surgery	Room 6D
	Industry Education Evening Evening Events – These events are not accredited for CME by SAGES.	
5:30 PM - 7:30 PM	Cadence Pharmaceuticals. – "OFIRMEV ® (acetaminophen) Injection:	Room 6D
	A Non-Opioid, Non-NSAID Analgesic for Perioperative Pain Management"	
5:30 PM - 7:30 PM	Davol Inc., a BARD Company. – "Advanced Laparoscopic Hernia Repair Techniques"	Room 2
5:30 PM - 7:30 PM	Intuitive Surgical - "daVinci® Single-Site™ Cholecystectomy and daVinci Multi-port Applications"	Room 4
5:30 PM - 7:30 PM	Stryker Endoscopy - "Needlescopic Approaches in General Surgery"	Room 6C

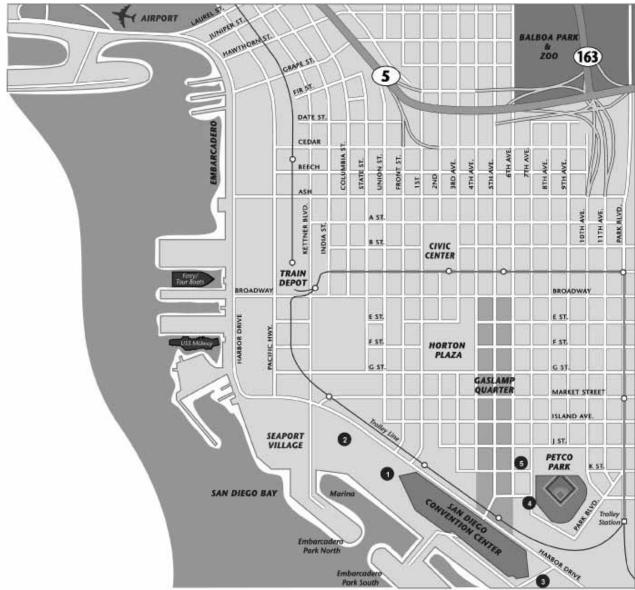
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SAGES 2012 Schedule at a Glance

Friday, March	9. 2012	
7:30 AM - 8:30 AM	SAGES/IPEG Panel: Great Debates in Pediatric Bariatric Surgery	Room 6C
7:30 AM - 8:30 AM	SAGES/ASCRS Panel: Current Controversies during Colorectal Surgery	Room 6AB
7:30 AM - 8:30 AM	SAGES Panel: Simulation: New Paradigm for Competency	Room 6F
7:30 AM - 8:30 AM	SAGES Concurrent Session SS10: Novel Techniques & Operations	Room 6E
7:30 AM - 8:30 AM	SAGES Concurrent Session SS11: Videos – Hernia	Room 4
8:30 AM - 10:00 AM	SAGES Plenary Session: SS12: Plenary 1	Room 6AB
9:30 AM - 3:30 PM	Exhibits, Poster Session, Learning Center Open	Exhibit Hall C
10:00 AM - 10:45 AM	SAGES Presidential Address: "You Must Be the Change You Wish to See in the World" Steven D. Schwaitzberg, MD	Room 6AB
10:45 AM - 11:30 AM	SAGES Karl Storz Lecture: "The Collaboration Paradox" John Abele	Room 6AB
11:30 AM - 12:30 PM	SAGES Concurrent Session SS13: Simulation	Room 6F
11:30 AM - 12:30 PM	SAGES Concurrent Session SS14: Therapeutic Endoscopy	Room 6AB
11:30 AM - 12:30 PM	SAGES Concurrent Session SS15: Hernia	Room 6D
11:30 AM - 12:30 PM	SAGES Concurrent Session SS16: Single Incision	Room 6E
11:30 AM - 12:30 PM	SAGES Concurrent Session SS17: Videos – Colon	Room 4
12:30 PM - 2:00 PM	Fellowship Council Luncheon	Room 11AB
1:30 PM - 3:00 PM	SAGES Panel: Do You Know More Than Your Fellow?	Room 6D
1:30 PM - 3:30 PM	SAGES Session: Emerging Technology	Room 6E
1:30 PM - 3:30 PM	SAGES Session: Inguinal Hernia: Treating the Other Guy's Complications	Room 6AB
1:30 PM - 3:30 PM	SAGES Concurrent Session SS18: Foregut	Room 6F
1:30 PM - 3:30 PM	SAGES Concurrent Session SS19: Videos – HPB (Hepatobiliary and Pancreas)	Room 4
3:30 PM - 5:30 PM	SAGES Debate: Robotic Surgery: Hope or Hype?	Room 6AB
3:30 PM - 5:30 PM	SAGES Panel: Solid Organ: MIS Endocrine and Spleen	Room 6D
3:30 PM - 5:30 PM	SAGES Session: Advanced Open and Laparoscopic Ventral Hernia Repair	Room 6E
3:30 PM - 5:30 PM	SAGES Concurrent Session SS20: Colorectal	Room 6F
3:30 PM - 5:30 PM	SAGES Concurrent Session SS21: Videos – Solid Organ / Foregut	Room 4
6:00 PM - 7:00 PM	Meet the Leadership Reception for Residents, Fellows & New Members	Marriot Marquis
7:30 PM - 11:00 PM	SAGES/IPEG Gala – An Evening on the Historic USS Midway Aircraft Carrier Museum	USS Midway, Coronado Terrace
Saturday, Mar	ch 10, 2012	
8:00 AM - 9:30 AM	SAGES Panel: Champions for New Operations – Lessons Learned from Change Agents	Room 6D
8:00 AM - 9:30 AM	SAGES Panel: SAGES Response to Healthcare Reform	Room 6AB
8:00 AM - 9:30 AM	SAGES Symposium: Starting Your Career	Room 6E
8:00 AM - 10:00 AM	SAGES Mini Med School	Room 4
8:00 AM - 9:30 AM	SAGES Concurrent Session SS22: Robotics	Room 6F
9:30 AM - 11:00 AM	SAGES Plenary Session SS23: Plenary 2	Room 6AB
10:00 AM - 1:00 PM	Exhibits, Poster Session, Learning Center Open	Exhibit Hall C
11:00 AM - 11:45 AM	SAGES Gerald Marks Lecture: "The Changing Role of American Surgical Leadership" Michael J. Zinner, MD	Room 6AB
11:00 AM - 11:45 AM 11:45 AM - 12:30 PM		Room 6AB Room 6D
	Michael J. Zinner, MD	
11:45 AM - 12:30 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend!	Room 6D
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees	Room 6D Exhibit Hall
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM 1:00 PM - 2:30 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications	Room 6D Exhibit Hall Room 6AB
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications SAGES Panel: MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments	Room 6D Exhibit Hall Room 6AB Room 6D
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications SAGES Panel: MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments SAGES Panel: Innovation in the Era of COI and Transparency	Room 6D Exhibit Hall Room 6AB Room 6D Room 6F
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 1:00 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications SAGES Panel: MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments SAGES Panel: Innovation in the Era of COI and Transparency Mini Med School Interactive Experience	Room 6D Exhibit Hall Room 6AB Room 6D Room 6F Room 4
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 1:00 PM 1:00 PM - 1:00 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications SAGES Panel: MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments SAGES Panel: Innovation in the Era of COI and Transparency Mini Med School Interactive Experience SAGES Concurrent Session SS24: Videos – Robotics	Room 6D Exhibit Hall Room 6AB Room 6D Room 6F Room 4 Room 6E
11:45 AM - 12:30 PM 12:00 PM - 1:00 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 2:30 PM 1:00 PM - 1:00 PM 1:00 PM - 2:30 PM 1:00 PM - 4:00 PM	Michael J. Zinner, MD SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend! FREE LUNCH for all attendees SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications SAGES Panel: MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments SAGES Panel: Innovation in the Era of COI and Transparency Mini Med School Interactive Experience SAGES Concurrent Session SS24: Videos – Robotics SAGES Session: TeleMentoring and Remote Battlefield Surgery	Room 6D Exhibit Hall Room 6AB Room 6D Room 6F Room 4 Room 6E Room 6AB



SAGES Hotel Walking Map



Hotel Walking time (in minutes) from SDCC

Downtown San Diego

San Diego Marriott Marquis & Marina (SAGES Headquarter Hotel)

Manchester Grand Hyatt San Diego (IPEG Headquarter Hotel)

Hitton San Diego Bayfront Hotel

Omni San Diego Hotel

San Diego Marriott Gaslamp Quarter

San Diego Marriott Gaslamp Quarter



SAGES Policy on Conflict of Interest

A. Identifying Conflicts of Interest

SAGES has implemented a five-tiered approach towards identifying potential conflicts of interest.

- 1. Members of committees involved in the planning of CME activities, including the Board of Governors, must provide a financial disclosure. These disclosures are sent to the committee in advance of each committee meeting. Attendees are reminded about the disclosure policy at each committee meeting, and any committee member with a conflict is asked to recuse him or herself from the discussion of any CME activities.
- 2. Course Directors for CME activities must provide their financial disclosures along with their suggested course outline and faculty. This information is forwarded to the Conflict of Interest Task Force, who then determines whether or not a potential conflict exists and makes suggested edits.
- 3. Invited faculty for CME activities must provide their financial disclosures upon invitation to serve as faculty.
- 4. For abstract submissions for the scientific session, the presenting and senior authors must provide disclosures. Abstracts are peer reviewed in a blinded fashion by multiple reviewers and are selected for presentation based on scientific merit. All disclosures are provided to the Program Committee during the "Put-The-Program-Together" meeting at which abstracts are selected for presentation.
- 5. All speakers at SAGES CME activities must display a list of financial disclosures on the first slide of their presentation.

B. Managing Potential Conflicts of Interest

SAGES has implemented several mechanisms to manage conflicts of interest prior to an educational activity.

- 1. Self-management, such as the committee member recusing him or herself from discussion of CME activities.
- The SAGES Conflict of Interest Task force reviews all Course Director's disclosures, proposed course outlines and faculty lists. The Conflict of Interest Task Force will make edits to the course outline or faculty list if necessary.
- 3. The SAGES disclosure form requires faculty to provide management suggestions if there is a relationship with a commercial entity. This information is forwarded to the Course Director, who is responsible for determining whether or not a conflict exists and if so, how to manage this conflict.
- 4. If a conflict is determined, then a letter is sent to the faculty member, requiring them to adhere to the management technique or else recuse him or herself from the presentation.
- 5. During the session, the Course Director observes the presentations and makes note of commercial bias. If any is perceived, this is immediately reported to the staff.
- 6. All attendees of CME activities are requested to make note of perceived commercial bias in activity evaluations and bias report forms. The Conflict of Interest Task Force and/or the CME Committee will investigate substantive concerns.

SAGES 2012 Meeting Commercial Bias Reporting Form



You are encouraged to ...

- 1) Document (on this form) any concerns about commercially-biased presentations/ materials during educational sessions, and
- 2) Immediately take your completed form to the SAGES staff at Meeting Registration at the San Diego Convention Center or fax it to (310) 437-0585.

Your feedback will be shared with a member of the Conflict of Interest Task Force, Program and/or Continuing Education Committee, who will make the faculty and course chair(s) aware of these concerns.

Commercial Bias

The Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) has an obligation to the medical profession and society as a whole to elucidate bias in order to protect the objectivity, scientific integrity and quality of its continuing medical education (CME) programs and to provide CME in an ethical and impartial manner. Bias is defined when a preference or predisposition exist toward a particular perspective or result that interferes with an individual's ability to be impartial, unprejudiced or objective in order to further personal gain and disregard for data. Particular preferences may be favorable or unfavorable. When bias exists, impartial judgment and neutrality may be compromised. Bias may be minimized through a declaration of conflict of interest or commercial interests, an evaluation of peer-reviewed evidence-based medicine with an integration of clinical expertise and/or experience, and an assertion of published sources for evidence-based reporting. SAGES requires presenters at all educational events to specifically avoid introducing bias, commercial or otherwise, into their presentations.

Presentation:	Commercial Blas by:	Promotion via:
(eg session name, etc)	(ie faculty name, company rep)	(eg handouts, slides, what they said, actions
Commercial Bias about:		
(check all that apply)		
Patient treatment/managen	nent recommendations weren't based on strongest	levels of evidence available.
Emphasis was placed on one safety and/or efficacy.	e drug or device versus competing therapies, and no	o evidence was provided to support its increased
Trade/brand names were us	ed.	
Trade names versus generic	s were used for all therapies discussed.	
The activity was funded by i	ndustry and I perceived a slant toward the grantors.	
The faculty member had a d	isclosure and I perceived a slant toward the compar	nies with which he/she has relationships.
Other (please describe):		
Dlagga yatı	www.this.form.to.CACEC.Mosting.Docistrati	on oxforto (210) 427 0505

Please return this form to SAGES Meeting Registration or fax to (310) 437-0585.



Baltimore is eagerly awaiting the arrival of SAGES, Society of American Gastrointestinal and Endoscopic Surgeons, April 17-20, 2013! Discover our renowned attractions, great restaurants, historic neighborhoods, and our world-famous Inner Harbor, all within walking distance from the Baltimore Convention Center. As we say in Baltimore, you're "two feet" away from everything.

Program Chairs: Fredrick Brody, MD & Santiago Horgan, MD





IPEG's 22nd Annual Congress for Endosurgery in Children



Held at the JW Marriott Beijing, China 83 Jian Guo Rd., China Central Place, Chaoyang District, Beijing 100025, PRC

WWW.IPEG.ORG

SAGES 2012 Final Program CME Hours

Accreditation:

The Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor Continuing Medical Education for physicians.

The Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) designates this live activity for a maximum of 36.25 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CME Worksheet for the 2012 SAGES Scientific Session & Postgraduate Course: This is NOT your CME credit form. Please use the worksheet to track the number of CME hours you attend for each activity. All attendees wishing to receive a CME certificate for activities attended at the 2012 SAGES Scientific Session & Postgraduate Course must first complete an on-line meeting evaluation. Attendees will be able to print and re-print their certificates throughout the year beginning two weeks after the conclusion of the meeting.

 During or after the meeting: Attendees will also have access to the on-line meeting evaluation and credit claim form via a link on the Annual Meeting website. Two weeks after the conclusion of the meeting, an email will notify attendees that the certificates are available to print.

Be sure to retain your Conference Badge as the ID number will be your online PIN number. An email will also be sent, reminding attendees of this service.

Self-Assessment CME Credit, Part 2 of the American Board of Surgery (ABS) Maintenance of Certification (MOC) Program: This activity has also been designated as Self-Assessment CME credit, applicable to Part 2 of the ABS MOC program. In order to claim Self-Assessment credit, attendees must participate in a post meeting assessment in July. For additional information on the ABS MOC program and it's requirements, visit the ABS website at: http://home. absurgery.org/

California Surgeons Please Note: some of the sessions at the SAGES meeting may not qualify for the purposes of maintaining your license by state law. You should be aware of your own state's requirements.

To fully comply with ACCME regulations, all SAGES Meeting attendees must have their badge scanned before entering any course or session room in order to receive CME credit for that event.

	Activity	Hours I Attended	Credits Available
	Foregut: Dysmotility from Mouth to Anus	Transfer.	Available 2
	PG Course: Fundamentals of Endoscopic Surgery		4
	PG Course: Essentials of Robotic Surgery		3.75
€	HO Course: Essentials of Robotic Surgery		4.5
ш	PG Course: MIS Colorectal Surgery		3.75
D	Social Media for Surgeons		2
ES	Upcoming Changes with Medical Reimbursement		2
O	HO Course: Transanal Colorectal and Single Port Surgery		4.5
AY	SAGES Top 21 Videos		4
	Endoscopic and Surgical Alternatives for Benign Pancreatic Disease		2
	SAGES/SSAT Minimally Invasive Hepatobiliary & Pancreatic Surgery-The Next Frontier		2.5
	SUBTOTAL		MAX – 8.5
	Resident/Fellow Scientific Session		2.5
	PG Course: Metabolic Surgery and Cure of Diabetes		4
	Posters of Distinction		0
	Surgery in Space		1.5
	Video Session: Best of NOTES from Around the World		1.75
	Stories of SAGES Heroes		1
	PG Course: Per Oral Endoscopic Myotomy (POEM)		2
F	HO Course: Per Oral Endoscopic Myotomy (POEM)		4
THURSD	PG Course: Laparoscopic Ventral Hernia with Endoscopic Component Separation		2
R	HO Course: Laparoscopic Ventral Hernia with		
SD	Endoscopic Component Separation and Simulation		4
АΥ	SAGES/IPEG Joint Panel: My Way is Better than Yours		1.5
	Education and Training in Crisis		2
	Educator's Lunch-Milestones in MIS		1.5
	Fundamental Use of Surgical Energy (FUSE)		3.75
	SAGES/ALACE Innovations in Obesity and Metabolic Surgery		2
	SAGES/CAGS Therapeutic Endoscopy Panel Video Session: Oops-Now What		2
	Scientific Sessions		8.75
	SUBTOTAL		MAX -10
	Scientific Sessions		6
	SAGES/IPEG Great Debates in Pediatric Bariatric Surgery		1
	Plenary Session 1		1.5
	SAGES/ASCRS Current Controversies during Colorectal Surgery		1
	Simulation: New Paradigm for Competency		1
T	Presidential Address: You Must be the Change You Wish to See in the World		0.75
꼰	Storz Lecture: The Collaboration Paradox		0.75
D	Fellowship Council Luncheon		1.5
A	Do You Know More Than Your Fellow?		1.5
	Emerging Technology Session		2
	Inguinal Hernias: Treating the Other Guy's Complications Solid Organ: MIS Endocrine and Spleen		2
	Robotic Surgery: Hope or Hype? Presidential Debate		2
	Advanced Open and Laparoscopic Ventral Hernia Repair		2
	SUBTOTAL		MAX – 10
	Scientific Sessions		4.5
	Plenary Session 2		1.5
	Champions for New Operations-Lessons Learned from Change Agents		1.5
	SAGES Response to Healthcare Reform		1.5
15	Starting Your Career		1.5
4	Marks Lecture: The Changing Role of American Surgical Leadership		0.75
Ū	SAGES/ASMBS Bariatric Surgery Nightmares: Prevention and Management of Complications		1.5
ATURDAY	MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments		1.5
D A	Innovation in the Era of Conflict of Interest and Transparency		1.5
4	TeleMentoring and Remote Battlefield Surgery		1.5
	SAGES/AORN MIS Patient Safety Checklist		1.5
	Mental Training		1.5
	SAGES Mini Medical School Boot Camp		0
	SUBTOTAL		MAX – 7.75
PS	15 Surgical Sprin	a Wool C	ACEC 2012

SAGES 2012 Meeting Leaders

Program Chairs:







Daniel J. Scott, MD, Co-Chair

2012 Course Chairs & Unit Coordinators

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Chair: Leena Khaitan, MD **Co-Chair:** Giselle G. Hamad, MD

Learning Center:

Chair: Shawn T. Tsuda, MD **Co-Chair:** Neal E. Seymour, MD

Posters:

Chair: Brian P. Jacob, MD **Co-Chair:** Denise W. Gee, MD

Video:

Chair: Archana Ramaswamy, MD **Co-Chair:** Simon Bergman, MD

Per-Oral Endoscopic Myotomy (POEM) Postgraduate & Hands-on Course:

Chair: Haruhiro Inoue, MD
Co-Chair: Brian J. Dunkin, MD

Co-Chair: Brian J. Dunkin, MD

Co-Chair: David Bryan Earle, MD

Lap. Ventral Hernia w/Endoscopic Components Separation Postgraduate & Hands-on Course:

Chair: Brent D. Matthews, MD Co-Chair: Carla Marie Pugh, MD, PhD Co-Chair: Michael J. Rosen, MD

Fundamentals of Endoscopic Surgery

(FES™) Postgraduate Course: Chair: John D. Mellinger, MD Co-Chair: Jeffrey M. Marks, MD Co-Chair: Thadeus L. Trus, MD

Essentials of Robotic Surgery Postgraduate Course:

Chair: Santiago Horgan, MD **Co-Chair:** Sherry M. Wren, MD

Essentials of Robotic Surgery Hands-on Course:

Chair: Bryan J. Sandler, MD **Co-Chair:** Jonathan E. Efron, MD **Co-Chair:** Robert D. Acton, MD

MIS Colorectal Surgery Postgraduate Course:

Chair: John H. Marks, MD **Co-Chair:** Peter W. Marcello, MD **Co-Chair:** Michael Stamos, MD

Transanal Colorectal and Single Port Surgery Hands-on Course:

Chair: Matthew R. Albert, MD Co-Chair: Wai Lun Law, MD Co-Chair: Deborah Nagle, MD

Metabolic Surgery and Cure of Diabetes Postgraduate Course:

Chair: Marina Kurian, MD Co-Chair: Bruce M. Wolfe, MD

Fundamental Use of Surgical Energy (FUSE™) Postgraduate Course:

Chair: Liane S. Feldman, MD **Co-Chair:** Pascal R. Fuchshuber, MD

Educator's Lunch:

Chair: Jo Buyske, MD

Co-Chair: James R. Korndorffer, MD **Co-Chair:** Kent R. Van Sickle, MD

Fellowship Council Lunch:

Chair: Bruce D. Schirmer, MD Co-Chair: Tim M. Farrell, MD

Unit - Technology into Meeting:

Chair: Dmitry Oleynikov, MD **Co-Chair:** Christopher M. Schlachta, MD

Unit - Ethics into Meeting:

Chair: Vivian E.M. Strong, MD **Co-Chair:** Michael A. Edwards, MD

Unit - Guidelines into Meeting:

Chair: William S. Richardson, MD **Co-Chair:** Robert D. Fanelli, MD

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FLS™ Testing Available! Wednesday, March 7 -Friday, March 9, 2012

Contact FLS@sages.org for more details or to schedule your test.

SAGES 2012 Meeting Leaders



SAGES Panel/Session/Symposium/Debates Chairs/Co-Chairs:

Robotic Surgery: Hope or Hype? Debate:

Chair: Manabu Yamamoto, MD **Co-Chair:** Richard M. Satava, MD

Mental Training Panel:

Chair: Raul J. Rosenthal, MD **Co-Chair:** Rajesh Aggarwal, MD

Champions for New Operations - Lessons Learned from Change Agents Panel:

Chair: Dennis L. Fowler, MD, MPH **Co-Chair:** George Berci, MD

Do You Know More Than Your Fellow? Panel:

Chair: Jeffrey L. Ponsky, MD **Co-Chair:** Daniel B. Jones, MD

Foregut: Dysmotility from Mouth to Anus Panel:

Chair: Brant K. Oelschlager, MD **Co-Chair:** C. Daniel Smith, MD

Innovation in the Era of Conflict of Interest and Transparency Panel:

Chair: Steven C. Stain, MD **Co-Chair:** Aurora Dawn Pryor, MD

MIS Evolution: Single Port, Minilaparoscopy & Deployable Instruments Panel:

Chair: Paul G. Curcillo II, MD **Co-Chair:** Sharona B. Ross, MD

SAGES Response to Healthcare Reform Panel:

Chair: Eli N. Lerner, MD

Co-Chair: Matthew M. Hutter, MD

SAGES/ALACE Innovations in Obesity and Metabolic Surgery Panel:

Chair: Horacio J. Asbun, MD

Co-Chair: Alonso Antonio Alvarado Alfrette, MD

Co-Chair: Ricardo Zorron, MD

SAGES/AORN MIS Patient Safety Checklist Panel:

Chair: Charlotte Guglielmi, BSN, RN, CNOR **Co-Chair:** L. Michael Brunt, MD

SAGES/ASCRS Current Controversies During Colorectal Surgery Panel:

Chair: James W. Fleshman, MD **Co-Chair:** Steven D. Wexner, MD

Frederick L. Greene, MD

SAGES/ASMBS Bariatric Surgery
Nightmares: Prevention and
Management of Complications Panel:

Chair: Natan Zundel, MD **Co-Chair:** Alfons Pomp, MD

SAGES/CAGS Therapeutic Endoscopy Panel:

Chair: James C. Ellsmere, MD **Co-Chair:** Lee L. Swanstrom, MD

SAGES/IPEG Joint Panel "My Way is Better Than Yours"

Chair: Todd Ponsky, MD **Co-Chair:** Jeffrey Ponsky, MD

SAGES/IPEG Great Debates in Pediatric Bariatric Surgery Panel:

Chair: Thomas H. Inge, MD **Co-Chair:** Janey S.A. Pratt, MD

Simulation: New Paradigm for Competency Panel:

Chair: Gerald M. Fried, MD **Co-Chair:** Ajit K. Sachdeva, MD

Solid Organ: MIS Endocrine & Spleen Panel:

Chair: John F. Sweeney, MD Co-Chair: Fiemu E. Nwariaku, MD

Stories of SAGES Heroes Panel: Chair: Tonia M. Young-Fadok, MD

Co-Chair: Thomas P. McIntyre, MD **Surgery in Space Panel:**

Chair: Carlos Godinez, MD
Co-Chair: Dan Buckland, PhD

Education & Training in Crisis Panel:

Chair: L. Michael Brunt, MD **Co-Chair:** John Hunter, MD

Advanced Open and Laparoscopic Ventral Hernia Repair Session:

Chair: Adrian E. Park, MD

Co-Chair: Jonathan F. Critchlow, MD

Inguinal Hernias: Treating the Other Guy's Complications Session:

Chair: Edward L. Felix, MD
Co-Chair: David C. Brooks, MD

TeleMentoring and Remote Battlefield Surgery Session:

Chair: Robert B. Lim, MD

Co-Chair: Ninh Tuan Nguyen, MD **Co-Chair:** E. Matt Ritter, MD

SAGES Top 21 Videos Session:

Chair: Kenric M. Murayama, MD **Co-Chair:** Benjamin E. Schneider, MD

Best of NOTES from Around the World Video Session:

Chair: David W. Rattner, MD **Co-Chair:** Antonello Forgione, MD

Emerging Technology Session:

Chair: Yoav Mintz, MD
Co-Chair: Yuman Fong, MD
Co-Chair: Giovanni Dapri, MD

Resident/Fellows Session:

Chair: Lora M. Melman, MD Co-Chair: Tung Tran, MD

Oops - Now What? Video Session:

Chair: Jeffrey W. Hazey, MD **Co-Chair:** Melina C. Vassiliou, MD

SAGES/SSAT Minimally Invasive Hepatobiliary & Pancreatic Surgery - The Next Frontier Symposium:

Chair: Horacio J. Asbun, MD **Co-Chair:** Mark P. Callery, MD

Social Media for Surgeons Symposium:

Chair: Gretchen Purcell Jackson, MD, PhD Co-Chair: Daniel M. Herron, MD Co-Chair: Allan E. Okrainec, MD

Starting Your Career Symposium:

Chair: Blair A. Jobe, MD **Co-Chair:** David R. Urbach, MD

Upcoming Changes with Medical Reimbursement Symposium:

Chair: Robert A. Andrews, MD **Co-Chair:** Michael D. Holzman, MD

Endoscopic and Surgical Alternatives for Benign Pancreatic Disease Symposium:

Chair: Robert Hawes, MD **Co-Chair:** Matthew Walsh, MD

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1992 - 1993

2002 - 2003

Bruce D. Schirmer, MD

Wednesday, March 7, 2012

Time	Session	Location
Wednesday, I	March 7, 2012	
7:30 AM - 9:30 AM	SAGES Panel: Foregut: Dysmotility from Mouth to Anus	Room 6D
7:30 AM - 11:30 AM	SAGES Half-Day Postgraduate Course: Fundamentals of Endoscopic Surgery (FES)	Room 6F
7:30 AM - 11:30 AM	SAGES Half-Day Postgraduate Course: Essentials of Robotic Surgery	Room 6B
7:30 AM - 11:30 AM	SAGES Half-Day Postgraduate Course: MIS Colorectal Surgery	Room 6A
9:30 AM - 11:30 AM	SAGES Symposium: Social Media for Surgeons	Room 6D
11:30 AM - 1:00 PM	SAGES Foundation Awards Luncheon	Room 11AB
1:00 PM - 3:00 PM	SAGES Symposium: Endoscopic and Surgical Alternatives for Benign Pancreatic Disease	Room 6F
1:00 PM - 3:00 PM	SAGES Symposium: Upcoming Changes with Medical Reimbursements	Room 6A
1:00 PM - 5:30 PM	SAGES Half-Day Hands-On Course: Robotic Surgery	UCSD
1:00 PM - 5:30 PM	SAGES Half-Day Hands-On Course: Transanal Colorectal and Single Port Surgery	UCSD
1:30 PM - 5:30 PM	SAGES Session: SAGES Top 21 Videos	Room 6B
3:00 PM - 5:30 PM	SAGES/SSAT Symposium: Minimally Invasive Hepatobiliary and Pancreatic Surgery	Room 6A
5:30 PM - 7:30 PM	Welcome Reception	Exhibit Hall C

Unique Features of the 2012 SAGES Meeting

- » California casual attire Leave your ties and button down shirts at home. Order a SAGES polo.
- » Learn essentials about Robot Surgery, POEM, Telementoring, Mental training, and Transanal Surgery
- » Free popcorn at Top 21, NOTES and Oops video sessions.
- » Allied Health Care Professionals should not miss SAGES AORN MIS Safety Checklist session.
- » SAGES Heroes recognized.
- » Learn more about volunteerism.
- » Heckle at the presidential debate on "Robotic Surgery; Hope or Hype"
- » Prepare for ABSITE and ABS exam at someone else's expense at "Do you know more than your fellow?"
- » Log on to SAGESPAGES to learn more about the 2012 SAGES Coin Award for Excellence.
- » Relax at the Exhibit Hall Oasis there will be informal gatherings for "Office Hours with the Experts", "Job Networking" and time to relax!
- » Bring the family. Mini med school for high school students; and Top Gun for Kids.
- » Gala and Sing-Off at the Midway Aircraft Carrier
- » Mobile Meeting Options: http:/thesagesmeeting.org/ Apps for iOS and Android
- » The entire 2012 meeting has been designated for Self-Assessment CME Credit, applicable to Part 2 of the American Board of Surgery (ABS) Maintenance of Certification (MOC) Program. In order to claim Self-Assessment credit, attendees must participate in a post meeting assessment. For additional information on the ABS MOC program and its requirements, visit the ABS website at: http://home.absurgery.org/default.jsp?exam-moc.



Wednesday, March 7, 2012

7:30 AM - 9:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Foregut: Dysmotility from Mouth to Anus

Chair: Brant Oelschlager, MD
Co-Chair: C. Daniel Smith, MD

Location: Room 6D

This course presents the major diagnostic and management options for patients with gastrointestinal motility disorders. Motility disorders are complex problems that surgeons are increasingly asked to manage, and occur frequently with our "functional" surgical interventions. The theme of this session is practical approaches to these patients.

Objectives

At the conclusion of this session, participants will be able to:

- Assess the methods of evaluation of constipation, prolapse and fecal incontinence
- · Analyze the surgical alternatives for the treatment of constipation, prolapse and fecal incontinence
- · Compare the results of surgical treatment of constipation, prolapse and fecal incontinence
- · The debate between partial and total fundoplication for GERD, especially in patients with esophageal motility disorders
- Medical and surgical management of esophageal and gastric motor dysfunction
- · Manage colonic motility disorders and pelvic floor dysfunction

SCHEDULE

Role of Motility in the surgical management of GERD and Hiatal Hernias: Nathaniel Soper, MD 7:30am What Do I Need to Know and Do? 7:45am **Management of Pre and Post Fundoplication Motility Complaints** Steven Bowers, MD The Importance of GI Motility in Bariatric Surgery 8:00am Saurabh Khandelwal, MD 8:15am **Surgical Treatment of Achalasia Updates** C. Daniel Smith, MD 8:30am **Evaluation and Treatment of Constipation and Pseudoobstruction** John Coller, MD **Evaluation and Surgical Treatment Pelvic Floor Disorders** Dana Sands, MD 8:45am (e.g. Rectal Prolapse, Fecal Incontinence) 9:00am Panel Discussion/Q&A

To send your questions and comments for this session · Text FORGUT and your message to 22333 · Tweet @poll FORGUT and your message · Go to http://pollev.com/SAGES6D during the session

7:30 AM - 11:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: Fundamentals of Endoscopic Surgery (FES™)

Chair: John D. Mellinger, MD

Co-Chair: Jeffrey Marks, MD & Ted Trus, MD

Location: Room 6F

Sam Finlayson MD

This course will review the rationale for emphasis on flexible endoscopy in current surgical training, the merits of different training models and tools, the scientific basis for simulation training and standardized curricula in skill development, credentialing realities facing the future surgeon, the science and development behind FES^{m} as a validated endoscopic cognitive and skill curriculum, and implementation strategies. A video demonstration of the skill modules in FES^{m} will be included.

Objectives

At the conclusion of this session, participants will be able to:

Surgical Workforce Issues and the Pural Surgeon

- Describe current expectations for graduating residents to be credentialed in endoscopy
- Detail several strategies for improving resident endoscopic experience
- Describe how FES™ might be incorporated into a residency curriculum to enhance the development of endoscopic knowledge and skill
- Explain how validated tools such as GAGES may help address proficiency issues in endoscopy

SCHEDULE

7:30am	Why Does the Public Need Surgical Endoscopists?	Sam Finiayson, MD
7:50am	Therapeutic Endoscopy and the Future of Surgical Practice: Why Is Endoscopy Important to the Surgeon of the Future?	Maurice Arregui, MD
8:10am	Credentialing Realities and Endoscopic Skill: Are We Training our Residents Adequately for the Real World?	Imran Hassan, MD
8:30am	Simulation and Skill Acquisition: What Can We Do in the Lab, and Why Should We?	Matt Ritter, MD
8:50am	Transference of Skill to the Clinical Setting: The Holy Grail, or Reality?	Melina Vassiliou, MD
9:10am	Lessons from FLS™: How Do We Implement Well?	Lee Sillin, MD
9:30am	Validating the Tool: FES™ Didactics, FES™ Skills, and GAGES	Brian Dunkin, MD
9:50am	Complimentary Tools for Building Endoscopic Skill and Training: STEP it up?	Ted Trus, MD
10:10am	Putting it all Together: A Program Director's Perspective	John Mellinger, MD
10:30am	Demonstrating the Tool: Video Demonstration of FES™ Skills Modules	Jeffrey Marks, MD
11:00am	Panel Discussion/Q&A	Panel

 $\textit{Text PGFES and your message to 22333} \cdot \textit{Tweet @poll PGFES and your message} \cdot \textit{Go to http://pollev.com/SAGES6F during the session}$

7:30 AM - 11:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: Essentials of Robotic Surgery

Chair: Santiago Horgan, MD Co-Chair: Sherry Wren, MD

Location: Room 6B

This session will illustrate how surgical robots are being used now in general surgery (bariatric, CRS, Foregut, HPB, and endocrine) and their future including single incision surgery.

Objectives:

At the conclusion of this session, participants will be able to:

- · Understand indications and benefits of Robotic Surgery in General Surgery
- · Describe specific robotic surgical techniques in foregut, bariatric surgery, and colorectal surgery
- Understand and describe future applications of Robotic Surgery

SCHEDULE

7:30am	"I Am Robot"	Santiago Horgan, MD
7:35am	Simulation, Training, and Guidelines	Lisa McLemore, MD
7:50am	Ethics: Doctor, How Many of These Procedures Have You Performed and Is the Robot Beneficial?	Mark Talamini, MD
8:05am	Single Site Robotic Surgery	Sherry Wren, MD
8:20am	Robotic Bariatric Surgery: By-pass and Sleeve Gastrectomy	Erik Wilson, MD
8:35am	Robotic Myotomy and Fundoplication	Subhashini Ayloo, MD
8:50am	Robotic Total Esophagectomy	Santiago Horgan, MD
9:05am	Robotic Gastrectomy	Woo Jin Hyung, MD
9:20am	Panel	
9:45am	Break	
10:00am	Robotic in Colorectal Surgery	Eduardo Parra-Davila, MD and Eric Haas, MD
10:30am	Robotic Pancreas Surgery	Piero Cristoforo Giulianotti, MD
10:45am	Robotic Thyroidectomy	Woung Young Chung, MD
11:00am	Future Robotic Systems	Mehran Anvari, MD
11:15am	Mini-robotic Systems	Dmitry Oleynikov, MD

To send your questions and comments for this session Text PGROBOT and your message to 22333 $\textit{Tweet @poll PGROBOT and your message} \cdot \textit{Go to http://pollev.com/SAGES6B during the session}$

SAGES acknowledges an educational grant in support of this course from Stryker Endoscopy

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Wednesday, March 7, 2012

1:00 PM - 5:30 PM *Separate Fee Applies

HANDS-ON COURSE: Essentials of Robotic Surgery

**Offsite Lab

Chair: Bryan Sandler, MD

Co-Chair: Jonathan Efron, MD & Robert Acton, MD **Location: UCSD**

This course will introduce safe robotic surgical practice to novice robotic surgeons, including general or colorectal surgeons, senior surgical residents, and MIS or colorectal fellows. Focus will include set-up and challenges unique to working with a robotic surgical system, and allow participants to translate this knowledge into a hands-on experience. This course will consist of a hands-on animate lab in which participants will receive instruction by experts in various robotic techniques and procedures, including foregut, bariatic, colorectal, hepato-biliary, solidorgan, and revisional surgery. Several inanimate stations will also be used to allow additional skill acquisition for simple (coordination) and complex (suturing) skills. Lab stations will have a 1:3 faculty to participant ratio.

Objectives:

At the conclusion of this session, participants will be able to:

- · Safely plan procedure and set-up the robotic surgical system
- Become familiar with the use of the robotic surgical platform for surgical training, basic surgical skills, such as suturing and tissue manipulation, and recognize the advantages, disadvantages, and limitations of the present robotic surgical system
- · Apply this knowledge for use in basic surgical techniques for foregut, bariatric, colorectal, hepatobiliary, solid organ and revisional surgical procedures

SCHEDULE

Introduction and Welcome 1:00pm

Bryan Sandler, MD

Hands-on lab: set-up and docking/undocking 1:15pm

Bryan Sandler, MD

Hands-on lab: inanimate stations

Robert Acton, MD

Hands-on lab: animate stations

Jonathan Efron, MD

Lab Faculty (for animate stations):

Mehran Anvari, MD Santiago Horgan, MD Michael Marohn, MD Erik Wilson, MD Michael Awad, MD Eduardo Parra-Davila, MD Sherry Wren, MD Woo Jin Hyuna, MD Elisabeth McLemore, MD Garth Jacobsen, MD Niazy Selim, MD

Faculty for inaminate stations: Dimitrios Stefanidis, MD

Inanimate Station Coordinator Deborah Hogg, BS

SAGES acknowledges an educational grant in support of this course from New Wave Surgical SAGES acknowledges contributions in-kind in support of this course from: Covidien, Ethicon Endo-Surgery, Intuitive Surgical, New Wave Surgical, Stryker Endoscopy

7:30 AM - 11:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: MIS Colorectal Surgery

John Marks, MD

Co-Chair: Peter Marcello, MD & Michael Stamos, MD Location: Room 6A

This is a heavily video based session focused on the technique of MIS colorectal surgery, including traditional laparoscopic approaches, single incision approaches, novel transanal approaches, and flexible endoscopy techniques such as enodoscopic submucosal dissection.

At the conclusion of this session, participants will be able to:

- Alter surgeons' minimally invasive approach to splenic flexure, middle pelvis, and deep pelvis using laparoscopic, single incision, robotic
- Impact surgeon strategies to address in a minimally invasive fashion approaches used for particularly challenging areas of pelvic surgery
- Enhance surgeons' understanding of options for endoluminal therapy for benign neoplasia of colon and rectum

SCHEDULE

7:30am Single Port vs Laparoscopic Approaches to Challenging Areas	John Marks, MD
7:35am Single Port: Placement/Instrumentation/Limitations	Harry Papaconstantinou, MD
7:45am Ileo-Colic through Middle Colic Vessels a. Single Port	Dan Geisler, MD
7:55am b. Laparoscopic: Suprameosoclic Approach, Inframesocolic Approach	Morris Franklin, MD
8:05am IMA Set-Up And Splenic Flexure Release a. Single Port Approach	Tonia Young-Fadok, MD
8:15am b. Laparoscopic	Brad Champagne, MD

eption B

7:30 AM - 11:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: MIS Colorectal Surgery (continued)

8:45am	MIS Approaches to the Deep Pelvis for TME: Introduction	Michael Stamos, MD
8:50am	Hand Assisted Approach	Kirk Ludwig, MD
9:00am	Laparoscopic TME	Sergio Larach, MD
9:10am	Break	
9:30am	Robotic Assisted LAR	Alessio Pigazzi, MD
9:40am	Endoanal Alternatives	John Marks, MD
9:50am	Panel-debate: Approach to Mid Rectal T3 Cancer in Obese Males After Chemoradiation	
10:10am	Laparo-Endoscopic Approach to Colorectal Neoplasia: Introduction	Peter Marcello, MD
10:15am	Laparoscopic Assisted Endoscopic Polypectomy	Sang Lee, MD
10:25am	Endoscopic Resection Combined with Laparoscopic Wedge Resection	R. Larry Whelan, MD
10:35am	Endoscopic Submucosal with Diagnostic Laparoscopy	Peter Marcello, MD
10:45am	Endoscopic Submucosal Dissection - Different Perspective	Michael Stamos, MD
10:55am	Endoluminal Management of Anastomotic Complications	Robert Fanelli, MD
11:05am	Panel-debate: How Do You Address Large Polyps?	

To send your questions and comments for this session Text PGCOLO and your message to 22333 • Tweet @poll PGCOLO and your message • Go to http://pollev.com/SAGES6A during the session SAGES acknowledges educational grants in support of this course from Applied Medical, Covidien, and Stryker Endoscopy

9:30 AM - 11:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Social Media for Surgeons

Chair: Gretchen Purcell Jackson, MD, PhD
Co-Chair: Daniel Herron, MD & Alan Okrainec, MD

Location: Room 6D

This session provides a general introduction to social media with an emphasis on the most popular applications such as Facebook, Twitter, and LinkedIn, as they relate to surgeons and their practices. Participants will learn how healthcare organizations can use social media to gather and disseminate information, and instructors will provide guidelines for developing social media policies for individuals and groups. An emphasis will be placed on how these social media affect surgeons and their practices.

Objectives:

At the conclusion of this session, participants will be able to:

- Define social media
- · List popular social media applications and their functionalities
- Apply social media to gather and disseminate information in the healthcare setting
- Describe methods by which social medial applications may be used by surgeons in their practice

SCHEDULE

9:30am	What is Social Media?	Gretchen Purcell Jackson, MD
9:45am	Facebook for Surgeons	Kiran Turaga, MD
10:00am	Twitter for Surgeons	Niraj Gusani, MD
10:15am	LinkedIn for Surgeons	Seung Gwon, MD
10:30am	Social Media and Public Health	Michele Ledgerwood, MPP
10:45am	SAGES and Social Media	Allan Okrainec, MD
11:00am	Social Media Policies and Procedures	Danielle Walsh
11:15am	Questions and Answers	Panel

To send your questions and comments for this session Text SMEDIA and your message to 22333

Tweet @poll SMEDIA and your message • Go to http://pollev.com/SAGES6D during the session

SAGES acknowledges an educational grant in support of this symposium from Stryker Endoscopy

SAGES Goes Green!

In an effort to support the environment, you will see less paper at the SAGES 2012 Annual Meeting. The printed Final Program will include the regular schedule and course/panel outlines, as well as oral abstracts, Poster of Distinction abstracts and poster listing. However, electronic copies of all the abstracts, digitalposters, and Postgraduate course syllabi will be available on-line for all attendees and as an App for iOS and Android devices. Go to thesagesmeeting.org for more information.



Wednesday, March 7, 2012

11:30 AM - 1:00 PM

*Tickets Required. Cost: \$150 per ticket; \$1,275 per table (10 seats)

Location: Room 11AB

SAGES 2012 Awards Ceremony During SAGES Foundation Awards Luncheon

SAGES Foundation Awards Luncheon Honorary Sponsors: Covidien and Ethicon Endo-Surgery

Welcome and Introductions – Bruce Schirmer, MD, Foundation President

2012 Career Development Award & Research Grant Winners

Presented by: Aurora Pryor, MD, Research Committee Chair & Representatives of Supporting Companies

Career Development Award

Recipient: Silvana Perretta, MD

Insitution: NHC Strasbourg, University Hospital

Title: Novel Targeted Therapies for Esophageal Motility Diseases

SAGES Research Grant Awards:

Recipient: Jeffrey Marks, MD

Institution: Case Western Reserve Medical Center **Title:** Anti-Scarring Therapy to Prevent Stricturing Following Endoscopic Esophageal Mucosectomy

Supported by Karl Storz Endoscopy

Recipient: Sheetal Nijhawan, MD

Institution: University of South Alabama **Title:** Effects of Bariatric Surgery on Mitochondrial Function and Insulin Resistance *Supported by SAGES Foundation*

Recipient: Mark Wendling, MD

Institution: The Ohio State University

Title: Near Infrared Fluorescent Cholangiography (NIRF-C) for Biliary Imaging During Laparoscopic Cholecystectomy

Supported by SAGES

Recipient: Melina Vassiliou, MD

Institution: McGill University

Title: The Effects of Acute Exercise on the Acquisition of

Laparoscopic Skills

Supported by SAGES Foundation

Recipient: William Hope, MD

Institution: New Hanover Regional Medical Center **Title:** Training Surgical Residents in Endsocopy: The Impact of a Formal Endoscopy Curriculum on Resident

Performance and Outcomes

Supported by SAGES Foundation & SAGES

SAGES 2012 Young Researcher Award Winner

Presented by: Aurora Pryor, MD, Research Committee Chair & Representative from Olympus

Recipient: Melina Vassiliou, MD

The SAGES Young Researcher Award is based on significant clinical and/or basic science research, publication or presentation at national meetings and dedication to an academic career as well as participation in SAGES.

Melina Vassilou is Assistant Professor of Surgery and attending surgeon at McGill University, Montreal. She is also Associate Director and Chair of Research Committee, Arnold and Blema Steinberg Centre for Medical Simulation, McGill University, and Montreal, Quebec

Dr. Vassiliou's research has been focused on 2 main areas, both of which are relevant to SAGES: 1) Surgical education, with a particular focus on minimally invasive surgery and flexible endoscopy, and 2) NOTES. Her interest in surgical education started during her residency training when she completed a Master's of Education. During this time she worked very closely with Dr. Gerald Fried to help in the final stages of the validation testing of the FLS manual skills tasks. Of particular note, she was the main force behind the creation and validation of GOALS (the Global Operative Assessment of Laparoscopic Skills), which is now being used by many centers around the world to measure intraoperative skills during a variety of surgical procedures. GOALS was also used to complete the landmark study published by this group demonstrating that FLS practice improves performance in the operating room. Dr. Vassiliou was awarded a Medical Education Research grant from the Royal College of Physicians and Surgeons of Canada during her residency to create the GOALS instrument and then use it to prove the value of FLS training. This work was presented at several SAGES meetings over the years.

SAGES saw her work and she was invited to participate in the FES Task Force. She worked closely with the chairs and a few other members to create the GAGES (Global Assessment of Gastrointestinal and Endoscopic Skills) instruments and then led the multicenter trial to validate the instrument, which was also presented at SAGES. GAGES was used to determine if there was a correlation between number of procedures and clinical performance, and she was awarded the Haemonetics Best Paper award at the Association for Surgical Education (ASE) annual meeting in 2009 for this work. Dr. Vassiliou has since participated in the development and validation of the FES program, and has taken a lead role in the FES manual skills component, which is still ongoing. She has presented at the SAGES meeting several times about the progress and process of the FES project and was the first author on a chapter for the Surgical Clinics of North America about FLS and FES.

She has been an active member of SAGES since 2003 though she started as candidate member

Amazingly, though less than a decade into her SAGES life, Melina has served on almost every education committee. Her work has included: Co-Chair, Hernia Task Force, Co-Chair, FLS Committee, Research Committee, Resident Education Committee, Task Force for creation of FES (Fundamentals of Endoscopic Surgery) curriculum, SAGES Endolumenal Task Force, SAGES Flexible Endoscopy Committee, SAGES Web site task force, SAGES Guidelines committee, SAGES Public Information Committee.

Dr. Vassilou not only innovates but she is generous in sharing her work. She has taught at dozens of courses, served as an invited lecturer all over the U.S, Canada and abroad; and has authored 325 peer reviewed papers.

Because SAGES is all about research, education and leadership, Melina Vassilou is the future of SAGES. We are proud and happy that she has chosen to do some of her most valuable work with us.

SAGES gratefully acknowledges Olympus America Inc. for their support of the Young Researcher Award



SAGES 2012 Researcher in Training Award Winner

Presented by: Aurora Pryor, MD, Research Committee Chair

Recipient: Dana A. Telem, MD

Dr. Telem earned her medical degree at Jefferson Medical College, Philadelphia, PA and performed her Postdoctoral Training at Massachusetts General Hospital, Boston, MA where she was an Advanced Laparoscopic Fellow, July 2011-Present. She served as a surgical resident including chief resident at The Mount Sinai Hospital, New York, NY.

She is an active candidate member of SAGES as well as resident member of Society for Surgery of the Alimentary Tract, American College of Surgeons, the Association of Women Surgeons and the Medical Society of New York.

Her Honors and Prizes include: Centers of Expertise Research grant – Massachusetts General Hospital, David A. Dreiling Award for Excellence in Scholarly Activities – The Mount Sinai Hospital, Finalist – American College of Surgeons Resident Award for Exemplary Teaching, The Medical Student Teaching Award – The Mount Sinai Hospital, and a Grant Recipient – Society of Academic Emergency Medicine Medical Student Research.

Her Current Funded Projects include a Center of Expertise Medical Education Research Grant "Can virtual reality simulators achieve endoscopic proficiency in novice surgical residents" for which she is Co-investigator.

SAGES IRCAD Fellowship Award Winner

Presented by: C. Daniel Smith, MD, Awards Committee Chair & Representative from Karl Storz Endoscopy



Recipient: Omar Yusef Kudsi, MD

Omar Yusef Kudsi was born in Damascus, earned his medical degree at the University of Aleppo, and an M.B.A., Lebow College of Business, Drexel University. He performed his residency at Lankenau Medical Center and Jefferson Medical College and his research fellowship in General Surgery at Brigham and Women's Hospital.

He is currently a Clinical Fellow in Surgery, Beth Israel Deaconess Medical Center/ Harvard Medical School, Boston, MA. In 2011 Dr. Kudsi was a Co-Investigator, N.I.H., Validation of virtual reality based skill trainers: VBLaST (Virtual Basic Laparoscopic Skill Trainer) as well as Co-Investigator, N.I.H., Developing Physically-Based Virtual Simulation Technology

for Natural Orifice Transluminal Endoscopic Surgery.

He has been active in SAGES since 2007, written five peer reviewed papers, presented at 8 major meetings, written two chapters and two monographs.

SAGES gratefully acknowledges Karl Storz Endocsopy for their support of the IRCAD Fellowship Award

SAGES 2012 Excellence in Clinical Care Award Winner

Presented by: C. Daniel Smith, MD, Awards Committee Chair



Recipient: Joseph B. Petelin, MD

Joseph "Joe" Petelin graduated from the University of Kansas School of Medicine and completed his surgical residency at the same institution. He was later appointed to the clinical faculty. Dr. Petelin's undergraduate work in physics and his interest in computer science have been influential in shaping his career path since that time.

Joe Petelin developed the first curved instruments for use in laparoscopic surgery in 1989. These instruments enabled operations that were not possible prior to their invention. His technique of percutaneous cholangiography has become accepted worldwide. He produced many of the first papers, texts, and videos detailing laparoscopic common duct exploration, and has lectured on this subject worldwide. He currently still has one of the world's largest personal series

of laparoscopic cholecystectomies (>5000), and the largest series of laparoscopic common bile duct explorations (>400).

Dr. Petelin's work was integral to the expansion of laparoscopy in the early 1990s. His perspective has always been to research what helped patients. In 1991, he performed a laparoscopic splenectomy, a laparoscopic pancreatic pseudocyst-gastrostomy, and one of the first laparoscopic gastrojejunostomies. He has performed almost all types of laparoscopic surgery, including over 5,000 laparoscopic hernia repairs and more than 1,000 laparoscopic colectomies. In all, he has performed well over 10,000 laparoscopic surgical cases.

Joe Petelin is a teacher's teacher. He performed multiple advanced live laparoscopic procedures for audiences of thousands of surgeons in England, France, Spain, Switzerland, Italy, Kazakhstan, China, New Zealand, Hong Kong, Canada, Israel, India, and others. In 2006, he produced a live webcast of a laparoscopic sigmoid colectomy that was observed live over the Web by > 1200 sites; the webcast was placed in the NIH (National Institutes of Health) library.

Dr. Petelin sits on the editorial boards of several journals and is widely published. Joe Petelin served on the SAGES Board of Governors and was a founding member of the Fellowship Council.

SAGES 2012 Brandeis Scholarship Awards (2)

Presented by: C. Daniel Smith, MD, Awards Committee Chair

The "Executive Leadership Program in Health Policy and Management" at the Heller School for Social Policy and Management at Brandeis University trains clinical leaders in health care policy and management. It aims to provide health care professionals with the skills essential to creating innovative and sustainable solutions to improve the quality, cost-effectiveness, and efficiency of health care service delivery.

The purpose of sponsoring attendance to this intensive one-week course scholarship is to promote individuals as leaders in medicine.



Recipients: Jeffrey Hazey, MD



Rajesh Aggarwal, MD



Wednesday, March 7, 2012

Jeffrey L. Ponsky Master Educator in Endoscopy Award – A SAGES Foundation Award

Presented by: Bruce Schirmer, MD, Foundation President



Recipient: Frederick L. Greene, MD, FACS

To SAGES, Rick Greene is not only a master educator, but a master leader, master manager and, of course, master of ceremonies for the SAGES sing-off.

Chairman, Department of Surgery and Director of Surgical Residency Program at Carolinas Medical Center, Rick received his medical school training at the University of Virginia and completed a residency in surgery at Yale University School of Medicine. He was an American Cancer Society clinical research fellow at Yale. He is currently clinical professor of surgery at the University of North Carolina School of Medicine.

He is a founding member and was president of SAGES 1992-1993. He was awarded the Distinguished Service Award by SAGES in 2004 and was President of the SAGES Education and Research Foundation for five years. In the three decades since SAGES birth, he has served on every educational committee and on almost every other committee. He was SAGES rep to the ACS Board of Governors. He has taught at our annua, I meetings, resident ed courses, hands on courses and contribtuons to a huge number of SAGES publications. Our dedication to reducing paper usage prohibits listing all of his efforts for the Society.

Rick Greene has served on the Commission on Cancer of the American College of Surgeons and is a past chair. He has represented the American College of Surgeons on the American Joint Committee on Cancer (AJCC) and served as chair. He is also the editor of the Sixth and Seventh editions of the AJCC Cancer Staging Manual.

His publications have included more than 160 papers, 30 book chapters, and two textbooks relating to cancer surgery and, specifically, the use of laparoscopic surgery in the treatment of patients with cancer. He serves as the Associate Editor of the Annals of Surgical Oncology and on numerous editorial boards including Surgical Endoscopy, Journal of Surgical Education, Journal of Surgical Oncology, World Journal of Surgery, American Surgeon, Journal of Clinical Oncology, Surgical Endoscopy, Laparoscopy and Percutaneous Techniques and is Editor of General Surgery News.

He has made teaching a mainstay is his professional life and his generosity of sharing his significant surgical abilities has helped create future surgical leaders. While it has nothing to do with surgical education, it should be known that he is a great dancer.

2012 Excellence in Medical Leadership Award – A SAGES Foundation Award

Presented by: Bruce Schirmer, MD, Foundation President & Representatives from Gore



Recipient: Daniel Jones, MD

This scholarship will enhance a surgeon's understanding of what it means to be an effective leader in today's global economy. It will teach the recipient how to realign his role as a leader, develop a leadership philosophy, use his talents more effectively and apply the latest research and best practices in global management for greater patient outcomes. This scholarship will enable an individual to attend a seminar that will facilitate their role as a high potential leader in the medical world.

Dr. Daniel Jones has already taken upon his shoulders such enormous SAGES tasks as Program Chair of this conference, the FUSE Project, the Quality, Outcomes & Safety Committee, and a variety of other complex missions.

2012 Gerald Marks Rectal Cancer Award – A SAGES Foundation Award

Presented by: Bruce Schirmer, MD, Foundation President



Recipient: Soo Yeun Park, MD

The Gerald Marks Rectal Cancer Award is selected from each year's submitted abstracts. This award is chosen from the hundreds of abstracts submitted by a special committee of reviewers and given to one individual each year in honor of Dr. Gerald Marks, SAGES first President and Founder.

In Memoriam

The surgical world lost two great luminaries this year. We remember them here because our patients are better off because of their pioneering work.

Felicien M. Steichen, MD



Dr. Felicien M. Steichen died in June, 2011. He was 84. He was a globally acclaimed pioneer in the use of suturing devices in minimally invasive surgery. Dr. Steichen co-authored three seminal works in surgical stapling with his colleague, Mark M. Ravitch. He also authored over 200 scientific papers, book chapters and monographs. He was fluent in English, French and German. We called him "Felix" and he was unreasonably modest for his great talents and accomplishments. It was said by everyone he taught that he was a virtuoso surgeon.

Dr. Steichen was born in Luxembourg and graduated from the Medical School of the University of Lausanne. He was active and held office in more than a dozen European and American surgical societies. He was honored by the governments of France, Luxembourg, Germany and New York City (Mayor's 1986 Liberty Medal). A grant from the United

States Surgical Corporation (Covidien) with whom he worked for decades, established an Endowed Chair of Surgery in his honor at New York Medical College.

He served as Professor of Surgery at New York Medical College and achieved emeritus status in 2008. He formerly served on the faculty of the Johns Hopkins' School of Medicine, the Albert Einstein College of Medicine and the University of Pittsburg School of Medicine.

He was not only a wonderful friend of SAGES but someone on whose scientific shoulders we all stand. His contribution to surgery was enormous and, more important, he was a wonderful and modest human being.



SAGES 2012 Pioneer in Endoscopy Award Winner

Presented by: Steve Schwaitzberg, MD, SAGES President

Recipient: Leon C. Hirsch



Leon Hirsch was the founder, chairman and CEO of U.S. Surgical Corporation (USSC). He was the inventor of many of the Autosuture wound closure and stapling devices. He headed the company during the entire decade of the laparoscopic revolution and was a major supporter of Endoscopic surgical education and research during "the early years." The company he founded, now Covidien. Inc., remains a major force in surgical education and research.

The Wall Street Transcript named Mr. Hirsch their gold award for top CEO in Medical Technology in 1990,1991 and 1992. He also was the first non physician ever award the prestigious University Of Geneva (Switzerland) prize for surgery/

Mr. Hirsch is a member of the Board of Boston University and is past chairman of the board and current member of the board of Jarvik Heart. In 1994 he received and honorary Doctor of Science award from the University of Illinois, Chicago, for his impact on the field of medicine. He holds several patents and has earned many other honors. Under his guidance, his company was and still remains a pillar of SAGES education and research program, providing funds for our very first research grants in 1992. His efforts have contributed to the improvement of how we practice surgery and provided our patients with better quality of care.

Recipient: Turi Josefsen

Turi Josefsen is a leading executive in the health care industry both internationally and in the United States. As Executive Vice President of United Stated Surgical Corporation, and then President of International Operations, Ms. Josefsen was a significant contributor to product innovation in the company's formative years and was a major supporter of laparoscopic surgeon education and research.

Ms. Josefsen is one of only four lay women named a Fellow of the Royal College of Surgeons in Edinburgh. In 1994, Boys Town of Italy named her Woman of the Year. Ms. Josefsen has been honored by the U.S. Army for her work in helping train their International surgeons. In June of 2000, the French government award Ms. Josefsen the rank of Knight of the

Order of the Legion of Honor. Rarely is this honor award to anyone other than a French citizen.

Ms. Josefsen is a partner in JHK Investments, LLC, an investment company specializing in high-tech medical device companies in the start-up mode.

SAGES is indebted to her for the vision and help she has provided to surgical education and research.

SAGES 2012 Distinguished Service Award Winner

Presented by: C. Daniel Smith, MD, Awards Committee Chair



Recipient: Bruce Schirmer, MD

Stephen H. Watts Professor of Surgery University of Virginia

The SAGES Distinguished Service Award is given to a surgeon who has made a significant, long-term educational, research, clinical and/or technological contribution to the field of surgical endoscopy and has advanced the mission of SAGES

How do we count the ways that Bruce Schirmer has made an educational, research or clinical contribution? The SAGES rule is that if you would run out of paper you are allowed to abbreviate. Just remember that his work in education alone

would take two pages....small print.

Dr. Schirmer served on the SAGES Board of Governors for a decade and was President 2002-2003. He served as Chairman of the Program and Resident Education Committees, and was a member of the Educational Resources, Program and Awards Committees. He was the 2000 Meeting Program Director, and was instrumental in the development of SAGES Residency Integration guidelines and position statements. He is the current SAGES representative to the Board of Governors of the American Board of Surgery and again on the SAGES Board.

 $He is \ President \ of the \ SAGES \ Education \ and \ Research \ Foundation \ and \ has \ served \ in \ its \ leadership \ for \ 8 \ years.$

Outside of SAGES in his copious spare time he has been President, Society of Clinical Surgery, President, American Hepato-Pancreato-Biliary Association, President and founder of the Fellowship Council, President, Virginia Society of Parenteral and Enteral Nutrition, Current Executive Committee, Society for Surgery of the Alimentary Tract. This is a guy who tends to give his all!

His work in surgical publications includes: Editor-in-Chief, Journal of Laparo- endoscopic and Advanced Surgical Techniques, and editor of the following journals: Journal of Laparoendoscopic Surgery, Annals of Surgery, Journal of the American College of Surgeons, Surgical Endoscopy, Obesity Surgery, Journal of Long-Term Effects of Medical Implants, Surgery of Obesity and Related Disorders, Journal of Gastrointestinal Surgery, Surgical Innovation, Surgery.

A few years ago a crisis loomed in the funding of surgical fellowships. Dr. Schimer, along with Lee Swanstrom and Raul Rosenthal undertook to create a new Foundation for Surgical Fellowships to assure the future of advanced training and education of surgeons. None of them would ever serve in its leadership. It took hundreds of hours and it was an act of pure dedication to education. Honor is due.

With all the glory he has earned, the most important thing you can say about Bruce Schirmer is that he is a kind and generous human being, has an undeserved sense of modesty and (on behalf of the staff) that he returns your calls.

His service has made us a better organization by far.

Pencil us in for next year:

April 17 - 20, 2013 | Baltimore, MD



Wednesday, March 7, 2012

2012 Top International Abstracts

SAGES Board of Governor's and the SAGES Global Affairs Committee would like to acknowledge the following Top International Abstract Presenters:

Name: Julian Varas MD

Institution: Pontificia Universidad Católica de Chile

Abstract Title: Significant Transfer Of Surgical Skills Obtained With An Advanced Laparoscopic Training Curriculum; Feasibility

Of Learning Advanced Laparoscopy In A General Surgery

Residency.

Country: Chile

Name: Long Vo Duy Ms

Institution: University Medical Center, Hochiminh City

Abstract Title: Comparison of Open and Laparoscopic Gastrectomy with

Lymph Node Dissection for Gastric Cancer

Country: Hochiminh city, Vietnam

Name: Jensen T Poon MBBS, MS

Institution: The University of Hong Kong, Queen Mary Hospital

Abstract Title: Comparison of Single Port and Conventional Laparoscopic Colectomy: A Randomized Controlled Trial

Country: Hong Kong, China

Name: Hyung-Ho Kim MD, PhD
Institution: Seoul National University

Abstract Title: Laparoscopic Versus Open Gastrectomy for Gastric

Adenocarcinoma: Long-term Outcomes from a Large scale

multicenter study.

Country: Seoul, Korea

Name: Augusto C. Tinoco, PhD
Institution: Hospital São Jose Do Avai

Abstract Title: Laparoscopic roux En Y Hepaticojejunostomy After Bismuth

IV Bile Duct Injure

Country: Brazil

In Memoriam

The surgical world lost two great luminaries this year. We remember them here because our patients are better off because of their pioneering work. (see In Memoriam for Dr. Steichen on page 26)

Dr. William I. Wolff



Bill Wolff was the father of modern colonoscopy. He died on Aug. 20 at his home in New York. He was 94.

The New York Times obituary, which was a half page long said: "Working with Dr. Hiromi Shinya at Beth Israel Medical Center in Manhattan in the 1960s, Dr. Wolff was at the forefront of a worldwide research effort to develop ways to probe the full length of the colon using a tube with electronic sensors. Their most significant advance was the development of a device that could remove a polyp immediately during a colonoscopy, eliminating the need for a second procedure.

Their protocol — became the universal standard, and articles they published about their thousands of successes confirmed the safety and efficacy of colonoscopies.

Though often dreaded by patients as much as a root canal, the procedure, if done in time, can eliminate more than 60 percent of large-intestine growths. In the United States, more than 1.6 million colonoscopies are performed every year, mostly as a recommended preventive procedure for adults beginning in middle age."

Drs. Wolff and Dr. Shinya also worked with the Olympus Optical Company in 1969 to introduce a wire loop snare to cauterize a polyp as soon as it is found, making open surgery unnecessary.

Gastroenterologists and surgeons alike agree that the colonoscopy prompted a radical shift in medical thinking.

William Irwin Wolff (Bill) was born in Manhattan in 1916. He earned a bachelor's degree from New York University and a medical degree from the University of Maryland. After an internship and residency at Bellevue Hospital in Manhattan, he served as an Army medical officer during World War II in Europe.

It may be hard to believe but this great pioneer was a "regular guy" with a great sense of humor. He was loved by everyone he taught. When we say a gentleman and a scholar" that defined Bill Wolff. He was SAGES first keynote lecturer in our first freestanding meeting in Williamsburg in 1986. That lecture was named for the late Steven Hedberg. He earned the SAGES distinguished Service award in 1998.



SAGES Recognition of Excellence Award

Log onto SAGESPAGES during the Annual Meeting to learn To Whom, From Whom and Why. SAGES will announce recipients of the 2012 SAGES Recognition of Excellence Coin daily.

www.sages.org/sagespages

To fully comply with ACCME regulations, all SAGES Meeting attendees must have their badge scanned before entering any course or session room in order to receive CME credit for that event.

1:00 PM - 3:00 PM

*Included in Registration SuperPass (Option A) or Registration Option B

Upcoming Changes with Medical Reimbursement

Chair: Robert A. Andrews, MD
Co-Chair: Michael Holzman, MD

Location: Room 6A

A multidisciplinary session that will provide information about massive changes in reimbursement structures, value based purchasing, accountable care organizations, and how these and other measures may effect clinicians and their practices in the short and long term.

Objectives:

At the conclusion of this session, participants will be able to:

- · Describe an accountable care organization, the principles/theory behind this model of health care delivery
- · Evaluate the benefits both to patient care and finances of a robust electronic medical record system
- · Discuss some of the changes scheduled to take place with our new health care laws, and coding procedures as the industry is revamped
- · Evaluate on how changes may affect both non-procedural and procedural based physicians and their practices
- Assess on the vastly different practice models of the integrated health system and private practice, and how they each benefit patient care in different ways

SCHEDULE

Meaningful Use: Electronic Medical Records; What Does It Mean for the Surgical Practice	Paresh Shah, MD
Accountable Care Organizations and Value Based Purchasing: A Brave New World	Stuart A. Rosenberg, MD
October 1st, 2013: ICD – 10: It is Coming; What You Need to Do to Prepare	Michael Edye, MD
Point: The Integrated Health System is Now the Only Financially Viable Model to Deliver Healthcare: These are the Reasons	Mark Talamini, MD
Counterpoint: Private and Small Group Practices are Sustainable and Viable Practice Models: This is Why	Edward L Felix, MD
	Accountable Care Organizations and Value Based Purchasing: A Brave New World October 1st, 2013: ICD – 10: It is Coming; What You Need to Do to Prepare Point: The Integrated Health System is Now the Only Financially Viable Model to Deliver Healthcare: These are the Reasons Counterpoint: Private and Small Group Practices are Sustainable and Viable Practice Models:

To send your questions and comments for this session Text REIMB and your message to 22333 • Tweet @poll REIMB and your message • Go to http://pollev.com/SAGES6A during the session

1:00 pm - 5:30 pm *Separate Fee Applies

HANDS-ON COURSE:

Transanal Colorectal and Single Port Surgery

**Offsite Lab

Chair: Matthew Albert, MD

Co-Chairs: Deborah Nagle, MD & Wai Lun Law, MD

Location: UCSD

Laparoscopic colorectal surgery, using a conventional laparoscopic technique, has been accepted as an optimal approach for many colorectal diseases. Recent advances have enabled colorectal surgery to be performed using a single port strategy, either through the abdominal wall or through the anus, but these techniques are associated with a learning curve. This half-day hands-on cadaver lab course is designed to provide practical training in colorectal procedures using single port and transanal devices. All participants should be familiar with advanced laparoscopic techniques and wish to expand their skills in single port and transanal approach. Techniques will be demonstrated during brief video-based presentations. All participants will have the opportunity to use various access devices and special instruments on the cadaver model. Basic techniques as well as tips and tricks will be demonstrated and discussed. Lab stations will have a 1:3 faculty: participant ratio.

Objectives

At the conclusion of this session, participants will be able to:

- · Describe the equipment and instruments used for single port and transanal colorectal surgery
- Apply various techniques used in single port and transanal colorectal surgery
- Implement strategies for overcoming spatial limitations associated with single port and transanal colorectal surgery

SCHEDULE

1:00pm	Less May Be More	Matthew Albert, MD
1:10pm	Equipment and Instruments	BJ Champagne, MD
1:20pm	Single Incision Right Colectomy	Deborah Nagle, MD
1:30pm	Single Incision Left Colectomy/High Anterior Resection	Wai Lun Law, MD
1:40pm	Single Incision Total Colectomy	Daniel Geisler, MD
1:50pm	Transanal Endoscopic Microsurgery: From Local Excision to Oncologic Resection	Mark Whiteford, MD
2:00pm	Novel Transanal Approach Using Single Port Devices	Teresa deBeche-Adams, MD
2:10pm	Discussion	All faculty
2:20pm	Hands on Cadaver Dissection	All participants

Lab Faculty:

Jamie Adair, MD	Daniel Geisler, MD	Sergio Larach, MD	Theodoros Voloyiannis, MD
BJ Champagne, MD	Virgilio George, MD	Craig Olson, MD	Mark Whiteford, MD
Teresa deBeche-Adams MD	Fric Haas MD	Harry Panaconstantinou MD	

SAGES acknowledges educational grants in support of this course from Applied Medical, Covidien, Olympus America and Stryker Endoscopy.

SAGES acknowledges contributions in-kind in support of this course from Applied Medical, Covidien, Davol Inc., a BARD Company,
Ethicon Endo-Surgery, Ethicon Inc.,Karl Storz Endoscopy, Olympus America Inc., Richard Wolf, Stryker Endoscopy



Wednesday, March 7, 2012

1:00 PM - 3:00 PM

*Included in Registration SuperPass (Option A) or Registration Option B

Endoscopic and Surgical Alternatives for Benign Pancreatic Disease

Chair: Robert Hawes, MD

Co-Chair: Matthew Walsh, MD Location: Room 6F

This session will compare surgical and endoscopic treatment options for numerous benign pancreatic disorders. These challenging diseases are benefited by a multimodality approach and it is imperative for the clinician to have a full understanding of available interventions.

Objectives

At the conclusion of this session, participants will be able to:

- · List alternative techniques for improving the management of pancreatic necrosis
- · Define the role of surgery for patients with chronic pancreatitis
- · List the endoscopic and surgical therapies available for the management of persistent pancreatic pseudocysts

SCHEDULE

PANCREATIC PSEUDOCYSTS

1:00pm	Endoscopic Differentiation and Techniques for Drainage of Pancreatic Pseudocysts	Robert Hawes, MD
1:15pm	Surgical Techniques for Management of Pancreatic Pseudocysts	Michel Gagner, MD
	PANCREATIC NECROSIS	
1:30pm	Endoscopic Techniques and Outcomes for Pancreatic Necrosis	Todd Baron, MD
1:45pm	Surgical Techniques and Outcomes for Pancreatic Necrosis	Katherine Morgan, MD
	CHRONIC PANCREATITIS	
2:00pm	Endoscopic Techniques and Outcomes in Chronic Pancreatitis	Michael Kochman, MD
2:15pm	Surgical Intervention and the Emerging Role of Islet Cell Transplantation – When to Employ in Chronic Pancreatitis?	Matthew Walsh, MD
2:30pm	Panel Discussion/Case Presentation	All Faculty

To send your questions and comments for this session Text ENDOALT and your message to 22333 · Tweet @poll ENDOALT and your message · Go to http://pollev.com/SAGES6F during the session

1:30 PM - 5:30 PM

1:30pm

*Included in Registration SuperPass (Option A) or Registration Option B

SAGES Top 21 Videos

Chair: Kenric Murayama, MD

Co-Chair: Benjamin Schneider, MD

Location: Room 6B

Kenric Murayama, MD

The SAGES Top 21 was developed to demonstrate techniques for safe performance of 21 of the most common MIS procedures. This comprehensive session is designed to provide participants with the unique opportunity to learn 15 of these procedures in one afternoon directly from the experts who authored each module. The experts will present their video tutorial for each procedure, discussing the key steps for safe completion as well as pitfalls to avoid. FREE POPCORN WHILE SUPPLIES LAST.

Objectives:

At the conclusion of this session, participants will be able to:

- · Understand the value of video review in preparation for performing the procedures included in this session
- Improve their understanding of the key steps of each procedure
- Identify potential pitfalls and avoidance strategies in performance of each procedure
- Apply these key steps and pitfall avoidance strategies in practice to improve performance

SCHEDULE

Introduction

Questions will be answered after each video presentation.

1:45pm	Laparoscopic Distal Pancreatectomy	Horacio Asbun, MD
2:00pm	Upper Endoscopy	Dean Mikami, MD
2:15pm	Laparoscopic Nissen Fundoplication	Patrick Reardon, MD
2:30pm	Laparoscopic Paraesophageal Hernia Repair	Dmitry Oleynikov, MD
2:45pm	Adjustable Gastric Band	Jeffrey Allen, MD
3:00pm	Laparoscopic Inguinal Hernia Repair	Daniel Marcus, MD
3:15pm	Laparoscopic Ventral Hernia Repair	Abdelrahman Nimeri, MD
3:30pm	Laparoscopic Splenectomy	John Sweeney, MD
3:45pm	Laparoscopic Adrenalectomy	L. Michael Brunt, MD
4:00pm	Laparoscopic Right Hemicolectomy	Tonia Young-Fadok, MD
4:15pm	Laparoscopic Sigmoid Colectomy and Low Anterior Resection	Edward Borrazzo, MD
4:30pm	Laparoscopic Roux-en-Y gastric bypass	Daniel Gagne, MD
4:45pm	Cholecystectomy	Benjamin Schneider, MD
5:00pm	Minimally Invasive Esophagectomy	Ninh Nguyen, MD
5:15pm	Laparoscopic Gastric Resection	Alex Nagle, MD

3:00 PM - 5:30 PM

*Included in Registration SuperPass (Option A) or Registration Option B

SAGES/SSAT Minimally Invasive Hepatobiliary & Pancreatic Surgery - The Next Frontier

Chair: Horacio J. Asbun, MD Co-Chair: Mark P. Callery, MD

Location: Room 6A

This will be a joint session hosted by SAGES and SSAT, featuring world-renowned experts from both societies. Cutting edge advances in minimally invasive hepatobiliary and pancreatic surgery will be presented. An emphasis will be placed on discussing ways for surgeons to incorporate these techniques into their practice.

Objectives:

At the conclusion of this session, participants will be able to:

- Describe outcome metrics that may be applied to open and laparoscopic hepatobiliary and pancreatic surgery
- Evaluate the critical aspects for achieving oncologic adequacy for MIS treatments compared to open approaches
- Adopt strategies for deciding when an MIS approach might be best versus an open approach
- Apply methods of incorporating MIS in their hepatobiliary and pancreatic surgical practice

SCHEDULE

3:00pm	Whipple Outcomes: A set of Metrics Based on the Evidence For Open Surgery	L. William Traverso, MD
3:15pm	Minimally invasive Surgery Metrics: Answer	Michael Kendrick, MD
3:30pm	Are We Achieving Oncologic Adequacy with the Minimally Invasive Approach to Pancreatic Cancer?	Mark Callery, MD
3:40pm	Minimally Invasive Surgery and Oncologic Resection: Answer	Horacio J. Asbun, MD
3:55pm	Minimally Invasive and Open Pancreatic Surgery: Should It Be One or The Other? Or Can They Co-Exist and Benefit from Each Other?	Pascal Fuchshuber, MD
4:05pm	Q&A Panel Discussion	
4:25pm	How Did I Learn Complex Pancreatic Minimally Invasive Surgery? Overcoming the Hurdles and What Would I Recommend Today to a Surgeon That Wishes to Learn It?	Chinnasamy Palanivelu, MCH Michael Kendrick, MD Horacio J. Asbun, MD Craig Fischer, MD

Q&A Panel Discussion

To send your questions and comments for this session Text SSAT and your message to 22333 · Tweet @poll SSAT and your message · Go to http://pollev.com/SAGES6A during the session

5:30 - 7:30 PM

Welcome Reception in Exhibit Hall

SAGES Exhibits will take place in the San Diego Convention Center. Exhibit Hall C. The Learning Center and Posters will NOT open until Thursday.

Be Sure to Visit SAGES' Exhibit Hall Oasis During Exhibit Hours!

Located in the Exhibit Hall at Booth #118, SAGES Oasis will have a variety of opportunities for meeting attendees to network and learn in a relaxed setting. Visit the Oasis to relax, charge your cellphone, have a snack, and catch up with friends and colleagues.

Oasis Activities

Thursday, 12:30 - 1:30 Fellowship Social – where residents, fellows and program directors can get to know each other in a relaxed atmosphere

Job Mixer - Who's hiring? Who's looking? Come find out! Friday, 12:30 - 1:30

Meet the Experts Hours

Thursday, 10:00am - 12:00pm Colon, NOTES

12:00pm-1:30pm **Bariatric** 1:30pm - 3:00pm **Foregut**

Friday, 12:00pm - 1:30pm Hernia 1:30pm - 3:00pm **Solid Organ**

Saturday, 12:00pm - 1:00pm **Robotics, Education**



Time	Session	Location
Thursday, Ma	rch 8, 2012	
7:30 AM - 12:00 PM	SAGES Half-Day Postgraduate Course: Metabolic Surgery and Cure of Diabetes	Room 6A
7:30 AM - 10:00 AM	SAGES Resident/Fellow Scientific Session	Room 6B
7:30 AM - 8:30 AM	SAGES Session: Posters of Distinction	Room 4
7:30 AM - 8:30 AM	SAGES Concurrent Session SS01: Basic Science	Room 6E
7:30 AM - 8:30 AM	SAGES Concurrent Session SS02: Instrumentation/Ergonomics	Room 6F
7:30 AM - 8:30 AM	SAGES Concurrent Session SS03: HPB (Hepatobiliary and Pancreas)	Room 6D
8:30 AM - 10:00 AM	SAGES Panel: Surgery in Space	Room 6E
8:30 AM - 9:30 AM	SAGES Panel: Stories of SAGES Heroes	Room 6D
8:30 AM - 10:15 AM	SAGES Video Session: Best of NOTES® from Around the World	Room 6F
8:30 AM - 9:30 AM	SAGES Concurrent Session SS04: Quality Outcomes from the Other Category	Room 4
9:30 AM - 10:30 AM	SAGES Concurrent Session SS05: Education	Room 4
9:30 AM - 3:30 PM	Exhibits, Poster Session, Learning Center Open	Room B2 & C
10:00 AM - 12:00 PM	SAGES Postgraduate Course: POEM	Room 6B
10:00 AM - 12:00 PM	SAGES Postgraduate Course: Lap Ventral Hernia with Endoscopic Components Separation	Room 6D
10:00 AM - 12:00 PM	SAGES Panel: Education and Training in Crisis	Room 6E
10:15 AM - 12:00 PM	SAGES Concurrent Session SS06: NOTES	Room 6F
10:30 AM - 12:00 PM	SAGES/IPEG Panel: "My Way is Better Than Yours"	Room 6C
12:00 PM - 1:30 PM	Educator's Lunch – Milestones in MIS	Room 11AB
1:30 PM - 5:30 PM	SAGES Half-Day Hands-On Course: POEM	UCSD
1:30 PM - 5:30 PM	SAGES Half-Day Hands-On Course: Lap Ventral Hernia with Endoscopic Components Separation	UCSD
1:30 PM - 5:30 PM	SAGES Half-Day Postgraduate Course: Fundamental Use of Surgical Energy (FUSE)	Room 6F
1:30 PM - 3:30 PM	SAGES/ALACE Session: Innovations in Obesity Surgery	Room 6D
1:30 PM - 3:30 PM	SAGES Concurrent Session SS07: Solid Organ	Room 6B
1:30 PM - 3:30 PM	SAGES Concurrent Session SS08: Videos – Obesity Surgery	Room 6E
3:30 PM - 5:30 PM	SAGES/CAGS Panel: Therapeutic Endoscopy	Room 6B
3:30 PM - 5:30 PM	SAGES Video Session: Oops – Now What?	Room 6E
3:30 PM - 5:30 PM	SAGES Concurrent Session SS09: Obesity Surgery	Room 6D
	Industry Education Evening Evening Events – These events are not accredited for CME by SAGES	
5:30 PM - 7:30 PM	Cadence Pharmaceuticals. – "OFIRMEV ® (acetaminophen) Injection: A Non-Opioid, Non-NSAID Analgesic for Perioperative Pain Management"	Room 6D
5:30 PM - 7:30 PM	Davol Inc., a BARD Company. – "Advanced Laparoscopic Hernia Repair Techniques"	Room 2
5:30 PM - 7:30 PM	Intuitive Surgical - "daVinci® Single-Site™ Cholecystectomy and daVinci Multi-port Applications"	Room 4
5:30 PM - 7:30 PM	Stryker Endoscopy - "Needlescopic Approaches in General Surgery"	Room 6C

FLS Testing Available All Week! Wednesday, March 7 - Friday, March 9, 2012 Contact FLS@sages.org for more details or to schedule your test.



7:30 AM - 8:30 AM

*included in Registration SuperPass (Option A) or Registration Option B)

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS01 - Basic Science

Location: Room 6E

Moderators: Thomas L. Dent, MD & Lee L. Swanstrom, MD

S001 EFFECT OF ENZYMATIC DEGRADATION ON THE MECHANICAL PROPERTIES OF BIOLOGIC SCAFFOLD MATERIALS Afua H Annor, BS, Michael E Tang, BS, Chi Lun Pui, BS, Gregory C Ebersole, MS MS, Margaret M Frisella, RN, <u>Brent D Matthews, MD</u>, Corey R Deeken, PhD, Washington University in St. Louis

S002 GASTRIC ISCHEMIC CONDITIONING INCREASES NEOVASCULARIZATION AND REDUCES INFLAMMATION AND FIBROSIS DURING GASTROESOPHAGEAL ANASTOMOTIC HEALING Kyle A Perry, MD, James Liu, MD, Ambar Banarjee, MD, Mark R Wendling, Nilay Shah, MD, W S Melvin, MD, Center for Minimally Invasive Surgery, The Ohio State University, Columbus, OH

S003 EFFECT OF OBESITY ON ADIPOGENIC DIFFERENTIATION OF ADIPOSE TISSUE-DERIVED HUMAN MESENCHYMAL STEM CELLS <u>Jiegen Chen, PhD</u>, Anna Spagnoli, MD, Alfonso Torquati, MD MSCI, Duke University and University of North Carolina - Chapel Hill

S004 EFFECTS OF CARBON DIOXIDE PNEUMOPERITONEUM ON RENAL FUNCTION IN OBSTRUCTIVE JAUNDICE: AN EXPERIMENTAL STUDY IN A RAT MODEL Merter Gulen, MD, <u>Mustafa Sare, MD</u>, Banu Sancak, MD, Mehmet Senes, MD, Seher Yuksel, Department of General Surgery Gazi University School of Medicine, Department of Biochemistry Gazi University School of Medicine, Ankara Teaching and Research Hospital

S005 PRE- AND INTRA-OPERATIVE LIDOCAINE INJECTION FOR PREEMPTIVE ANALGESICS IN LAPAROSCOPIC GASTRECTOMY: A PROSPECTIVE RANDOMIZED DOUBLE-BLIND PLACEBO-CONTROLLED STUDY <u>Tae Han Kim, MD</u>, Hyun Kang, MD, Yoo Shin Choi, MD, Joong Min Park, MD, Kyong Choun Chi, MD, College of Medicine, Chung-Ang University

To send your questions and comments for this session Text SS01 and your message to 22333 · Tweet @poll SS01 and your message · Go to http://pollev.com/SAGES6E during the session

SAGES Concurrent Session SS02 - Instrumentation/Ergonomics

Location: Room 6

Location: Room 6D

Moderators: Danielle S. Walsh, MD & Phillip P. Shadduck, MD

S006 RADIOFREQUENCY ENERGY COUPLING TO COMMON LAPAROSCOPIC INSTRUMENTS: BEWARE OF THE CAMERA TIP <u>Edward L Jones, MD</u>, Thomas N Robinson, MD, Paul N Montero, MD, Henry R Govekar, MD, Greg V Stiegmann, University of Colorado School of Medicine, Aurora, CO

S007 COMPARISON OF SURGICAL PLUME GENERATION OF FIRST GENERATION CORDLESS (SONICISION) VERSUS TRADITIONAL LAPAROSCOPIC HARMONIC SCALPEL DEVICES USING A NOVEL REAL-TIME DIGITAL QUANTIFICATION TECHNIQUE Fernando J Kim, MD, David E Sehrt, BS, Shalini Tayal, MD, Wilson R Molina, MD, Denver Health Medical Center, Tony Grampsas Cancer Center, University of Colorado Health Sciences Center

S008 WORKLOAD ASSESSMENT OF SURGEONS: CORRELATION BETWEEN NASA TLX AND BLINKS <u>Bin Zheng</u>, <u>MD PhD</u>, Xianta Jiang, Msc, Geoffery Tien, Msc, Adam Meneghetti, MD, Neely Panton, MD, Stella Atkins, PhD, University of British Columbia

S009 MAGNETICALLY ANCHORED CAMERA AND PERCUTANEOUS INSTRUMENTS MAINTAIN TRIANGULATION AND IMPROVE COSMESIS COMPARED TO SINGLE-SITE AND CONVENTIONAL LAPAROSCOPIC CHOLECYSTECTOMY Nabeel A Arain, MD MBA, Luisangel Rondon, MD, Deborah C Hogg, BS, Jeffrey A Cadeddu, MD, Richard Bergs, MS, Raul Fernandez, PhD, Daniel J Scott, MD, University of Texas Southwestern Medical Center at Dallas (Departments of Surgery and Urology), University of Texas at Arlington (Texas Manufacturing Assistance Center)

S010 DETERMINATION OF THE IDEAL POSTURE FOR THE SURGEON DURING LAPAROSCOPIC SURGERY <u>Cas Van't Hullenaar</u>, <u>MD</u>, Maarten Van Alphen, BSc, Matthijs Hendriks, BSc, Ivo Broeders, Professor, Meander Medical Center, Amersfoort / University Medical Center Utrecht/ Twente University, Eschede

S011 UNIVERSAL MULTIFUNCTIONAL HD VIDEO SYSTEM FOR MINIMALLY INVASIVE, OPEN AND MICRO SURGERY Nicholas N Nissen, MD, Vijay Menon, MD, James Williams, BA, Steven D Colquhoun, MD, George Berci, MD, Cedars-Sinai Medical Center, Los Angeles, CA

 $To send your \ questions \ and \ comments \ for this session \ Text \ SSO2 \ and \ your \ message \ to \ 22333 \cdot Tweet \ @poll \ SSO2 \ and \ your \ message \cdot Go \ to \ http://pollev.com/SAGES6F \ during \ the \ session \ the \ session$

SAGES Concurrent Session SS03 - HPB (Hepatobiliary and Pancreas)

Moderators: David M. Mahvi, MD & Bruce D. Schirmer, MD

S012 - Withdrawn

S013 ONCOLOGIC SAFETY OF LAPAROSCOPIC HEPATECTOMY VERSUS OPEN HEPATECTOMY IN HEPATOCELLULAR CARCINOMA Stephen Ky Chang, FRCS, Chee Wei Tay, MRCSEd, Wah Wah Hlaing, Ms, Iyer Shridhar Ganpathi, FRCS, Victor Tw Lee, FRCS, Krishnakumar Madhavan, FRCS, National University Health System, Singapore

S014 CONSECUTIVE 87 CASES OF LAPAROSCOPIC PANCREATODUODENECTOMY: CHANGES OF CLINICAL OUTCOMES AND ITS IMPLICATION FOR CLINICAL APPLICATION Song Cheol Kim, MD, Hae Ran Ha, RN, Hae R Seo, RN, Gi B Song, MD, Yong S Jung, MD, Yong H Kim, MD, Jae Bum Park, MD, Duck J Han, MD, Yun B. Choi, Department of Surgery, University of Ulsan College of Medicine

S015 MINIMALLY INVASIVE APPROACHES TO INTRAHEPATIC AND EXTRAHEPATIC CHOLANGIOCARCINOMA <u>Andrew A Gumbs, MD</u>, Nicolas Jarufe, MD, Brice Gayet, MD PhD, Summit Medical Group, Pontificia Universidad Católica School of Medicine, Institut Mutualiste Montsouris S016 - Withdrawn

S017 NORMOKINETIC BILIARY DYSKINESIA: A NOVEL DIAGNOSIS <u>Christopher G Ducoin, MD MPH</u>, Daryl D Wier, MD FACS, Orlando Health, Center for Digestive and Metabolic Surgery

To send your questions and comments for this session Text SSO3 and your message to 22333 // Tweet @poll SSO3 and your message // Go to http://pollev.com/SAGES6D during the session

Are You Ready to Get Physical?

Are you and/or your spouse or partner, feeling sluggish while in sunny San Diego because that is a crime! If so, you might like to join our first ever SAGES "Lets Get Physical" aerobic class! The class will be held at the Marriott Marquis on Thursday, March 8 and Friday, March 9 in the Rancho Santa Fe room at 8:00 am. Join SAGES President Dr. Steven Schwaitzberg's wife Dr. Lisa Jacobsen, who will be running the class. Put on your headband, grab those legwarmers and come join us!

7:30 AM - 10:00 AM

*Included in Registration SuperPass (Option A) or Registration Option B

B B

Resident/Fellow Scientific Session

Chair: Lora Melman, MD; Co-Chair: Tung Tran, MD

Location: Room 6B

In this session, residents and fellows will present their clinical and basic science research to a panel of prominent faculty who are respected in the fields of minimally invasive / bariatric surgery, flexible gastrointestinal endoscopy, and surgical education. After each presentation, panelists will rank each speaker with regard to study content and originality, design and methodology, interpretation of results, and overall presentation skills. Awards will be given to the top two presenters at the conclusion of the session.

Objectives:

At the conclusion of this session, participants will be able to:

- · Identify challenges and pitfalls in research design, methodology, and critical review of results
- Discuss these challenges and pitfalls in order to improve future study design
- · Recognize optimum communication skills in terms of a 10 minute presentation
- · Acquire an appreciation for the depth and breadth of research conducted by surgical residents and fellows

SCHEDULE

7:30am Introduction

Lora Melman, MD; Tung Tran, MD

7:35am Resident/Fellow presentations
10:00am Adjourned

Expert Panelists: Aaron Fink, MD, Leena Khaitan, MD, Archana Ramaswamy, MD, Barry Salky, MD, Chris Schlachta, MD

- S132 IMPACT OF AN ENHANCED RECOVERY PROGRAM ON SHORT-TERM OUTCOMES AFTER SCHEDULED LAPAROSCOPIC COLON RESECTION Nicoleta O Kolozsvari, MD, Giovanni Capretti, MD, Pepa Kaneva, MSc, Amy Neville, MD, Franco Carli, MD, A. Sender Liberman, MD, Patrick Charlebois, MD, Barry Stein, MD, Melina C Vassiliou, MD, Gerald M Fried, MD, Liane S Feldman, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery and Innovation, McGill University, Montreal, Qc, Canada
- S133 PRE-OPERATIVE ENDOSCOPIC TREATMENT DOES NOT ADVERSELY IMPACT LAPAROSCOPIC MYOTOMY OUTCOMES <u>S El Djouzi, MD</u>, V B Tsirline, MD, P D Colavida, MD, A Brokamp, A Walters, MS, D Stefanidis, MD PhD, T B Heniford, MD, Carolinas Medical Center
- S134 LAPAROSCOPIC VERSUS OPEN HERNIA REPAIR, RESULTS FROM THE NATIONWIDE INPATIENT SAMPLE P.D. Colavita, MD, A L. Walters, MS, V. B. Tsirline, MD, A E Lincourt, PhD, B T Heniford, MD, Carolinas Medical Center, Charlotte, NC
- S135 GALLBLADDER DAMAGE CONTROL: COMPROMISED PROCEDURE FOR COMPROMISED PATIENTS <u>Justin Lee, MD</u>, Reza Kermani, MD, Haisar Dao, MD, Kevin F O'donnell, MD, St. Elizabeth Medical Center, Tufts University School of Medicine
- S136 REVISIONAL SURGERY AFTER FAILED LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: A SYSTEMATIC REVIEW <u>Ahmad Elnahas, MD</u>, Kerry Graybiel, MD, Forough Farrokhyar, MPhil PhD, Scott Gmora, MD FRCSC, Mehran Anvari, MBBS PhD FRCSC FACS, Dennis Hong, MD MSc FRCSC FACS, McMaster University, St. Joseph's Healthcare Hamilton
- S137 UTILITY AND ACCURACY OF ENDOBRONCHIAL ULTRASOUND AS A DIAGNOSTIC AND STAGING TOOL FOR THE EVALUATION OF MEDIASTINAL ADENOPATHY Rebecca J Johnson, MD, J E Stephenson, MD FACS, C Schammel, PhD, B L Johnson, MS, K Banks, S Hutcheson, W Wall, W D Bolton, MD, Greenville Hospital System University Medical Center
- S138 DOES A DEDICATED SURGICAL TEAM REALLY MAKE THE BARIATRIC SURGICAL SUITE MORE EFFICIENT? <u>Matthew Fourman, MD</u>, Leena Khaitan, MD, Case Western Reserve University Hospitals
- S139 LAPAROSCOPIC PREPERITONEAL INCISIONAL HERNIA REPAIR FOLLOWING RENAL TRANSPLANTATION <u>Lucian Panait</u>, <u>MD</u>, Robert L Bell, MD, Kurt E Roberts, MD, Andrew J Duffy, MD, Yale School of Medicine
- S140 INCISIONAL HERNIA AFTER SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY <u>Patricia L Eichhorn, MD</u>, T. Paul Singh, MD, Brian Binetti, MD, Department of Surgery, Albany Medical Center

To send your questions and comments for this session Text RESFEL and your message to 22333 · Tweet @poll RESFEL and your message · Go to http://pollev.com/SAGESGB during the session

SAGES acknowledges educational grants in support of this session from Ethicon Endo-Surgery and Synovis Surgical Innovations

7:30 AM - 12:00 PM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: Metabolic Surgery and Cure of Diabetes

Chair: Marina Kurian, MD; Co-Chair: Bruce Wolfe, MD

Location: Room 6A

Many weight loss surgeries produce improvement in co-morbid conditions including metabolic syndrome and type 2 diabetes. Differentiating the effects and mechanisms of action of prevailing and new techniques will likely help physicians and patients to identify appropriate procedures and personalize treatment. This course is designed to critically review the available data, which delineate these physiologic mechanisms of various procedures. Experts who have performed landmark research in this area will present their experiences and share current state-of-the art information.

Objectives:

At the conclusion of this session, participants will be able to:

- Understand the physiologic mechanisms of type II diabetes improvement
- Describe different metabolic operations, which have beneficial effects on diabetes
- Differentiate the metabolic effects of various metabolic procedures
- Tailor their operative intervention in clinical practice based on their improved understanding of mechanisms relevant to diabetes and its treatment



7:30 AM - 12:00 PM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: Metabolic Surgery and Cure of Diabetes (continued)

SCHEDULE

7:30am **Introduction** Marina Kurian, MD

GLP What? Making Sense of the Hormones & the Interactions:

7:35am Part 1: Satiety Signals/Peptides Bruce Wolfe, MD 8:05am Part 2: GLP1, GIP, Ceramide & Impact of the Foregut vs. Hindgut Sayeed Ikramuddin, MD

8:45am Break

9:00am Is Sleeve Gastrectomy a Metabolic Operation

SGIT/ Ileal Brake/ Ileal Interposition, Sleeve en Y: Is it all a DS

9:20amYesMichel Gagner, MD9:40amNoAureo DePaula, MD10:00amDiscussionMarina Kurian, MD

10:15am Duodenal Jejunal Bypass: Surgical and Endoscopic

10:30am Break

10:40am Does Adjustable Gastric Banding Cure Diabetes: Why or Why Not and How? Wendy Brown, MD
11:00am Does Roux-en-Y Gastric Bypass Cure Diabetes: Why or Why Not and How? Kelvin Higa, MD

11:20amSleeve and DMGregg Jossart, MD11:40amGastric Plication and DMStacy Brethauer, MD

11:55am Concluding Remarks

Bruce Wolfe, MD

To send your questions and comments for this session Text PGMETA and your message to 22333 • Tweet @poll PGMETA and your message • Go to http://pollev.com/SAGES6A during the session

SAGES acknowledges educational grants in support of this course from Covidien and Stryker Endoscopy

7:30 AM - 8:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Posters of Distinction

Chair: Brian Jacob, MD Co-Chair: Denise Gee, MD

Location: Room 4

Samer Mattar, MD

Ricardo Cohen, MD

This one-hour session is dedicated to the top 16 committee-selected posters at SAGES this year. It is an opportunity to hear about the most cutting edge surgical and endoscopic related research. This year, the audience will help select the winning poster by voting.

Objectives:

At the conclusion of this session, participants will be able to:

- Enhance their knowledge base about the top ten research posters
- Understand the latest developments in surgical and endoscopic research

SCHEDULE

7:30am Introduction and review of audience response system Brian Jacob, MD

7:35AM Presentations of the top 16 posters (3 minutes each with 1-2 comments or questions per poster)

8:25AM Audience votes / Session Conclusion

Brian Jacob, MD

This session is not accredited for CME by SAGES.

P001 TRIMODAL PREHABILITATION PROGRAM IMPROVES FUNCTIONAL RECOVERY IN COLORECTAL CANCER SURGERY: A PILOT STUDY Chao Li, MD, Francesco Carli, MD MPhil, Patrick Charlebois, MD, Barry Stein, MD, Alexander S Liberman, MD, Berson Augustin, BSc, Pepa Kaneva, MSc, Ann Gamsa, PhD, Do J Kim, MSc, Gerald M Fried, MD, Melina C Vassiliou, MD MEd, Liane S Feldman, MD, McGill Unversity Health Centre

P002 NATURAL ORIFICE SPECIMEN EXTRACTION VERSUS CONVENTIONAL LAPAROSCOPICALLY ASSISTED ANTERIOR RESECTION: A CASE-MATCHED STUDY IN 104 PATIETNS <u>Won Ho Choi, MD</u>, Gyu-seog Choi, MD, Jun Seok Park, MD, Soo Yeun Park, MD, Hye Jin Kim, MD, Jong Pil Ryuk, MD, Colorectal Cancer Center, Kyungpook National University Medical Center, Daegu, Korea

P003 TRANSANAL ENDOSCOPIC VIDEO-ASSISTED (TEVA) EXCISION <u>Madhu Ragupathi, MD</u>, Dominique Vande Maele, MD, Javier Nieto, MD, T. Bartley Pickron, MD, Eric M Haas, MD FACS FASCRS, 1. Colorectal Surgical Associates, Ltd LLP, Houston, TX; 2. Division of Elective General Surgery, Department of Surgery, The University of Texas Medical School at Houston, TX

P004 SURGICAL MANAGEMENT OF GASTROINTESTINAL STROMAL TUMORS (GIST) OF THE STOMACH. COMPARISON OF OUTCOMES AFTER LAPAROSCOPIC VERSUS OPEN SURGERY. THE MOST RECENT NSQIP ACS DATABASE Omar Bellorin, MD, Mingwei Ni, MD, Frank Zheng, Turner James, MD, Du Litong, MD, New York Hospital Queens. Flushing. New York

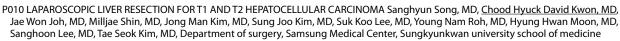
P005 A PROSPECTIVE RANDOMIZED TRIAL COMPARING 9-YEAR FOLLOW UP RESULTS BETWEEN OPEN VS. LAPAROSCOPY-ASSISTED DISTAL GASTRECTOMY FOR EARLY GASTRIC CANCER Lee Joo-ho, MD PhD, Chae Sumin, MD, Han Ho-seong, MD PhD, Ewha Womans University School of Medicine, Seoul National University Bundang Hospital

P006 PATTERNS OF DETERIORATION AND IMPROVEMENT IN ABDOMINAL WALL FUNCTION AFTER VENTRAL INCISIONAL HERNIA REPAIR: RESULTS OF A PROSPECTIVE STUDY Ross F Goldberg, MD, Armando Rosales-velderrain, MD, Tatyan M Clarke, MD, Michael Parker, MD, Madi Dinkins, Mauricia A Buchanan, RN, John A Stauffer, MD, Horacio J Asbun, MD FACS, C Daniel Smith, MD FACS, Steven P Bowers, MD FACS, Mayo Clinic - Florida

P007 LONG TERM FOLLOW UP OF LAPAROSCOPIC TEP HERNIA REPAIR USING SLIT MEDIUM SIZE POLYPROPYLENE MESH <u>Sugandi Hardjanto</u>, <u>MD</u>, Kasih Ibu Hospital

P008 PREDICTORS OF POOR OUTCOMES IN FUNCTIONALLY DEPENDENT PATIENTS UNDERGOING ELECTIVE VENTRAL HERNIA REPAIR <u>Drew Reynolds</u>, MD, Daniel Davenport, PhD, J. Scott Roth, MD, University of Kentucky

P009 ERCP AND LAPAROSCOPIC CHOLECYSTECTOMY IN A COMBINED(ONE-STEP) PROCEDURE: A RANDOM COMPARISON TO THE STANDARD(TWO-STEP) PROCEDURE. <u>Matthew Johnson, MD</u>, Edward Samourjian, MD, Nathan Ozobia, MD FACS, University of Nevada School of Medicine



P011 OPEN VERSUS LAPAROSCOPIC LIVER RESECTION FOR T1 AND T2 HEPATOCELLULAR CARCINOMA: A MIDTERM RESULT Choon Hyuck D Kwon, MD PhD, Sanghyun Song, MD, Jae-won Joh, MD PhD, Samsung Medical Center, Sungkyunkwan University School of Medicine

P012 MANAGEMENT OPTIONS FOR OBESITY AFTER BARIATRIC SURGERY Kristen Buttelmann, PAC MMS, Amy Yetasook, Melissa Ruiz, MD, John Linn, MD, Ervin Denham, MD, Michael Ujiki, MD, NorthShore University HealthSystem

P013 LEAK AFTER SLEEVE GASTRECTOMY: PRELIMINARY RESULTS FROM BARIATRIC OUTCOME LONGITUDINAL DATABASE (BOLD) Ashutosh Kaul, MD FRCS FACS, Jyoti Sharma, MD, Debbie Winegar, PhD, Donald Risucci, PhD, Anthony Maffei, MD FACS, Thomas Cerabona, MD FACS, New York Medical College

P014 LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: LONG TERM CLINICAL OUTCOMES Ayman Obeid, MD, Joshua W Long, MD, Manasi Kakade, MPH, Clements H Ronald, MD, Stahl Richard, MD, Jayleen Grams, MD PhD, Department of Surgery, University of Alabama at Birmingham; Department of Surgery, Vanderbilt University

P015 THE ROLE OF TACTILE FEEDBACK ON GRIP FORCE DURING LAPAROSCOPIC TRAINING TASKS Christopher R Wottawa, MS, Jeremiah R Cohen, Richard E Fan, PhD, Warren S Grundfest, MD FACS, Martin O Culjat, PhD, Erik P Dutson, MD SAGES, University of California, Los Angeles P016 THE EFFECT OF LAPAROSCOPIC STAPLERS ON SMALL BOWEL PERFUSION AND LEAK RATES Bilal M Shafi, MD, Parth K Shah, MD, Harveen Bal, MD, Douglas L Fraker, MD, Hospital of University of Pennsylvania

To send your questions and comments for this session

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8:30 AM - 9:30 AM

*included in Registration SuperPass (Option A) or Registration Option B

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS04 - Quality Outcomes

Moderators: L. William Traverso, MD & John Hunter, MD

S018 SCREENING FOR THROMBOPHILIAS IN BARIATRIC SURGICAL CANDIDATES Vincent Chavanon, Medical Student, Gabriel E Herrera, MD, Giselle Hamad, MD, University of Pittsburgh Medical Center, University of Pittsburgh

S019 ANALYSIS OF PRACTICE PATTERNS IN 66103 LAPAROSCOPIC AND OPEN CHOLECYSTECTOMIES USING THE NSQIP DATABASE Jesse R Gutnick, MD, Allan E Siperstein, MD, Cleveland Clinic

S020 OUTCOMES FOLLOWING DIAGNOSTIC LAPAROSCOPY FOR TRAUMA: A NATIONAL TRAUMA DATA BANK COMPARISON OF UNIVERSITY AND COMMUNITY HOSPITALS Wissam Raad, MD MRCS, J. Alexander Palesty, MD FACS, Juan A Sanchez, MD FACS, The Stanley J. Dudrick Department of Surgery, Saint Mary's Hospital, Waterbury, CT

S021 THE BENEFITS OF DIAGNOSTIC LAPAROSCOPY IN THE EVALUATION OF ABDOMINAL TRAUMA Jay N Collins, MD, Rebecca C Britt, MD, Leonard J Weireter, MD, L D Britt, MD MPH, Eastern Virginia Medical School

S022 ENVIRONMENTAL CONTAMINATION AS A RESULT OF AEROSOLIZED BLOOD AND FLUID DURING LAPAROSCOPIC SURGERY. Richard K. Englehardt, MD, Brent Nowak, Michael V Seger, MD, Frank D Duperier, MD, University of Texas Medical Center at Houston, Bariatric Medical

S023 ASSESSING IMMEDIATE POSTOPERATIVE URINARY FUNCTION IN TAPP INGUINAL HERNIAS USING THE AMERICAN UROLOGICAL ASSOCIATION SYMPTOM SCORE FOR BPH Robert Mckay, MD, Ellis Hospital

To send your questions and comments for this session Text SSO4 and your message to 22333 // Tweet @poll SSO4 and your message // Go to http://pollev.com/SAGES4 during the session

8:30 AM - 10:00 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Surgery in Space

Carlos Godinez, MD Co-Chair: Daniel Buckland, PhD

Location: Room 6E

Location: Room 4

This session will explain how recent changes in the US Manned Space program provide an opportunity for surgeons to contribute to the exploration of space. It will also cover common medical and surgical issues related to long-term spaceflight as well as current treatments and procedures.

At the conclusion of this session, participants will be able to:

- Describe medical and surgical issues that are spaceflight mission impacting
- · Describe current treatment and imaging standards for austere environments
- · Describe the effect on gravity on common medical conditions

SCHEDULE

8:30am	Current Status of the US Human Spaceflight Program	Daniel Buckland, PhD
8:40am	Likely Surgical Issues in Long-Term Spaceflight	Mark Campbell, MD
8:55am	Surgery in Simulated Space Environments	Christian Otto, MD
9:10am	Limitations and Advantages to Minimally Invasive Surgery in Weightlessness	Timothy Broderick, MD
9:25am	Operational Considerations of Surgery in Space	David Williams, MD Astronaut, International Space Station
9:40am	Panel Discussion + Q&A	

To send your questions and comments for this session

Text SPACEMD and your message to 22333 · Tweet @poll SPACEMD and your message · Go to http://pollev.com/SAGES6E during the session



8:30 AM - 10:15 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Video Session: Best of NOTES from around the World

Chair: David Rattner, MD
Co-Chair: Antonello Forgione, MD

Location: Room 6F

Natural Orifice Translumenal Endoscopic Surgery (NOTES) has shown promise as potentially providing benefit to patients in terms of decreased post-operative pain, faster recovery, and improved cosmesis. However, this field is in a state of evolution and various strategies and instrumentation are still being explored and refined. In this session, NOTES experts from around the world will share their experiences through video-based presentations showing how they perform these procedures, including operative strategies and equipment.

Objectives

At the conclusion of this session, participants will be able to:

- · Describe access routes for Natural Orifice Cholecystectomy
- Describe basic steps for performing a Trans-oral Endoscopic Heller Myotomy
- Describe some experimental NOTES procedures that are under development
- · Describe trans-rectal access for Colon Surgery

Schedule

8:30am	NOSCAR Trials and Tribulations	David Rattner, MD
8:35am	Per Oral Endoscopic Esophageal Myotomy: POEM is here!	Haru Inoue, MD
8:45am	Safe and effective methods for transgastric and transesophageal surgery	Christopher Gostout, MD
8:55am	Transvaginal Access and Cholecystectomy	Antonello Forgione, MD
9:05am	NOTES solid organ surgery	Eduardo Targarona, MD
9:15am	Transvaginal and Transgastric access route for NOTES Morbid Obesity Surgery	Santiago Horgan, MD
9:25am	Prevention and Management of NOTES complications	Ricardo Zorron, MD
9:35am	NOTES Total Colectomy	Antonio Lacy, MD
9:45am	TOVAT – TransOral video assisted Thyroidectomy	Tahar Benhidjeb, MD
9:55am	Innovative NOTES technologies from around the world	GV Rao, MD
10:05am	Panel Discussion	

To send your questions and comments for this session

Text BESTNOTE and your message to 22333 \cdot Tweet @poll BESTNOTE and your message \cdot Go to http://pollev.com/SAGES6F during the session

SAGES acknowledges an educational grant in support of this session from Olympus America Inc.

8:30 AM - 9:30 AM

*Included in Registration SuperPass (Option A) or Registration Option B

Stories of SAGES Heroes

Chair: Tonia Young-Fadok, MD
Co-Chair: Thomas McIntyre, MD

Location: Room 6D

SAGES has a strong commitment to supporting and advancing humanitarian efforts by its members. This session provides an opportunity for those interested to become more involved in such activities. Participants will learn about organized activities of SAGES and the individual experiences of SAGES members who have participated in national and international humanitarian efforts. An emphasis will be placed on how participants may become involved with these activities and incorporate them into their practice.

OBJECTIVES:

At the conclusion of this session, participants will be able to:

- · Become involved in international humanitarian efforts
- Evaluate local educational needs appropriately
- · Contribute to local humanitarian efforts

SCHEDULE

8:30am	Groundbreaking in Haiti	Thomas McIntyre, MD
8:40am	Deciding How and Where in the World to Start	Ramon Berguer, MD
8:50am	Humanitarianism at Home – Med-Wish	Jeffrey Ponsky, MD
9:00am	SAGES' History of Giving	Jo Buyske, MD

9:10am Humanitarian and Volunteerism (selected from submitted abstracts)

S024 LOCAL ADAPTATIONS AIDS ESTABLISHMENT OF LAPAROSCOPIC SURGERY IN A SEMI-L

S024 LOCAL ADAPTATIONS AIDS ESTABLISHMENT OF LAPAROSCOPIC SURGERY IN A SEMI-URBAN NIGERIAN HOSPITAL <u>Adewale O Adisa, MBChB FWACS FMCSNig DMAS</u>, Oladejo O Lawal, MBBS FMCSNig FWACS, Olukayode A Arowolo, MBBS FWACS, Olusegun I Alatise, MBChB FWACS, Obafemi Awolowo University, Ile-Ife, Nigeria

To send your questions and comments for this session Text HEROES and your message to 22333 · Tweet @poll HEROES and your message · Go to http://pollev.com/SAGES6D during the session

9:30 AM - 10:30 AM

*included in Registration SuperPass (Option A) or Registration Option B

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS05 - Education

Location: Room 4

Moderators: Maurice E. Arregui, MD & Jo Buyske, MD

S025 REMOTE EVALUATION OF LAPAROSCOPIC PERFORMANCE USING THE GLOBAL OPERATIVE ASSESSMENT OF LAPAROSCOPIC SKILLS lan Choy, BEng MD MEd, Andras Fesco, BSc MD, Josephine Kwong, BScH MPA, Timothy Jackson, MD MPH, <u>Allan Okrainec, MD MHPE</u>, Department of Surgery, University of Toronto, Temerty/Chang Telesimulation Centre, University Health Network, Toronto, Ontario, Canada

S026 DATA-BASED SELF-STUDY GUIDELINES FOR THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY EXAMINATION Maria A Cassera, BS, <u>Bin Zheng, MD PhD</u>, Lee L Swanstrom, MD, Gastrointestinal and Minimally Invasive Surgery Division, The Oregon Clinic

S027 COMPREHENSIVE PROFICIENCY-BASED INANIMATE TRAINING FOR ROBOTIC SURGERY: RELIABILITY, FEASIBILITY, AND EDUCATIONAL BENEFIT Nabeel A Arain, MD MBA, Genevieve Dulan, MD, Deborah C Hogg, BS, Robert V Rege, MD, Cathryn Powers, MD, Seifu T Tesfay, RN MS, Linda S Hynan, PhD, Daniel J Scott, MD, University of Texas Southwestern Medical Center

S028 LEARNING CURVE OF ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) IN AN ESTABLISHED EXPERIMENTAL SETTING Masayuki Kato, MD PhD, Yunho Jung, MD, Mark A Gromski, MD, Jongchan Lee, MD, Navaneel Biswas, MD, Chuttani Ram, MD, Kai Matthes, MD PhD, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

S029 SIGNIFICANT TRANSFER OF SURGICAL SKILLS OBTAINED WITH AN ADVANCED LAPAROSCOPIC TRAINING CURRICULUM; FEASIBILITY OF LEARNING ADVANCED LAPAROSCOPY IN A GENERAL SURGERY RESIDENCY. <u>Julian Varas, MD</u>, Ricardo Mejía, MD, Oslando Padilla, PhDS, Felipe Maluenda, MS, Napoleon Salgado, MD, Arnoldo Riquelme, MD, Jorge Martinez, MD, Nicolas Jarufe, MD, Rajesh Aggarwal, MBBS MA PhD FRCS, Camilo Boza, MD, Department of Digestive Surgery. Surgery Division. Pontificia Universidad Católica de Chile

S030 THE EFFECTS OF VIEWING AXIS ON LAPAROSCOPIC PERFORMANCE: A COMPARISON OF NON-EXPERT AND EXPERT LAPAROSCOPIC SURGEONS. Rebecca J Rhee, MD, Gladys Fernandez, MD, Ron Bush, BS, Neal E Seymour, MD, Baystate Medical Center-Western Campus Tufts University School of Medicine

To send your questions and comments for this session Text SSO5 and your message to 22333 • Tweet @poll SSO5 and your message • Go to http://pollev.com/SAGES4 during the session

9:30 AM - 3:30 PM

Exhibits, Poster Session, and Learning Center Open

10:00 AM - 12:00 PM

*Included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: Per Oral Endoscopic Myotomy (POEM)

Chair: Haru (Haruhiro) Inoue, MD

Co-Chair: Brian J. Dunkin, MD & David Earle, MD

Location: Room 6B

This course will introduce the attendee to POEM (Per Oral Endoscopic Myotomy) for the treatment of achalasia. This endoscopic method of creating a surgical myotomy is a truly unique application of NOTES with great clinical relevance. Professor Inoue invented the POEM procedure by borrowing from the techniques of endoscopic submucosal dissection (ESD) so frequently used in Japan for treating early gastric cancer. Any surgeon performing laparoscopic Heller myotomy should come get didactic and hands-on experience performing POEM. It is the future of achalasia treatment!

Objectives:

At the conclusion of this session, participants will be able to:

- Review the pathophysiology and diagnosis of achalasia
- · Compare endoscopic and surgical management strategies of achalasia
- Describe the steps for performing a POEM procedure
- Discuss the experience to date with POEM both in the US and abroad

SCHEDULE

10:00am	Introduction and history of POEM	Haru Inoue, MD
10:10am	Achalasia – Pathophysiology and Diagnosis	Silvana Perretta, MD
10:30am	Achalasia – Treatment Options and Expected Outcomes	Eric Hungness, MD
10:50am	POEM	Haru Inoue, MD
11:20am	Clinical Experience in USA	Lee Swanstrom, MD
11:35am	Clinical Experience in Europe	Karl Hermann Fuchs, MD
11:50am	Discussion and Adjourn	

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Hotel Video Loop

Attention Guests at the San Diego Marriott Marquis & Marina Hotel, Omni San Diego Hotel, and Hilton San Diego Bayfront Hotel:

The 2012 Program Chairs have created an additional avenue for excellent videos to be viewed by meeting attendees. You may view these videos in your respective hotel rooms on Thursday, Friday, and Saturday. Please turn to channel 37 (Marriott Marquis), channel 16 (Omni) or channel 49 (Hilton) in your hotel room to view the 2012 Video Channel Loop videos. The Video Channel Loop listing is available on page 174 of your program.



10:00 AM - 12:00 PM

*included in Registration SuperPass (Option A) or Registration Option B

Postgraduate Course: Laparoscopic Ventral Hernia with Endoscopic Component Separation

Chair: Brent D. Matthews, MD

Co-Chair: Michael J. Rosen, MD & Carla M. Pugh, MD, PhD

Location: Room 6D

Brent D. Matthews, MD

This postgraduate course will explore novel techniques of minimally invasive ventral hernia repair and discuss the role of endoscopic component separation release in open and laparoscopic abdominal wall reconstruction. Applicants should be familiar with laparoscopic and open ventral hernia repair techniques and wish to expand their skills in advanced ventral hernia repair.

Objectives:

At the conclusion of this session, participants will be able to:

Technique of Laparoscopic Ventral Hernia Repair:

- Describe the techniques of endoscopic and open component separation release
- Recognize the role of laparoscopic ventral hernia repair and endoscopic components separation technique in reducing postoperative patient morbidity
- Differentiate which patients are most appropriate for endoscopic component separation techniques to augment abdominal wall closure during laparoscopic or open ventral hernia repair
- Decrease wound complications in patients with complex ventral incisional hernias

SCHEDIII E

10:00am

Biomaterials, Mesh Fixation, Primary Tissue Closure 10:20am **Evidence Based Patient Selection for Laparoscopic Ventral Hernia Repair:** Matthew I. Goldblatt, MD **Who Benefits from Minimally Invasive Surgery** 10:35am Component Separation Release: Anatomy, The RamirezTechnique and Alfredo Carbonell, DO **Additional Variations to Augment Abdominal Wall Closure** 11:00am **Endoscopic Component Separation Release:** Michael J. Rosen, MD **Fundamentals of a Novel Minimally Invasive Technique** An Algorithm for the Optimal Use of Endoscopic Components Separation Steve P. Bowers, MD During Ventral Hernia Repair: Sorting Out Patient Selection as It Relates to **Open and Minimally Invasive Techniques** 11:30am **Discussion**

To send your questions and comments for this session

 $\textit{Text PGHERNIA and your message to 22333} \cdot \textit{Tweet } @poll \textit{PGHERNIA and your message} \cdot \textit{Go to http://pollev.com/SAGES6D during the session}$

SAGES acknowledges educational grants in support of this course from: Covidien, Lifecell Corporation, Synovis Surgical Innovations

10:15 AM - 12:00 PM

*included in Registration SuperPass (Option A) or Registration Option B

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS06 - NOTES

Location: Room 6F

Moderators: Aaron S. Fink, MD & Kurt E. Roberts, MD

- S031 TRANS-ORAL VIDEO-ASSISTED NECK SURGERY (TOVANS) A NEW TRANS-ORAL TECHNIQUE OF ENDOSCOPIC THYROIDECTOMY WITH GASLESS PRE-MANDIBLE APPROACH Akihiro Nakajo, PhD, Hideo Arima, PhD, Munetsugu Hirata, Tadao Mizoguchi, Yuko Kijima, PhD, Heiji Yoshinaka, PhD, Shoji Natsugoe, PhD, Surgical Oncology of Kagoshima University Hospital
- S032 TRANSANAL HYBRID SIGMOID RESECTION -INTRODUCTION INTO CLINICAL PRACTICE <u>Karl H Fuchs, MD</u>, Wolfram Breithaupt, MD, Gabor Varga, MD, Thomas Schulz, MD, AGAPLESION Markus Krankenhaus
- S033 PROSPECTIVE RANDOMIZED CLINICAL TRIAL COMPARING LAPAROSCOPIC CHOLECYSTECTOMY AND HYBRID NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) (NCT00835250) <u>José F Noguera, PhD MD</u>, Angel Cuadrado, PhD MD, Juan C García, MD, Rafael Morales, MD, José M Olea, MD, Hospital Son Llàtzer, IUNICS, IDMQ
- S034 NOTES TRANSANAL RECTOSIGMOID RESECTION WITH TOTAL MESORECTAL EXCISION IN A LARGE HUMAN CADAVER SERIES <u>Dana A Telem, MD</u>, K S Han, MD, M C Kim, MD, I Ajari, MD, D K Sohn, MD, Kevin Woods, MD, V Kapur, MD, M A Sbeih, MD, S Perretta, MD, David W Rattner, MD, Patricia Sylla, MD, Massachusetts General Hospital
- S035 TRANSGASTRIC LARGE ORGAN EXTRACTION; THE INITIAL EXPERIENCE <u>Takayuki Dotai</u>, MD, Alisa Coker, MD, Luciano Antozzi, MD, Geylor Acosta, MD, Masayasu Aikawa, MD, Nikolai Bildzukewicz, MD, Marcos Michelotti, MD, Bryan Sandler, MD, Garth Jacobsen, MD, Mark Talamini, MD, Santiago Horgan, MD, Center for the Future of Surgery, Department of surgery, University of California, San Diego
- S036 PROSPECTIVE COMPARISON OF SHORT-TERM OUTCOMES BETWEEN HYBRID NOTES TRANSVAGINAL CHOLECYSTECTOMY AND LAPAROSCOPIC CHOLECYSTECTOMY Byron F Santos, MD, Eric S Hungness, MD, Ezra Teitelbaum, MD, Fahd O Arafat, MD, Magdy P Milad, MD, Nathaniel J Soper, Northwestern University

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2012 Poster Session

Posters will be on display, Thursday, Friday & Saturday.

Poster presenters will be available for Q&A on Friday, from 11:15 AM - 12:15 PM

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SA

Education and Training in Crisis

Chair: L. Michael Brunt, MD Co-Chair: John Hunter, MD

Location: Room 6E

The system of surgical education and training of surgeons is currently under stress for a number of reasons. This session will address some of these issues including medical school preparation for residency, the impact of work hour restrictions, the need for change in training in GI surgery, and the looming shortage in the surgical workforce.

Objectives:

At the conclusion of this session, participants will be able to:

- · Identify shortcomings in and opportunities to improve student preparedness for surgical residency
- · Discuss the implications of work hour restrictions on surgical training
- Describe the effectiveness of the current training paradigm in enabling expertise in GI surgery
- · Review trends and future considerations in the surgical workforce

SCHEDULE

10:00am	Are We Adequately Preparing Medical Students for Surgical Internship?	L. Michael Brunt, MD
10:15am	The ACGME Perspective Stance on Duty Hours	L.D. Britt, MD
10:30am	Unintended Consequences of Work Hour Restrictions on Surgical Training	Russell Nauta, MD
10:50am	Time For Change in Residency Training in GI Surgery	David Mahvi, MD
11:05am	Acquisition of Competence, Proficiency and Expertise	John Hunter, MD
11:20am	Role of the ACS in Fostering Surgical Education and Training	Ajit Sachdeva, MD
11:35am	Discussion	Panel

To send your questions and comments for this session Text CRISIS and your message to 22333 · Tweet @poll CRISIS and your message · Go to http://pollev.com/SAGES6E during the session

10:30 AM - 12:00 PM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES/IPEG Joint Panel "My Way is Better Than Yours"

Chair: Todd Ponsky, MD
Co-Chair: Jeffrey Ponsky, MD

Location: Room 6C

Scientific Session & Postgraduate Course

This session will address common surgical problems that are treated by both pediatric surgeons and adult surgeons. The management of these problems are very different between these two groups so both groups will present their method of therapy and debate which is "better".

Objectives:

At the conclusion of this session, participants will be able to:

- · Understand when either the adult or pediatric technique for hernia repair may be relevant for their patients
- Understand when either the adult or pediatric technique for nissen may be relevant for their patients
- · Understand when either the adult or pediatric technique for biliary reconstruction may be relevant for their patients
- · Understand when either the adult or pediatric technique for Gtube placement may be relevant for their patients

SCHEDULE

10:30amGastrostomy Tube PlacementTodd Ponsky, MD
Jeffrey Ponsky, MD10:45amInguinal Hernia Repair in Young AdultsC.K. Yeung, MD
Michael Rosen, MD

11:10am Fundoplication George W. Holcomb, III, MD

John Hunter, MD

11:35am Biliary Reconstruction Nguyen Liem, MD

Nguyen Liem, MD Steven Rothenberg, MD Michel Gagner, MD

12:00 - 1:30 PM

Exhibits, Poster Session, and Learning Center Open

FLS™ Testing Available!

Wednesday, March 7 - Friday, March 9, 2012

Contact FLS@sages.org for more details or to schedule your test.



12:00 PM - 1:30 PM

*Separate Registration Fee for Lunch. Lectures open to Registration Options A & B

Educators Lunch – Milestones in MIS

Chair: Jo Buyske, MD

Co-Chair: James Korndorffer, MD & Kent Van Sickle, MD

Location: Room 11AB

This session will review current and proposed changes in surgical training and certification requirements. The particular focus will be on MIS metrics.

Objectives:

At the conclusion of this session, participants will be able to:

- Discuss rationale for implementation of milestones requirements by ACGME and ABS
- · List currently required milestones
- · Discuss tools available for MIS milestones

SCHEDULE

12:00pm Milestones Initiatives From the ACGME and ABS

Jo Buyske, MD

12:15pm Lessons Learned From a Milestones-Based Residency

Teodor Grantcharov, MD

12:30pm MIS Milestones

James Korndorffer, MD

12:45pm Potential Endoscopy Milestones

Steve Eubanks, MD

1:00pm Summary and Discussion

Kent Van Sickle, MD

SAGES acknowledges our Diamond Level Donors for their support of this activity: Covidien, Ethicon Endo-Surgery

1:30 PM - 5:30 PM

0 PM *Separate Fee Applies

HANDS-ON COURSE: Per Oral Endoscopic Myotomy (POEM)

Chair: Haru (Haruhiro) Inoue, MD

Co-Chair: Brian J. Dunkin, MD & David Earle, MD

Location: UCSD

**Offsite Lab

During this session participants will gain hands-on experience performing POEM on an animate model. There will be 3 participants at each station - one operating the endoscope, one assisting with instrument exchanges, and one holding torque on the scope. Participants will change roles during the course of the procedure to gain familiarity with each portion. Participant ratio – 1:3 Faculty.

Objectives:

At the conclusion of this session, participants will be able to:

- · Describe the steps for performing a POEM
- Discuss the technical challenges for performing POEM
- · Discuss strategies for avoiding complications during POEM

SCHEDULE

1:30pm	Welcome Remarks	Mark Talamini, MD
1:35pm	Introduction of Facility	Santiago Horgan, MD
1:40pm	Video Demonstration - Mucosal Cut and Creating Submucosal Tunnel	David Earle, MD
1:50pm	Video Demonstration - Endoscopic Myotomy and Closure of Mucosal Entry	Brian Dunkin, MD
2:00pm	All Participants Perform Steps of the Procedure:	

Creation of Mucosal Entry Site
Development of Submucosal Tunnel

Myotomy

Closure of Mucosal Entry Site

5:15pm Closing Announcement and Evaluations

Brian Dunkin, MD

Lab Faculty:

David Desilets, MD (GI - Baystate) Jeffrey Marks, MD John Romanelli, MD Karl Hermann Fuchs, MD Ozanan Meireles, MD Nathaniel Soper, MD Eric Hungness, MD Silvana Perretta. MD

SAGES acknowledges an educational grant in support of this course from Olympus America Inc.
SAGES acknowledges contributions in-kind in support of this course from: Boston Scientific, Olympus America Inc.

SAGES Goes Green!

In an effort to support the environment, you will see less paper at the SAGES 2012 Annual Meeting. The printed Final Program will include the regular schedule and course/panel outlines, as well as oral abstracts, Poster of Distinction abstracts and poster listing. However, electronic copies of all the abstracts, digitalposters, and Postgraduate course syllabi will be available on-line for all attendees and as an App for iOS and Android devices. Go to thesagesmeeting.org for more information.

Postgraduate Course: Fundamental Use of Surgical Energy (FUSE™)

Chair: Liane Feldman, MD
Co-Chair: Pascal Fuchshuber, MD

Location: Room 6

Energy-based devices may facilitate or even enable complex procedures, yet despite their frequent use, they remain poorly understood. This Postgraduate course is open to all physicians and allied health care professionals. It is designed to inform and promote best practices for the use of electrosurgical, ultrasonic and other energy sources in the OR. Any health care professional who has ever used an energy-based device in the OR will better understand how it works, when to apply it, and what possible hazards and errors can occur. Participants will have the opportunity to participate in the beta test for the FUSE™ multiple choice exam. Those who successfully pass the exam will be awarded FUSE™ certification once the exam has been validated.

Objectives:

At the conclusion of this session, participants will be able to:

- · Understand the fundamental indications and limitations of energy sources in the OR
- · Discuss the potential complications and safety implications of surgical energy-based devices in the OR and endoscopic suite
- · Understand the underlying physics and principles of radiofrequency based surgical and endoscopic energy-based devices
- · Understand the underlying physics and principles of ultrasound based surgical and endoscopic energy-based devices
- Discuss the specific aspects of monopolar and bipolar cutting and sealing devices in open and laparoscopic surgery and list the potential hazards of incorrect function of these devices
- Apply best practices for the use of energy-based devices in the OR and endoscopy suite

SCHEDULE

1:30pm	Introduction	Pascal Fuchshuber, MD
1:35pm	Fundamental Principles: Principles Of Radiofrequency Electrosurgery	Malcolm Munro, MD
1:55pm	Electrosurgical Safety In Laparoscopy	J. Esteban Varela, MD
2:15pm	Monopolar Devices (Including Argon Beam And Saline-Enhanced)	Dana Portenier, MD
2:30pm	Bipolar Devices: Old And New	Dean Mikami, MD
2:45pm	Ultrasonic Energy Systems	Daniel Herron, MD
3:00pm	Ablation Technologies: RFA, Microwave, HIFU	Pascal Fuchshuber, MD
3:15pm	Discussion	Panel
3:30pm	Break	
3:45pm	Integration of Energy Systems: Cardiac Rhythm Management Devices and Energy-based Devices	Stephanie Jones, MD
4:00pm	Fires in the Operating Room: Prevention and Management	William Richardson, MD
4:15pm	How to Report Adverse Events Related to the Use of Energy-based Devices in the OR	Charlotte Gugliemi, BSN, RN, CNOR
4:25pm	The Right Tool for the Right Job: Flexible Devices for Endoscopy	Thadeus Trus, MD
4:45pm	Considerations in Pediatric Surgery	Gretchen Purcell Jackson, MD, PhD
4:55pm	Energy-based Devices: What Is the Evidence?	Thomas Robinson, MD
5:15pm	FUSE™ Certification Process	Liane Feldman, MD

To send your questions and comments for this session Text FUSE and your message to 22333 • Tweet @poll FUSE and your message • Go to http://pollev.com/SAGES6F during the session SAGES acknowledges educational grants in support of this course from Covidien and Olympus America Inc.

Visit the exhibit hall for coffee and cookies between 1:30 - 3:30 pm

A Gentle Reminder About Safety/Security:

We have taken every precaution to assure the safety and security of our guests and their possessions. However, we urge you to be aware and take simple steps to guard your possessions.

- · Do not leave your purse or briefcase unattended.
- Do not leave your iPad, laptop, phone or other electronic devices on the floor or out of your sight in a darkened room
- Be aware of your surroundings, in the convention center, in and around the downtown San Diego area.

Have a safe & secure meeting!



Thursday, March 8, 2012

1:30 PM - 5:30 PM *Separate Fee Applies

Hands-On Course: Laparoscopic Ventral Hernia with Endoscopic Component Separation and Simulation

**Offsite Lab

Chair: Brent D. Matthews, MD

Co-Chairs: Carla M. Pugh, MD, PhD, & Michael Rosen, MD

Location: UCSD

This cadaver hands-on course will augment the participant's experience with real time skills training in laparoscopic ventral hernia repair and endoscopic component separation release using a cadaver model. The course will also include simulation-based training scenarios with faculty feedback. Laboratory stations will have a 1:3 faculty to participant ratio.

Objectives:

At the conclusion of this session, participants will be able to:

- · Describe the technical steps of endoscopic and open component separation release
- · Describe the operative trocar strategy of endoscopic component separation release
- · Identify and use unique instrumentation required for endoscopic component separation release

SCHEDULE

1:30pm Introduction Brent Matthews, MD

1:45pm 1:45pm Carla M. Pugh, MD, PhD

Laparoscopic Ventral Hernia Repair And Endoscopic Component Separation

5:15pm Wrap up

Brent Matthews, MD

Faculty:

Sharon Bachman, MDJacob Greenberg, MDNathaniel Stoikes, MDSteve P. Bowers, MDGarth Jacobsen, MDAshley Vernon, MDAngel Caban, MDMelissa Phillips, MDMark Watson, MD

Alfredo Carbonell, DO Benjamin Poulose, MD Matthew I. Goldblatt, MD Jose Prince, MD

SAGES acknowledges educational grants in support of this course from Covidien, Gore & Associates and Synovis Surgical Innovations.

SAGES acknowledges contributions in-kind in support of this course from:

Applied Medical, Covidien, Davol Inc., a BARD Company, Ethicon Endo-Surgery, Ethicon Inc., Gore & Associates, Karl Storz Endoscopy, Olympus America Inc., Stryker Endosopy, Synovis Surgical Innovations

1:30 PM - 3:30 PM

*included in Registration SuperPass (Option A) or Registration Option B

SAGES/ALACE Innovations in Obesity and Metabolic Surgery

Chair: Alonso Alvarado, MD

Co-Chair: Ricardo Zorron, MD & Horacio J. Asbun, MD

Location: Room 6D

This session is designed to update attendees on surgical treatment alternatives that have recently emerged in the field of Bariatric and Metabolic Surgery.

Objectives:

At the conclusion of this session, participants will be able to:

- · Discuss the newest bariatric and metabolic surgical procedures
- Describe the current status and list indications for metabolic surgery
- Formulate a plan of treatment for the obese patient with a large hiatal hernia
- Tailor the type of procedure according to the desired result

SCHEDULE

1:30pm	Gastric Plication As A Primary Procedure	Almino Ramos, MD
1:40pm	Role Of Single Port And NOTES In Bariatric Surgery	Ricardo Zorron, MD
1:50pm	Single Port And Notes In Bariatric Surgery: Why We Shouldn't	Raul Rosenthal, MD
2:00pm	Endoscopic Treatment For Revisional Bariatric Surgery	Manoel Galvao Neto, MD
2:10pm	Should Bariatric Surgery Be Part Of The Treatment For Large Hiatal Hernias In The Obese Patient?: Treatment Options And Results	Jon Gould, MD
2:25pm	Panel Discussion	
2:35pm	Band Vs Sleeve vs Bypass For Diabetes	Jaime Ponce, MD
2:45pm	Endoscopic Treatment Of Diabetes And Obesity	Alex Escalona, MD
2:55pm	Current Results For Metabolic Surgery	Camilo Boza, MD
3:05pm	Innovations In Reoperative Surgery For Complications Of Metabolic And Bariatric Surgery: When How And For What?	Eric DeMaria, MD

To send your questions and comments for this session Text ALACE and your message to 22333 · Tweet @poll ALACE and your message · Go to http://pollev.com/SAGES6D during the session

Panel Discussion

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Location: Room 6B

Location: Room 6E

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS07 - Solid Organ

Moderators: Errawan R. Wiradisuria, MD & David W. Easter, MD

S037 LAPAROSCOPIC VS. OPEN SPLENECTOMY: THE IMPACT OF SPLEEN SIZE ON OUTCOMES <u>Ali Ardestani, MD</u>, Ali Tavakkolizadeh, MD, Brigham and Women's Hospital

S038 LAPAROSCOPIC SPLENECTOMY AND AZYGOPORTAL DISCONNECTION WITH INTRAOPERATIVE SPLENIC BLOOD SALVAGE <u>Yuedong Wang, MD PhD</u>, Yun Ji, MD, Yangwen Zhu, MD, Zhijie Xie, MD, Xiaoli Zhan, MD, Department of General Surgery, Zhejiang Provincial People's Hospital, Zhejiang China

S039 LONG-TERM POST-OPERATIVE RESULTS OF LAPAROSCOPIC AND OPEN SPLENECTOMY DUE TO HYPERSPLENISM SECONDARY TO LIVER CIRRHOSIS Jin Zhou, PhD, Zhong Wu, MD, Bing Peng, PhD, West China Hospital, Sichuan University

S040 SUMMARY OF LIVING DONOR RETROPERITONEOSCOPIC NEPHRECTOMY IN KIDNEY TRANSPLANTATION AT A SINGLE INSTITUTION Naotake Akutsu, MD, Michihiro Maruyama, MD, Chikara Iwashita, MD, Kazunori Otsuki, MD, Taihei Ito, MD, Ikuko Matsumoto, MD, Takehide Asano, MD, Takashi Kenmochi, MD, Department of Surgery, Chiba-East National Hospital

SO41 GASLESS TRANSAXILLARY ROBOTIC VS ENDOSCOPIC THYROIDECTOMY: EXPLORING THE FRONTIERS OF SCARLESS THYROIDECTOMY THROUGH A PRELIMINARY COMPARISON STUDY Andreas Kiriakopoulos, MD, <u>Dimitrios Linos, MD</u>, Department of Surgery, Hygeia Hospital, Athens, Greece

S042 LAPAROSCOPIC ADRENALECTOMY FOR MALIGNANT LESIONS – SAFE AND EFFECTIVE! Gideon Sroka, MD MSc, Nadav Slijper, MD, Dan Shteinberg, MD, Husam Mady, MD, Ibrahim Mattar, MD, Bnai-Zion Medical Center, Technion - Israel Institute of Technology, Haifa, Israel

S043 IMPACT OF SURGICAL TECHNIQUE AND SPLENIC SIZE ON POST-OPERATIVE MESENTERIC VEIN THROMBOSIS <u>Ivanesa Pardo, MD</u>, Rahul Reddy, MD, Eric Wiebke, MD, Don Selzer, MD, Indiana University School of Medicine

S044 LAPAROSCOPIC APPROACH FOR INCISIONAL HERNIAS IN PATIENTS AFTER ORGAN TRANSPLANTATION OR WITH LIVER INSUFFICIENCY Marty Zdichavsky, MD, Dörte Wichmann, MD, Maria Witte, MD, Maximillian Von Feilitzsch, MD, Tobias Meile, MD, Alfred Königsrainer, MD, Department of General, Visceral and Transplant Surgery

S045 STANDARDIZATION OF HYBRID-VANS (TORI METHOD) FOR THYROID DIFFERENTIATED CANCER INCLUDING INVASION TO THE TRACHEA Masayuki Tori, MD, Hiroki Akamatsu, MD, Takeshi Omori, MD, Katsuhide Yoshidome, MD, Toshirou Nishida, MD, Endocrine Surgery, Osaka Police Hospital

S046 LAPARO-ENDOSCOPIC SINGLE SITE SURGERY (LESS) FOR INTRA-ABDOMINAL SOLID ORGANS: A CASE CONTROL STUDY. Iris J Parrao-Alcantara, UNDERGRADUATED MEDICAL DOCTOR, Xeily Zarate, MD, Juan Pablo Pantoja, MD, Mauricio Sierra, MD, David Velazquez-Fernandez, MD PHD, Miguel F Herrera, MD PHD, Instituto Nacional de la Nutrición Salvador Zubirán

S047 TRUE BENEFIT OR SELECTION BIAS. AN ANALYSIS OF LAPAROSCOPIC VERSUS OPEN SPLENECTOMY FROM THE ACS-NSQIP <u>C Gonczy</u>, <u>MD</u>, V Advani, MD, S Markwell, MA, S Ahad, MD, I Hassan, MD, Southern Illinois University School of Medicine

S048 THE MICROBIOLOGY OF LAPAROSCOPIC KIDNEY DONATION – A BASELINE STUDY FOR TRANSVAGINAL DONOR NEPHRECTOMY <u>Calvin D Lyons, MD</u>, Richard Link, MD, Osama Gaber, MD FACS, Vid Fikfak, MD, Barbara L Bass, MD FACS, Brian J Dunkin, MD FACS, The Methodist Institute for Technology Innovation and Education

To send your questions and comments for this session Text SSO7 and your message to 22333 · Tweet @poll SSO7 and your message · Go to http://pollev.com/SAGES6B during the session

SAGES Concurrent Session SS08 - Videos - Obesity Surgery

Moderators: Philip R. Schauer, MD & Kevin M. Reavis, MD

V001 RETROGRADE INTUSSUSCEPTION AFTER ROUX-EN-Y GASTRIC BYPASS Saber Ghiassi, MD MPH, <u>Daniel Moon, MD</u>, Keith Boone, MD FACS, Kelvin Higa, MD FACS, University of California, San Francisco, Fresno

V002 LAPAROSCOPIC MANAGEMENT OF GI BLEED FROM PENETRATING ULCER AFTER RYGB <u>Jun Levine, MD</u>, David Lee, MD, Ronald Ross, MDBS, Koji Park, MD, Julio Teixeira, MD FACS, St Luke's Roosevelt Hospital Center, NY

V003 GASTRECTOMY AND ROUX-EN-Y ESOPHAGOJEJUNOSTOMY FOR GASTRIC NECROSIS AFTER GASTRIC BAND SLIPPAGE <u>Jason F</u> <u>Richardson, MD</u>, Ninh T Nguyen, MD, University of California Irvine Medical Center

V004 LAPAROSCOPIC REPAIR OF HIATAL HERNIA WITH DOR FUNDOPLICATION AFTER SLEEVE GASTRECTOMY IN A PATIENT WITH INTRACTABLE GERD AND RETAINED GASTRIC BODY Andre Teixeira, MD MBA MPH, Carolina Ampudia, MD, Samuel Szomstein, MD FACS FASMBS, Raul Rosenthal, MD FACS FASMBS, Cleveland Clinic Florida

V005 THE USE OF A T-TUBE TO MANAGE LEAK AFTER SLEEVE GASTRECTOMY Matthew Y Lin, MD, Ankit Sarin, MD, Stanley J Rogers, MD, Andrew M Posselt, MD, Jonathan T Carter, MD, University of California, San Francisco

V006 ENDOSCOPIC TREATMENT OF GASTRIC LEAK FOLLOWING SLEEVE GASTRECTOMY USING AN ENDOSCOPIC CLIPPING SYSTEM <u>Alisa M</u> <u>Coker, MD</u>, Marcos Michelotti, MD, Takayuki Dotai, MD, Luciano Antozzi, MD, Geylor Acosta, MD, Anibal Rondan, MD, Nikolai Bildzukewicz, MD, Mark A Talamini, MD, Bryan Sandler, MD, Garth R Jacobsen, MD, Thomas Savides, MD, Santiago Horgan, MD, Center for the Future of Surgery, Department of Surgery, University of California San Diego

V007 LAPAROSCOPIC CONVERSION OF GASTRIC BAND TO LAPAROSCOPIC GASTRIC BYPASS DUE TO FAILURE OF WEIGHT LOSS AND WORSENING GASTROESOPHAGEAL REFLUX <u>Guillermo Higa, MD</u>, Abraham Abdemur, MD, Samuel Szomstein, MD, Raul Rosenthal, MD, Cleveland Clinic Florida

V008 LAPAROSCOPIC REVISION OF ROUX-EN-Y GASTRIC BYPASS: RESECTION OF GASTROJEJUNAL ANASTOMOSIS, TRIMMING GASTRIC POUCH, AND A PROXIMAL REMNANT GASTRECTOMY <u>Andre Teixeira</u>, <u>MD</u>, Abraham Fridman, MD, Rena Moon, MD, Samuel Szomstein, MD FACS FASMBS, Raul Rosenthal, MD FACS FASMBS, Cleveland Clinic Florida

V009 COMPLETE ENDOSCOPIC/TRANSGASTRIC RETRIEVAL OF ERODED GASTRIC BAND: A NOVEL APPROACH TO A COMMON COMPLICATION <u>Kevin M El-hayek, MD</u>, Poochong Timratana, MD, Stacy Brethauer, MD, Bipan Chand, MD FACS, Cleveland Clinic

V010 REVISION OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY FOR REACTIVE HYPOGLYCEMIA Saber Ghiassi, MD MPH, <u>Benjamin Shadle</u>, MD, Keith Boone, MD FACS, Kelvin Higa, MD FACS, University of California, San Francisco, Fresno

V011 REVISION OF ROUX Y GASTRIC BYPASS FOR DISTAL ESOPHAGEAL STENOSIS <u>Daniel Moon, MD</u>, Saber Ghiassi, MD MPH, Keith Boone, MD FACS, Kelvin Higa, MD FACS, University of California, San Francisco, Fresno

V012 LAPAROSCOPIC BAND AND GASTRIC IMBRICATION (ILAP) <u>Armando Ramirez, MD</u>, Guy Voeller, MD, George Woodman, MD, University of Tennessee Health Science Center, Memphis

To send your questions and comments for this session Text SSO8 and your message to 22333 · Tweet @poll SSO8 and your message · Go to http://pollev.com/SAGES6E during the session

Thursday, March 8, 2012

3:30 PM - 5:30 PM

*included in Registration SuperPass (Option A) or Registration Option B

SAGES/CAGS Therapeutic Endoscopy Panel

Chair: James Ellsmere, MD Co-Chair: Lee Swanstrom, MD

Location: Room 6B

The panel will explore many of the current and future topics in therapeutic endoscopy. The goal of the expert panel is to share their thoughts on how endoscopic therapies can be used to effectively treat gastrointestinal diseases.

Objectives:

At the conclusion of this session, participants will be able to:

- Identify and evaluate appropriate patients for various endoscopic procedures
- Describe current endoscopic treatment in treating gastrointestinal diseases
- · List appropriate tips and tricks used by experienced therapeutic endoscopists
- Describe the role of new and emerging techniques in gastrointestinal diseases

SCHEDULE

3:30pm	Modalities for GI Bleeding	James Ellsmere, MD
3:45pm	Colonic Mucosal Resection	Mark Whiteford, MD
4:00pm	Esophageal Mucosal Ablation and Resection	Lorenzo Ferri, MD
4:15pm	Endoscopic GERD Therapy	Vic Velanovich, MD
4:30pm	Achalasia Therapy	David Urbach, MD
4:45pm	Esophageal, Colonic and Enteric Stents	Jose Martinez, MD
5:00pm	Sphincterotomy, Stone Removal and Lithotripsy	Bruce MacFadyen, Jr., MD
5:15pm	Drainage of Pseudocysts	Christopher Thompson, MD

To send your questions and comments for this session Text CAGS and your message to 22333 · Tweet @poll CAGS and your message · Go to http://pollev.com/SAGESGB during the session

SAGES acknowledges an educational grant in support of this panel from Olympus America Inc.

3:30 PM - 5:30 PM

2012 Scientific Session & Postgraduate Course

*included in Registration SuperPass (Option A) or Registration Option B

Video Session: Oops – Now What?

Jeffrey W. Hazey, MD Co-Chair: Melina Vassiliou, MD

Location: Room 6E

Kurt Roberts, MD

This video session will concentrate on unusual and unexpected intra-operative findings and complications encountered during minimally invasive procedures. Video presentations of a variety of intra-operative findings encountered will be highlighted and presented to the audience for an interactive discussion on operative management. A spectrum of general surgery cases will be presented including foregut, bariatric, biliary and hernia as well as other potential misadventures including bleeding and injury to adjacent structures. A panel of experienced surgeons at high volume centers will share their thoughts and participate in a lively, interactive discussion.

Objectives:

At the conclusion of this session, participants will be able to:

- Identify potential pitfalls and unusual complications encountered during general surgical procedures
- Describe various management options for unusual/unexpected intra-operative findings and complications
- Explain appropriate measures to prevent untoward events
- List potential approaches to discuss unusual findings/events with patients and families

SCHEDULE Complete on To

3:30pm	Caught on Tape	Jeffrey W. Hazey, MD
3:40pm	ACCESS: Veress needle Trocar perforation	Melina Vassiliou, MD
3:55pm	BARIATRIC: Stapling across the nasogastric tube Staple misfire	Bradley J. Needleman, MD
4:00pm	FOREGUT: Esophageal perforation	John Hunter, MD
4:10pm	BILIARY: Ductal injury	Daniel Deziel, MD
4:25pm	HERNIA: Nerve Injury Bowel perforation	Bruce Ramshaw, MD
4:35pm	COLORECTAL: Splenic hemorrhage Ureteral injury	Bradley Champagne, MD

To send your questions and comments for this session Text OOPS and your message to 22333 · Tweet @poll OOPS and your message · Go to http://pollev.com/SAGES6E during the session

Discussion - Panel

NOTES: Rectal injury ... and More

4:45pm

5:00pm

*included in Registration SuperPass (Option A) or Registration Option B

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS09 - Obesity Surgery

Location: Room 6D

Moderators: Robin P. Blackstone, MD & Jaime Ponce, MD

S049 MANAGEMENT OF STAPLE LINE LEAKS AFTER SLEEVE GASTRECTOMY IN A CONSECUTIVE SERIES OF 378 PATIENTS. Michel Vix, MD, Ludovic Marx, MD, Michele Diana, MD, Silvana Perretta, MD, Gianfranco Donatelli, MD, Cosimo Callari, MD, Valérie Podelski, MD, Jacques Marescaux, MD Hon FRCS FACS Hon JSES, IRCAD, University of Strasbourg, France

S050 MARGINAL ULCER AFTER ROUX-EN-Y GASTRIC BYPASS: WHAT HAVE WE REALLY LEARNED? <u>Kevin M El-hayek, MD</u>, Poochong Timratana, MD, Hideharu Shimizu, MD, Bipan Chand, MD FACS, Cleveland Clinic

S051 LAPAROSCOPIC FUNDOPLICATION TAKEDOWN WITH ROUX-EN-Y GASTRIC BYPASS LEADS TO EXCELLENT REFLUX CONTROL AND QUALITY OF LIFE IN PATIENTS AFTER ONE OR MORE FAILED FUNDOPLICATIONS Fernando A Navarro, MD, Brant T Heniford, Keith Gersin, Dimitrios Stefanidis, Carolinas Medical Center, Division of Gastrointestinal and Minimally Invasive Surgery, Charlotte, NC

S052 COMPARISON STUDY OF GASTRIC EMPTYING AFTER PERFORMING SLEEVE GASTRECTOMY WITH TWO DIFFIERENT TECHNIQUES Saed A Jaber, MD, <u>Basma M Fallatah</u>, <u>MD</u>, Abdel- Aziz Shehry, MD, Mahmoud Abdelmoeti, MD, King Fahd Medical Military complex

S053 PERI-OPERATIVE RISK FACTORS FOR 30-DAY MORTALITY AFTER BARIATRIC SURGERY: IS FUNCTIONAL STATUS IMPORTANT? <u>Muhammad Asad Khan, MD</u>, Roman Grinberg, MD, Stelin Johnson, RPAC, John N Afthinos, MD, Karen E Gibbs, MD, Staten Island University Hospital

S054 TRENDS IN ADOLESCENT BARIATRIC SURGERY EVALUATED BY UHC DATABASE COLLECTION <u>Pradeep Pallati, MD</u>, Anton Simorov, MD, Avishai Meyer, MD, Vishal Kothari, MD, Corrigan Mcbride, MD, Dmitry Oleynikov, MD, University of Nebraska Medical Center

S055 OMENTAL PATCH REPAIR EFFECTIVELY TREATS PERFORATED MARGINAL ULCERS FOLLOWING ROUX-EN-Y GASTRIC BYPASS Mark R Wendling, MD, John G Linn, MD, Kara Keplinger, MD, Vimal K Narula, MD, Jeffrey W Hazey, MD, Dean J Mikami, MD, Kyle A Perry, MD, W. Scott Melvin, MD, Bradley J Needleman, MD, Center for Minimally Invasive Surgery, The Ohio State University, Columbus, OH

S056 PRE-OP ALCOHOL ABUSE PREVALENCE AMONG WEIGHT LOSS SURGERY PATIENTS <u>Omar Y Kudsi, MD</u>, Karen Huskey, MPH, Shannon Grove, BA, George L Blackburn, MD PhD, Daniel B Jones, MD, Christina C Wee, MD MPH, Beth Israel Deaconess Medical Center, Harvard Medical School

S057 SHOULD INSURANCE COMPANIES REQUIRE STRUCTURED ATTEMPTS AT WEIGHT LOSS AS A CONDITION FOR APPROVAL OF WEIGHT LOSS SURGERY? <u>Abraham J Frech, MD</u>, Arpan Goel, MD, Tovy H Kamine, MD, Robert A Andrews, MD, Daniel B Jones, MD, Benjamin E Schneider, MD, Beth Israel Deaconess Medical Center/Harvard Medical School

S058 PORTO-MESENTERIC VEIN THROMBOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: REPORT OF 12 CASES <u>José Salinas</u>, MD, Julio Cerda, MS, Napoleón Salgado, MD, Fernando Pimentel, MD, Andrea Vega, RN, Gustavo Pérez, MD, Alex Escalona, MD, Ricardo Funke, MD, Camilo Boza, MD, Digestive Surgery Department, Hospital Clínico P. Universidad Católica de Chile

S059 "A PROSPECTIVE COMPARISON OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND GASTRIC BYPASS" Francesco Stipa, MD PhD FACS, Valentina Giaccaglia, MD, Alessio Pigazzi, MD FACS, Antonio Burza, MD, Ettore Santini, MD, Department of Surgery, San Giovanni Hospital, Rome, Italy

S060 SAFETY AND FEASIBILITY OF SLEEVE GASTRECTOMY IN MORBIDLY OBESE PATIENTS FOLLOWING LIVER TRANSPLANTATION <u>Matthew Y Lin, MD</u>, Ankit Sarin, MD MPH, M. Mehdi Tavakol, MD, Shadee M Amirkiai, BS, Stanley J Rogers, MD, Jonathan T Carter, MD, Andrew M Posselt, MD PhD, Department of Surgery, University of California, San Francisco, School of Medicine, San Francisco, California

To send your questions and comments for this session Text SSO9 and your message to 22333 · Tweet @poll SSO9 and your message · Go to http://pollev.com/SAGES6D during the session

5:30 - 7:30 PM

*Registration is free for any SAGES attendee (No registration required)

Industry Education Events

Industry presentations will take place on Thursday evening, immediately following SAGES sessions. Symposia on varying topics will be offered in SAGES session rooms. Registration is FREE for any SAGES attendee.

**These events are not planned nor accredited for CME by SAGES.

Cadence Pharmaceuticals – "OFIRMEV " (acetaminophen) Injection: A Non-Opioid, Non-NSAID

Analgesic for Perioperative Pain Management"

Location: Room 6D

Faculty:

Dr. Jay Redan, Florida Hospital - Celebration Health

Summary:

Discuss Multimodal Analgesia, the disease state of acute pain management and the safety and efficacy of OFIRMEV (acetaminophen) Injection

This is a non-CME activity presented and supported by Cadence Pharmaceuticals

Davol Inc., a BARD Company - "Advanced Laparoscopic Hernia Repair Techniques"

Location: Room 2

Faculty:

Namir Katkhouda, MD, FACS – Professor of Surgery, Director, Bariatric Surgery Program, Vice Chairman for Clinical Affairs, Chief, Division of General & Laparoscopic Surgery, University of Southern California

This is a non-CME activity presented and supported by Davol Inc., a BARD Company

Thursday, March 8, 2012

5:30 - 7:30 PM

*Registration is free for any SAGES attendee (No registration required)

Industry Education Events (continued)

Intuitive Surgical – "da Vinci® Single-Site™ Cholecystectomy and da Vinci Multi-Port Applications"

Location: Room 4
Summary:

This symposium will primarily focus on the surgical application and outcomes of the recently FDA-cleared da Vinci Single-Site platform in cholecystectomy. Surgeon speakers will discuss their Single-Site Cholecystectomy case series, providing videos and short-term outcomes data, while highlighting the potential benefits, risks and the learning curve of this new technology. Presenters will also discuss their multiport da Vinci experience in a wide variety of areas including foregut, hernia, bariatric and colorectal procedures.

This is a non-CME activity presented and supported by Intuitive Surgical.

Stryker Endoscopy – "Needlescopic Approaches in General Surgery"

Location: Room 6C

Faculty:

Dr. Arif Ahmad - Bariatric Applications

Dr. David Renton - Lap Chole

Dr. Huy Nguyen - Colon Applications

Dr. Philip Leggett - Lap Chole and Lap Appy

This is a non-CME activity presented and supported by Stryker Endoscopy.

5:30 - 7:30 pm Location: Room 11Ai

Foundation for Surgical Fellowships, Fellowship Council and SAGES Reception

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2012 SAGES Webcast Sessions

Sign-up TODAY to be part of the 2012 SAGES International Webcast Sessions: http://www.surveymonkey.com/s/7YRNTPG:

Friday, March 9, 2012

TIME	SESSION	CHAIR (S)/SPEAKER
7:30AM - 8:30AM	SAGES/ASCRS Current Controversies During Colorectal Surgery	Chair: James Fleshman, MD Co-Chair: Steven Wexner , MD
8:30AM - 10:00AM	Plenary Session 1	Moderators: W. Scott Melvin, MD & Jo Buyske, MD
10:00AM - 10:45AM	Presidential Address: "You Must Be the Change You Wish to See in the World"	Steven D. Schwaitzberg, MD
10:45AM - 11:30AM	Storz Lecture: "The Collaboration Paradox"	John Abele
11:30AM - 12:30PM	SS14 - Therapeutic Endoscopy	Moderators: Greg V. Stiegmann, MD & Frederick L. Greene, MD
1:30PM - 3:30PM	Inguinal Hernias: Treating the Other Guy's Complications	Chair: Edward Felix, MD Co-Chair: David Brooks, MD
3:30PM - 5:30PM	Robotic Surgery: Hope or Hype? Presidential Debate	Chair / Moderator: Manabu Yamamoto, MD Co-Chair: Richard Satava, MD

Saturday, March 10, 2012

8:00 AM - 9:30 AM	SAGES Response to Healthcare Reform	Chair: Eli Lerner, MD Co-Chair: Matthew Hutter, MD
9:30AM - 11:00AM	Plenary Session 2	Moderators: Steven D. Schwaitzberg, MD & Gerald Fried, MD
11:00AM - 11:45AM	Marks Lecture : "The Changing Role of American Surgical Leadership"	Michael Zinner, MD
1:00PM - 2:30PM	SAGES/ASMBS Bariatric Surgery Nightmares: Prevention and Management of Complications	Chair: Natan Zundel, MD Co-Chair: Alfons Pomp, MD
2:30PM - 4:00PM	TeleMentoring and Remote Battlefield Surgery	Chair: Robert Lim, MD Co-Chairs: Ninh Nguyen, MD Matt Ritter, MD

SAGES gratefully acknowledges the following companies for their unrestricted support towards the SAGES International Proctoring Courses (IPC), a SAGES Global Affairs Initiative:

Allergan Foundation SAGES Research & Education Foundation

SAGES gratefully acknowledges the following companies and individuals for their unrestricted contribution in kind:

Karl Storz Endoscopy Stryker Endoscopy Swanson Family Foundation

Time	Session	Location
Friday, March	9, 2012	
7:30 AM - 8:30 AM	SAGES/IPEG Panel: Great Debates in Pediatric Bariatric Surgery	Room 6C
7:30 AM - 8:30 AM	SAGES/ASCRS Panel: Current Controversies during Colorectal Surgery	Room 6AB
7:30 AM - 8:30 AM	SAGES Panel: Simulation: New Paradigm for Competency	Room 6F
7:30 AM - 8:30 AM	SAGES Concurrent Session SS10: Novel Techniques & Operations	Room 6E
7:30 AM - 8:30 AM	SAGES Concurrent Session SS11: Videos – Hernia	Room 4
8:30 AM - 10:00 AM	SAGES Plenary Session SS12: Plenary 1	Room 6AB
9:30 AM - 3:30 PM	Exhibits, Poster Session, Learning Center Open	Exhibit Hall C
10:00 AM - 10:45 AM	SAGES Presidential Address: "You Must Be the Change You Wish to See in the World" Steven D. Schwaitzberg, MD	Room 6AB
10:45 AM - 11:30 AM	SAGES Karl Storz Lecture: "The Collaboration Paradox" John Abele	Room 6AB
11:30 AM - 12:30 PM	SAGES Concurrent Session SS13: Simulation	Room 6F
11:30 AM - 12:30 PM	SAGES Concurrent Session SS14: Therapeutic Endoscopy	Room 6AB
11:30 AM - 12:30 PM	SAGES Concurrent Session SS15: Hernia	Room 6D
11:30 AM - 12:30 PM	SAGES Concurrent Session SS16: Single Incision	Room 6E
11:30 AM - 12:30 PM	SAGES Concurrent Session SS17: Videos – Colon	Room 4
1:30 PM - 3:00 PM	SAGES Panel: Do You Know More Than Your Fellow?	Room 6D
1:30 PM - 3:30 PM	SAGES Session: Emerging Technology	Room 6E
1:30 PM - 3:30 PM	SAGES Session: Inguinal Hernia: Treating the Other Guy's Complications	Room 6AB
1:30 PM - 3:30 PM	SAGES Concurrent Session SS18: Foregut	Room 6F
1:30 PM - 3:30 PM	SAGES Concurrent Session SS19: Videos – HPB (Hepatobiliary and Pancreas)	Room 4
3:30 PM - 5:30 PM	SAGES Debate: Robotic Surgery: Hope or Hype?	Room 6AB
3:30 PM - 5:30 PM	SAGES Panel: Solid Organ: MIS Endocrine and Spleen	Room 6D
3:30 PM - 5:30 PM	SAGES Session: Advanced Open and Laparoscopic Ventral Hernia Repair	Room 6E
3:30 PM - 5:30 PM	SAGES Concurrent Session SS20: Colorectal	Room 6F
3:30 PM - 5:30 PM	SAGES Concurrent Session SS21: Videos – Solid Organ / Foregut	Room 4
6:00 PM - 7:00 PM	Meet the Leadership Reception for Residents, Fellows & New Members	Marriot Marquis, Coronado Terrace
7:30 PM - 11:00 PM	SAGES/IPEG Gala – An Evening on the Historic USS Midway Aircraft Carrier Museum	ТВА

Posters will be on display, Thursday, Friday & Saturday. Poster presenters will be available for Q&A on Friday, from 12:30 - 1:30 PM

SAGES acknowledges our Diamond and Platinum Level Donors for their support of the poster session:
Diamond: Covidien, Ethicon Endo-Surgery
Platinum: Karl Storz Endoscopy, Olympus America Inc., Stryker Endoscopy



7:30 AM - 8:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES/IPEG Great Debates in Pediatric Bariatric Surgery

Chair: Thomas Inge, MD
Co-Chair: Janey Pratt, MD

Location: Room 6C

This course will cover current controversies in pediatric obesity surgery through a debate style format between experts. A true debate format will be used to discuss in an engaging manner which operations and what age surgery should be offered for pediatric patients. The debaters will "aim" and "fire" probing questions at their opponents within the context of the debate.

Objectives:

At the conclusion of this session, participants will be able to:

- · List three types of weight loss procedures that may be applicable to morbidly obese teenagers
- · Discuss technical differences performing various procedures in adolescents compared to adults
- · Discuss short and long-term effectiveness and risks of the three most common weight loss procedures as applied to adolescents

SCHEDULE

7:30am The Best Operation Is The Band For - Christine Ren-Fielding, MD Against - Mary Brandt, MD
7:40am — Rebuttals
7:45am The Best Operation Is The Bypass For - Samer Mattar, MD Against - Jeffrey Zitsman, MD
7:55am — Rebuttals
8:00am The Best Operation Is The Sleeve For - Thomas Inge, MD

Against - Janey Pratt, MD

For - Aayed Al-Qahtani, MD Against - Marc Michalsky, MD

8:15am — Rebuttals

- Rebuttals

7:30 AM - 8:30 AM

8:10am

8:15am

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Session (accepted oral & video presentations)

SAGES Concurrent Session SS10 - Novel Techniques & Operations

Location: Room 6E

Moderators: Sharona Ross, MD & Desmond H. Birkett, MD

Pediatric Obesity Surgery Should Be Done At Any Age

S061 MONOPOLAR RADIOFREQUENCY ENERGY'S EFFECT ON PACEMAKER FUNCTION: PRACTICAL IMPLICATIONS Henry R Govekar, MD, Thomas N Robinson, MD FACS, Guillaume Girard, MS, Greg V Stiegmann, MD FACS, Paul D Varosy, MD, University of Colorado School of Medicine

S062 THE EFFICACY OF FLUORESCENT CHOLANGIOGRAPHY USING THE SPY SCOPE™ SYSTEM, A RANDOMIZED CONTROL TRIAL <u>Danny A Sherwinter</u>, MD, Maimonides Medical Center

S063 THE UNACKNOWLEDGED INCIDENCE OF LAPAROSCOPIC STAPLER MALFUNCTION <u>D R Kwazneski, MD</u>, C K Six, MD, K R Stahlfeld, MD, UPMC Mercy, Pittsburgh, PA, USA

S064 AEROSOLISED INTRAPERITONEAL LOCAL ANESTHETIC (AILA): A NOVEL METHOD OF ANESTHETIC ADMINISTRATION IN LAPAROSCOPIC SURGERY. ASSESSMENT OF SAFETY AND FEASIBILITY A M McDermott, MD, K Mieske, MD, K H Chang, MD, A Abeidi, MD, B H Harte, MD, M J Kerin, MD MCh, O J Mcanena, MD, Discipline of Surgery, School of Medicine, National University of Ireland, Galway, Ireland and the Galway Clinic, Doughiska, Galway, Ireland

S065 TRANS NASAL ENDOSCOPY AS AN OFFICE PROCEDURE FOR BARIATRIC SURGERY EVALUATION <u>Helmuth T Billy, MD</u>, Ventura Advanced Surgical Associates

S066 THE LINX REFLUX MANAGEMENT SYSTEM CONFIRMED SAFETY AND EFFICACY NOW AT FOUR YEARS. <u>J Lipham, MD</u>, R Ganz, MD, Tr Demeester, MD, D Dunn, MD, W Bemelman, MD, G Saino, MD, D Bona, MD, P Fockens, MD, L Bonavina, MD, University Of Southern California, Abbott Northerwestern Hospital, Policlinico San Donato Milan Italy, Academic Medical Center Amsterdam

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7:30 AM - 8:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Session (accepted oral & video presentations)

SAGES Concurrent Session SS11 - Videos – Hernia

Location: Room 4

Moderators: Kenric M. Murayama, MD & Michael B. Edye, MD

V013 LAPAROSCOPIC TRANSABDOMINAL HERNIOPLASTY OF A LUMBAR HERNIA OF THE GRYNFELT – LESSHAFT TRIANGLE <u>Juan D Hernandez</u>, <u>MD</u>, Fundacion Santa Fe de Bogota, Universidad de los Andes

V014 SINGLE INCISION LAPAROSCOPIC BOCHDALEK HERNIA REPAIR Thomas J Swope, MD, Mercy Medical Center

V015 LAPAROSCOPIC REPAIR OF DIASTASIS OF RECTI C Palanivelu, P Senthilnathan, P Praveen Raj, R Parthasarthi, P S Rajan, V Vaithiswaran, Singh Jasmeet, Jai Ganesh, GEM Hospital & Research Centre

V016 MINIMALLY-INVASIVE SEPARATION OF COMPONENTS WITHOUT LAPAROSCOPY <u>Jonathan Carter, MD</u>, Ankit Sarin, MD, Matthew Lin, MD, George Allman, MD, University of California - San Francisco

V017 INTRACOPOREAL DEFECT CLOSURE WITH A MECHANICAL SUTURING DEVICE FOR LAPAROSCOPIC VENTRAL HERNIA REPAIR WITH MESH <u>Dustin Lee, DO</u>, Henry Lujan, MD FACS FASCRS, Victor Maciel, MD, Miami International Surgical Services

V018 LAPAROSCOPIC REPAIR OF A LARGE PERICARDIAL HERNIA Chan W Park, MD, Aurora D Pryor, MD, Duke University

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7:30 AM - 8:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES/ASCRS Current Controversies during Colorectal Surgery

Chair: James W. Fleshman, MD

Co-Chairs: Steven D. Wexner, MD & Peter Marcello, MD

Location: Room 6AE

Evidence-based medicine challenges our traditional dogma regarding importance of bowel prep, lymph node dissection, and margins. What would it take to make you change your habits? This session will discuss potentially controversial areas regarding optimization of colorectal procedures in terms of oncological outcomes and use of novel approaches.

Objectives:

At the conclusion of this session, participants will be able to:

- · Identify factors responsible for inadequate lymph node harvesting in colorectal cancer surgery
- · Develop improved techniques of lymph node harvesting
- · Describe techniques and strategies used during TEM procedures
- · Question the traditional use of distal resection margin as a measure of adequate oncological clearance
- · Discuss surgical, pathological as well as radiological techniques to improve the circumferential resection margins
- Improve the overall oncological outcome of the patients undergoing colorectal cancer surgery

SCHEDULE

Discussion

7:30am	Changing Your Approach to Early Rectal Cancer	Steven nunt, MD
7:40am	Mastery of TEM as a Prerequisite for NOTES	Matthew Mutch, MD
7:50am	The TME Specimen as a Guide for Laparoscopicand Robotic Quality Assessment	Maher Abbas, MD
8:00am	Does Pathology Audit of TME Replace the Traditional Assessment of Nodes and Margins?	Mariana Berho, MD
8:10am	The Future of Rectal Cancer Surgery Based on Clinical Trials	Thomas Read, MD

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SAGES Goes Green!

In an effort to support the environment, you will see less paper at the SAGES 2012 Annual Meeting. The printed Final Program will include the regular schedule and course/panel outlines, as well as oral abstracts, Poster of Distinction abstracts and poster listing. However, electronic copies of all the abstracts, digitalposters, and Postgraduate course syllabi will be available on-line for all attendees and as an App for iOS and Android devices. Go to thesagesmeeting.org for more information.



7:30 AM - 8:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

Simulation: New Paradigm for Competency

Chair: Gerald M. Fried, MD Co-Chair: Ajit Sachdeva, MD

Location: Room 6F

Medical education has evolved from being time based to competency based. Simulation provides a standardized educational experience that can be designed around the learner and embedded with reliable and validated metrics. These can then be used to verify that the learner has demonstrated competence in the specific targeted domains. This session will explore the use of simulation in the context of verifying competency.

Objectives:

At the conclusion of this session, participants will be able to:

- · Explain the distinction between time-based and competency-based education
- · Recognize the opportunities that simulation provide for competency-based education
- · Access simulation curriculum for medical students and surgical residents
- · Describe how metrics can be developed to verify competence in simulation scenarios

SCHEDULE

7:30am	Introduction	Gerald Fried, MD
7:35am	Using Simulation to Teach Core Surgical Competencies: What's Out There?	John Mellinger, MD
7:45am	FLS™ Is a Paradigm for Simulation Based Education in Fundamental Surgical Skills	Allan Okrainec, MD
7:55am	Simulations Are an Ideal Environment to Verify Competencies: The Role of Metrics	Melina C. Vassiliou, MD
8:05am	Use of Simulation to Address National Imperatives	Ajit Sachdeva, MD
8:15am	Discussion	

To send your questions and comments for this session Text SIMU and your message to 22333 • Tweet @poll SIMU and your message • Go to http://pollev.com/SAGES6F during the session

8:30 AM - 10:00 AM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES Session SS12: Plenary 1

Moderators: W. Scott Melvin, MD & Jo Buyske, MD

Location: Room 6AB

S067 ROBOTIC VERSUS LAPAROSCOPIC-ASSISTED INTERSPHINCTERIC RESECTION FOR LOW RECTAL CANCER: A COMPARATIVE STUDY OF SHORT-TERM OUTCOMES Soo Yeun Park, MD, Gyu-seog Choi, MD, Jun Seok Park, MD, Hye Jin Kim, MD, Jong-pil Ryuk, MD, Whon-ho Choi, MD, Kyungpook National University Medical Center

S068 LAPAROSCOPIC VERSUS OPEN GASTRECTOMY FOR GASTRIC ADENOCARCINOMA: LONG-TERM OUTCOMES FROM A LARGE SCALE MULTICENTER STUDY. Hyung-ho Kim, MD PhD, Hyuk-joon Lee, MD, Gyu Seok Cho, MD, Sang-uk Han, MD, Min-chan Kim, MD, Seung Wan Ryu, MD, Wook Kim, MD, Kyo Young Song, MD, Woo Jin Hyung, MD, Seong Yeob Ryu, MD, Department of Surgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital, Gyeonggi-do, Korea; Department of Surgery, Seoul National University, Seoul, Korea

S069 THIRTY DAY OUTCOMES OF LAPAROSCOPIC VERSUS OPEN APPENDECTOMY IN ELDERLY USING ACS/NSQIP DATABASE <u>Ashkan Moazzez</u>, <u>MD FACS</u>, Rodney J Mason, MD PhD FACS, Namir Katkhouda, MD FACS, H. Claude Hudson Comprehensive Health Center, University of Southern California

S070 COST EFFECTIVENESS ANALYSIS AND COMPARISON OF SINGLE STAGE VS TWO STAGE MANAGEMENT OF PATIENTS WITH CONCOMITANT GALL STONE DISEASE AND COMMON BILE DUCT STONES - A RANDOMIZED CONTROLLED TRIAL <u>Virinder K Bansal, MBBS MS FACS</u>, Pramod Garg, MD DM, M C Misra, MS FACS FRCS, Ragini Kilambi, MS, S Rajeshwari, MD, All India Institute of Medical Sciences, New Delhi-110029, India

V019 LAPAROSCOPIC ROUX EN Y HEPATICOJEJUNOSTOMY AFTER BISMUTH IV BILE DUCT INJURE <u>Augusto C Tinoco, PhD</u>, Luciana El-kadre, PhD, Livia Rodrigues, MD, Renam Tinoco, PhD, HOSPITAL SÃO JOSE DO AVAI

V020 ETAMIS: ENDOSCOPIC VISUALIZATION FOR TRANSANAL MINIMALLY INVASIVE SURGERY Alisa M Coker, MD, Cristina Metildi, MD, Takayuki Dotai, MD, Geylor Acosta, MD, Luciano Antozzi, MD, Marcos Michelotti, MD, Nikolai Bildzukewicz, MD, Juan S Barajas-gamboa, MD, Bryan Sandler, MD, Garth R Jacobsen, MD, Mark A Talamini, MD, Sonia Ramamoorthy, MD, Santiago Horgan, MD, Elisabeth C Mclemore, MD, Center for the Future of Surgery, Department of Surgery, University of California San Diego

To send your questions and comments for this session Text SS12 and your message to 22333 · Tweet @poll SS12 and your message · Go to http://pollev.com/SAGES6A during the session

SAGES acknowledges our Diamond Level Donors for their support of this session: Covidien, Ethicon Endo-Surgery

Hotel Video Loop

Attention Guests at the San Diego Marriott Marquis & Marina Hotel, Omni San Diego Hotel, and Hilton San Diego Bayfront Hotel:

The 2012 Program Chairs have created an additional avenue for excellent videos to be viewed by meeting attendees. You may view these videos in your respective hotel rooms on Thursday, Friday, and Saturday. Please turn to channel 37 (Marriott Marquis), channel 16 (Omni) or channel 49 (Hilton) in your hotel room to view the 2012 Video Channel Loop videos. The Video Channel Loop listing is available on page 174 of your program.



9:30 AM - 3:30 PM

Exhibits, Poster Session, and Learning Center Open

10:00 AM - 10:45 AM

*included in Registration SuperPass (Option A) or Registration Option C

Presidential Address -

"You Must Be the Change You Wish to See in the World" Steven Schwaitzberg, MD



Associate Professor of Surgery, Harvard Medical School and Adjunct Associate Professor of Engineering, Tufts University, Chief of Surgery, Cambridge Health Alliance

More than ten years ago a whirlwind blew into the SAGES leadership. That technological, strategic-thinking, pro-active force was Steve Schwaitzberg. We have been trying to keep up with him since 2002 when he first became a member of the SAGES Board. He was Program Chairman for the 2007 SAGES Annual Meeting in Las Vegas where he broke new ground in conference technology as well as demonstrating a superb grasp of traditional education. He has also served on the Web Task Force, the Awards and Program

Committees, is a member of the NOTES Joint Committee, and the Communications and Industry Relations Advisory Groups. Previously, he chaired the Development, Program and Technology Committees. He chaired the 2001-2006 SAGES "Surgeon in the Digital Age" courses. He is also a member of ACS, EAST, SIS, SSAT, AAS and the New England Surgical Society. One must ask: when does he sleep?

Dr. Schwaitzberg has developed and presented MIS training courses locally, regionally and in three different countries. He is renowned for his work in advanced technologies in surgical applications and surgical infections.

Every SAGES President stamps his or her imprimatur on the organization. There is no way to describe the innovation that Steve Schwaitzberg has brought to us. Knowing that electronic communications is the currency of tomorrow, Dr. Schwaitzberg helped conceive SAGES PAGES, SAGES wiki, iMAGES, and SAGES University. Just a few of his major projects have included:

- · A key new cooperative educational program with China
- · A total revamp of SAGES web page
- · The Hernia project, with Dr. Adrian Park
- FUSE, with Dr. Daniel Jones
- · Monthly Executive Committee conference calls
- · New cooperative education programs with ACS, the American Board of Surgery and countless other sister society collaborations Steve has enriched our lives both organizationally and personally. His energy is unlimited and contagious.

Inspirational talk on the future of Surgery and the challenges of getting there

At the conclusion of this lecture, participants will be able to:

- · Understand key issue affecting the future of technology
- Discuss barriers to innovation
- Develop key aspects of personal innovation in surgery

To send your auestions and comments for this session

Text PRESIDENT and your message to 22333 · Tweet @poll PRESIDENT and your message · Go to http://pollev.com/SAGES6A during the session

10:45 AM - 11:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

Location: Room 6AB

Karl Storz Lecture in New Technology "The Collaboration Paradox"



John Abele

Co-Founder, Boston Scientific Corporation

John Abele is a pioneer in the field of what he calls "less-invasive" medicine. In 2007 he was awarded the SAGES "Pioneer in Endoscopy" award. For more than 50 years, he has devoted himself to innovation in health care, business, and solving social problems. A founding chairman of Boston Scientific Corporation (retired), he holds numerous patents and has published and lectured extensively on the technology of various medical devices and the technical, social, economic, and political trends and issues affecting health care. His major interests are science literacy for children, education, and the process by which new

technology is invented, developed, and introduced to society. From 2002 to 2010, he served as chairman of the FIRST Foundation, which works with high-school kids to make science-literacy "cool and fun", and continues to serve as vice chairman. Other interests include the development of the Kingbridge Centre and Institute. He is a fellow in both the Society of Interventional Radiology and the American Institute for Medical and Biomedical Engineering, and received an honorary doctor of science from Northeastern University and Wentworth Institute of Technology, and an honorary doctor of humane letters from his alma mater, Amherst College, as well as numerous other awards from various medical societies.

An anthropological perspective on the evolution of medical technology and multidisciplinary collaboration, or lack thereof.

Objectives:

At the conclusion of this session, participants will be able to:

- Effectively collaborate with other medical professionals
- · Innovate within their areas of expertise

To send your questions and comments for this session Text STORZ and your message to 22333 · Tweet @poll STORZ and your message · Go to http://pollev.com/SAGES6A during the session



11:30 AM - 12:30 PM

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Session (accepted oral & video presentations)

SAGES Concurrent Session SS13 - Simulation

Location: Room 6F

Location: Room 6AB

Moderators: Rajesh Aggarwal, MD & Daniel Hashimoto

- S071 DOES THE INCORPORATION OF MOTION METRICS INTO THE EXISTING FLS METRICS LEAD TO IMPROVED SKILL ACQUISITION ON SIMULATORS? <u>Dimitrios Stefanidis</u>, <u>MD PhD</u>, Thomas C Yonce, Ryan C Phillips, Aikaterini Coker, Carolinas Simulation Center, Carolinas Healthcare System
- S072 SURGEONS DON'T KNOW WHAT THEY DON'T KNOW ABOUT THE SAFE USE OF ENERGY IN SURGERY <u>Liane S Feldman</u>, <u>MD</u>, Pascal Fuchshuber, MD PhD, Daniel B Jones, MS MD, Jessica Mischna, Steven D Schwaitzberg, MD, Fuse Task Force, McGill University, The Permanente Medical Group, Harvard Medical School, SAGES, Cambridge Heath Alliance
- S073 DEVELOPMENT AND EVALUATION OF A LAPAROSCOPIC COMMON BILE DUCT EXPLORATION SIMULATOR AND PROCEDURAL RATING SCALE Byron F Santos, MD, Eric S Hungness, MD, Taylor J Reif, BS, Alexander P Nagle, MD, Deborah M Rooney, PhD, Nathaniel J Soper, MD, Northwestern University Department of Surgery
- S074 ANALYSIS OF EYE GAZE: DO NOVICE SURGEONS LOOK AT THE SAME LOCATION AS EXPERT SURGEONS DURING A LAPAROSCOPIC OPERATION? Rana Khan, MD, Geoffrey Tien, Stella Atkins, Bin Zheng, MD, Ormond N Panton, MD, Adam T Meneghetti, MD MHSc, UNIVERSITY OF BRITISH COLUMBIA, SIMON FRASER UNIVERSITY
- S075 DOES FELLOW PARTICIPATION IN LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AFFECT PERI-OPERATIVE OUTCOMES? Aditya Gupta, MBBS, Neil H Bhayani, MD MHS, Valerie J Halpin, MD, Legacy Weight Management Institute, The Oregon Clinic
- S076 ENSURING COMPETENCY: IS FLS CERTIFICATION NECESSARY FOR PRACTICING SURGEONS? Daniel J Scott, MD, Melanie Hafford, MD, Ross E Willis, PhD, Kristine Gugliuzza, MD, Todd D Wilson, MD, Kimberly M Brown, MD, Kent R Vansickle, MD, UT Southwestern Medical Center at Dallas, UT Health Science Center at San Antonio, UT Medical Branch at Galveston, UT Houston Medical Center

To send your questions and comments for this session Text SS13 and your message to 22333 • Tweet @poll SS13 and your message • Go to http://pollev.com/SAGES6F during the session

SAGES Concurrent Session SS14 - Therapeutic Endoscopy

Moderators: Greg V. Stiegmann, MD & Frederick L. Greene, MD

- S077 INTRAOPERATIVE ASSESSMENT OF ESOPHAGOGASTRIC JUNCTION DISTENSIBILITY DURING PER ORAL ENDOSCOPIC MYOTOMY <u>Erwin Rieder, MD</u>, Silvana Perretta, MD, Christy M Dunst, MD, Lee L Swanstrom, MD, Gastrointestinal and Minimally Invasive Surgery, The Orgeon Clinic, Portland, Oregon; Institute de Recherche contra les Cancers de l'Appareil Digestif (IRCAD), Strasbourg Cedex, France
- S078 BIODEGRADABLE ESOPHAGEAL STENT PLACEMENT DOES NOT PREVENT STRICTURE FORMATION FOLLOWING CIRCUMFERENTIAL MUCOSECTOMY IN A PORCINE MODEL. <u>Eric M Pauli, MD</u>, Steve J Schomisch, PhD, Joseph P Furlan, BS, Amitabh Chak, MD, Jeffrey L Ponsky, MD, Jeffrey M Marks, MD, University Hospitals Case Medical Center, Cleveland, OH
- S079 A NEW PROCEDURE OF ESOPHAGOSTOMY FOR ENDOSCOPIC SURGEONS <u>Hideto Oishi, MD PhD</u>, Mina Miyashita, MD PhD, Takayuki lino, MD, Takao Yamane, MD, Eiichi Hirai, MD PhD, Shingo Kameoka, MD PhD, Division of Gastroenterological Surgery, Yachiyo Medical Center, Tokyo Women's Medical University
- S080 SURGICAL MANAGEMENT OF DUODENAL PERFORATIONS AFTER ERCP: THE CRUCIAL ROLE OF A RETROPERITONEAL APPROACH. <u>Sergio Alfieri, MD</u>, Fausto Rosa, MD, Caterina Cina, MD, Antonio P Tortorelli, MD, Vincenzo Perri, MD, Guido Costamagna, MD, Giovanni B Doglietto, MD, Department of Digestive Surgery, Catholic University, "A. Gemelli" Hospital
- S081 PARTIALLY COVERED ESOPHAGEAL STENTS CAUSE BOWEL INJURY WHEN USED TO TREAT COMPLICATIONS OF BARIATRIC SURGERY Wei Wei, MD, Archana Ramaswamy, MD, Roger De La Torre, MD, Brent W Miedema, MD, Division of General Surgery, University of Missouri-Columbia
- S082 ENDOSCOPIC SUBMUCOSAL DISSECTION USING A NEWLY DEVELOPED ENDOSCOPIC HOOD FOR GASTRIC TUMORS <u>Takeuchi Hirohisa</u>, Abe Nobutsugu, Ohki Atsuko, Yanagida Osamu, Masaki Tadahiko, Mori Toshiyuki, Sugiyama Masanori, Atomi Yutaka, Department of Surgery, Kyorin University School of Medicine

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SAGES Concurrent Session SS15 - Hernia

Location: Room 6D

2012 Scientific Session & Postgraduate Course

Moderators: Andrew J. Duffy, MD & Jeff Hazey, MD

- S083 LAPAROSCOPIC VENTRAL HERNIA REPAIR LONG-TERM PROGNOSIS AND THE ANALYSIS OF MESH SHRINKAGE BY COMPUTED TOMOGRAPHY Kanyu Nakano, MD, Hitoshi Idani, MD, Shinya Asami, MD, Sathoshi Koumoto, MD, Tetsushi Kubota, MD, Yohei Kurose, MD, Katsuyoshi Hioki, MD, Shinichiro Kubo, MD, Hiroki Nojima, MD, Yasushi Ohmura, MD, Takashi Yoshioka, MD, Hiroshi Sasaki, MD, Masahiko Muro,, Department of Surgery, Fukuyama City Hospital
- S084 COMPARISON OF LONG-TERM OUTCOME AND QUALITY OF LIFE FOLLOWING LAPAROSCOPIC REPAIR OF INCISIONAL AND VENTRAL HERNIAS WITH TACKER OR SUTURE MESH FIXATION: A PROSPECTIVE RANDOMIZED CONTROLLED STUDY <u>Virinder K Bansal, MBBS MS FACS</u>, M C Misra, MS FACS FRCS, P Singal, MBBS, K Rao, MS, S Kumar, MS, S Rajeshwari, MD, R Sagar, MD, All India Institute of Medical Sciences, New Delhi-110029, India
- S085 CLOSURE VERSUS NON-CLOSURE OF HERNIA DEFECT DURING LAPAROSCOPIC VENTRAL HERNIA REPAIR WITH MESH <u>Marianna Zeichen, MD</u>, Wilmer Mata, MD, Henry J Lujan, MD, Irving Jorge, MD, Victor Maciel, MD, Dustin Lee, DO, Eddie Gomez, MD, Alejandro M Hernandez, MD, Gustavo Plasencia, MD, Jackson South Community Hospital
- S086 OUTCOMES OF SIMULTANEOUS LAPAROSCOPIC CHOLECYSTECTOMY AND VENTRAL HERNIA REPAIR COMPARED TO LAPAROSCOPIC CHOLECYSTECTOMY ALONE Nathan T Orr, MD, Daniel L Davenport, PhD, John S Roth, MD, University of Kentucky School of Medicine
- S087 PARASTOMAL HERNIA REPAIR: LAPAROSCOPIC MODIFIED SUGARBAKER TECHNIQUE RESULTS IN SUPERIOR RECURRENCE RATE <u>Asma Asif, BS</u>, Melissa Ruiz, MD, Amy Yetasook, BS, Joann Carbray, BA, Woody Denham, MD, John Linn, MD, Michael B Ujiki, MD, NorthShore University Health System

S088 - Withdrawn

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11:30 AM - 12:30 PM

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Session (accepted oral & video presentations)

SAGES Concurrent Session SS16 - Single Incision

Moderators: Steve Eubanks, MD & Karl H. Fuchs, MD

S089 AN ANALYSIS OF PERI-OPERATIVE FACTORS AND A COST-COMPARISON OF SINGLE-INCISION VERSUS TRADITIONAL MULTI-INCISION LAPAROSCOPIC CHOLECYSTECTOMY <u>Catherine E Beck, MD</u>, Jeffrey L Eakin, MD, Rebecca Detorre, David E Renton, MD, The Ohio State University Medical Center

S090 COMPARISON OF SINGLE PORT AND CONVENTIONAL LAPAROSCOPIC COLECTOMY: A RANDOMIZED CONTROLLED TRIAL <u>Jensen T</u>
<u>Poon, MBBS MS</u>, Chi-wai Cheung, MBBS, Wai-lun Law, MBBS MS, Joe K Fan, MBBS MS, Siu-hung Lo, MBBS, Miu Y Chan, MBBS, Department of Surgery & Department of Anesthesia, The University of Hong Kong, Queen Mary Hospital, Hong Kong

S091 FEASIBILITY OF SINGLE SITE LAPAROSCOPIC SURGERY FOR COLORECTAL CANCER <u>Ichiro Takemasa</u>, <u>MD PhD</u>, Junichi Nishimura, MD PhD, Tsunekazu Mizushima, MD PhD, Masataka Ikeda, MD PhD, Hirofumi Yamamoto, MD PhD, Mitsugu Sekimoto, MD PhD, Yuichiro Doki, MD PhD, Masaki Mori, MD PhD, Department of Gastroenterological Surgery, Graduate School of Medicine, Osaka University

S092 REDUCED PORT VERSUS CONVENTIONAL LAPAROSCOPIC TOTAL PROCTOCOLECTOMY AND ILEAL J POUCH-ANAL ANASTOMOSIS: A CASE MATCHED STUDY Meagan Costedio, <u>Erman Aytac</u>, Emre Gorgun, Ravi P Kiran, Feza Remzi, Department of Colorectal Surgery, Digestive Disease Institute, The Cleveland Clinic Foundation, OH, USA

S093 SINGLE INCISION SURGERY INCISIONAL HERNIA STUDY <u>Harvey C Rainville, MD</u>, Diego Camacho, MD, Jenny Choi, MD, Emmanuel Agaba, MD, Pratibha Vemulapali, MD, Montefiore Medical Center

S094 SINGLE INCISION CHOLECYSTECTOMY UTILIZING SPIDER SURGICAL SYSTEM: CASE SERIES OF 40 PATIENTS Shyam L Dahiya, MD, Tri-City Regional Medical Center, Hawaiian Gardens, CA

To send your questions and comments for this session Text SS16 and your message to 22333 · Tweet @poll SS16 and your message · Go to http://pollev.com/SAGES6E during the session

SAGES Concurrent Session SS17 - Videos – Colon

Location: Room 4

Location: Room 6E

Moderators: John H. Marks, MD & Elisabeth McLemore, MD

V021 SINGLE-INCISION LAPAROSCOPIC RIGHT COLECTOMY WITH D3 DISSECTION FOCUSED UPON COUNTER TRACTION FOR RIGHT SIDED COLON CANCER Masanori Kotake, MD, Noriyuki Inaki, MD, Hiroyuki Bando, MD, Tetsuji Yamada, MD, Ishikawa Prefectural Central Hospital V022 SINGLE INCISION LAPAROSCOPIC ANTERIOR RESECTION FOR RECTAL CANCER Dan Geisler, MD Associate Staff, West Penn Allegheny Health System

V023 LAPAROSCOPIC LAVAGE FOR ACUTE PERFORATED DIVERTICULITIS Javier Nieto, MD, <u>Tara Martinez</u>, <u>DO</u>, Eric M Haas, MD FACS FASCRS, Division of Elective General Surgery, Department of Surgery, The University of Texas Medical School at Houston, Houston, TX

V024 LAPAROSCOPIC TOTAL COLECTOMY WITH TRANSVAGINAL REMOVAL OF THE COLON AND ILEORECTAL ANASTOMOSIS <u>Ziad T Awad, MD FACS</u>, Keyur Chavda, University o fFlorida College of Medicine - Jacksonville

V025 THE POOR MAN'S TEM Roel Hompes, MD, Frederic Ris, MD, Christopher Cunningham, FRCS, Neil Mortensen, FRCS, Ronan Cahill, FRCS, 1. department of colorectal surgery, John radcliffe hospitals, Oxford 2. Department of visceral surgery, Geneva University Hospitals, Geneva, Switzerland 3. Department of colorectal surgery, Beaumont Hospital, Dublin, Ireland

V026 AN UNUSUAL CECAL MASS <u>Amy Neville, MD</u>, Marilou Vaillancourt, MD, Etienne Auger-dufour, MD, Liane S Feldman, MD, Gerald M Fried, MD, McGill University Health Center

To send your questions and comments for this session Text SS17 and your message to 22333 • Tweet @poll SS17 and your message • Go to http://pollev.com/SAGES4 during the session

12:30 - 1:30 PM

Exhibits, Posters, Learning Center

12:30 PM - 2:00 PM

*Separate Registration Fee for Lunch. Lectures open to Registration Options A & C

Fellowship Council Luncheon

Chair: Bruce Schirmer, MD
Co-Chair: Tim Farrell, MD

This session will feature a lecture by Dr. Jo Buyske, Associate Executive Director of the American Board of Surgery, on her opinions about the future of non-ACGME surgical fellowships and their role in training tomorrow's surgeons. Following Dr. Buyske's address, a question and answer session on the topic will be held.

Objectives:

At the conclusion of this session, participants will be able to:

- · List the forces at work that will likely result in some change in the format of how current non-ACGME fellowships are structured
- Describe potential changes in the training of surgical residents that could impact the need for current Fellowship Council fellowships
- Compare and contrast different options for funding in the future for non-ACGME fellowships in their current or potentially altered form

SCHEDULE

2:30pm The Future of non-ACGME Fellowships in Surgery: One Perspective

Jo Buyske, MD

Location: Room 11AB

SAGES acknowledges an educational grant in support of this activity from Ethicon Endo-Surgery

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*included in Registration SuperPass (Option A) or Registration Option C

Do You Know More Than Your Fellow?

Chair: Jeffrey L. Ponsky, MD Co-Chair: Daniel B. Jones, MD

Location: Room 6D

Like Family Feud, SAGES Leadership Team squares off against a Team of Minimally Invasive Fellows. Who knows more – the elders or their fellows? Or the Audience? This will be an engaging session for the attendees – an audience response system will allow attendees to compare their knowledge to that of the two TEAMS. Questions from SAGES manuals, guidelines, FLS™, FES™, and FUSE™ will be used. Come join us to prepare for your ABSITE, Boards, or Recertification, or just to have some MIS fun!

Objectives:

At the conclusion of this session, participants will be able to:

- · Understand current guidelines for practice of GI surgery
- · Outline safety guidelines in endoscopic and laparoscopic surgery
- · Understand current therapies for GI disease

SCHEDULE

SAGES Family Feud: The Old vs The New

Moderator: Jeffrey Ponsky, MD

Team 1: SAGES Executive Committee:

Steven Schwaitzberg, MD W. Scott Melvin, MD Gerald Fried, MD L. Michael Brunt, MD Adrian Park, MD Daniel J. Scott, MD Omar Yusef Kudsi, MD Jeffrey Eakin, MD Amy Neville, MD James Bittner, MD Abe Frech, MD Luis Rondon, MD

Team 2: Their Fellows

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Foundation for Surgical Fellowships

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SAGES 2012



*Included in Registration SuperPass (Option A) or Registration Option C

Emerging Technology Session

Chair: Yoav Mintz, MD

Co-Chairs: Yuman Fong, MD & Giovanni Dapri, MD

Location: Room 6E

For the 8th year, SAGES, as part of the SAGES Technology Initiative, will present the Emerging Technology Session. Surgeons, physicians, scientists from academic centers as well as industry are invited to submit abstracts for consideration. Submissions that reflect "late breaking", "cutting-edge" or novel information are greatly encouraged. Submission of preliminary results for new technologies is encouraged as well.

SAGES does not offer CME for this session.

ET001 A NEW ROBOTIC SYSTEM FOR SINGLE-INCISION LAPAROSCOPIC SURGERY: PRELIMINARY EXPERIENCE <u>Giancarlo Basili, MD</u>, Gianluigi Pietroni, PhD, Arianna Menciassi, PhD, Dario Pietrasanta, MD, Marta Niccolini, PhD, Orlando Goletti, MD, Health Unit 5, Pontedera Hospital, General Surgery Unit - The BioRobotic Institute, Scuola Superiore S'Anna, Pisa, ITALY

ET002 AN EXTERNALLY-STEERABLE MAGNETIC LEVITATION SURGICAL CAMERA FOR MULTIPLE-POINT-OF-VIEW LAPAROSCOPY <u>Luca Morelli, MD</u>, Massimiliano Simi, Elena Troia, Carlo Maria Rosati, MD, Arianna Menciassi, Paolo Dario, Franco Mosca, MD, Division of General Surgery I, University of Pisa, Pisa, Italy; Scuola Superiore Sant'Anna, Pisa, Italy; Ekymed SpA, Pisa, Italy

ET003 CONSOLE INTEGRATED STEREOSCOPIC OSIRIX 3D VOLUME RENDERED IMAGES FOR DA VINCI™ ROBOTIC SURGERY <u>Francesco Volonte, MD</u>, François Pugin, MD, Nicolas Buchs, MD, Joel Spaltenstein, BS, Boris Schiltz, MD, Monika Hagen, MD, Osman Ratib, MD PhD, Philippe Morel, MD PhD, Clinic for Visceral and Transplantation Surgery, Department of Surgery, Clinic of Nuclear Medicine, Department of Imaging Sciences and Medical Information, Geneva University Hospital, Switzerland

ET004 THE MECHANICAL PROPERTIES OF ADHESIVE POLYMER FILMS IN EX-VIVO STUDY FOR BOWEL RETRACTION IN LAPAROSCOPIC SURGERY Z Wang, PhD, L Tai, PhD, G J Florence, PhD, D McLean, <u>S I Brown, PhD</u>, P Andre, PhD, A Cuschieri, MD PhD, Universities of Dundee & St Andrews, UK

ET005 MINIMALLY INVASIVE SURGERY USING INTRA-OPERATIVE REAL-TIME CAPSULE ENDOSCOPY FOR SMALL BOWEL LESIONS <u>Kazuki Yamashita, MD PhD</u>, Hideo Okumura, MD PhD, Yasuo Oka, MD PhD, Atsushi Urakami, MD PhD, Akiko Shiotani, MD PhD, Hiroshi Nakashima, MD PhD, Hideo Matsumoto, MD PhD, Toshihiro Hirai, MD PhD, Masafumi Nakamura, MD PhD, Kawasaki Medical School, Digestive Surgery

ET006 CLINICAL EXPERIENCE WITH A HANDS-FREE INTERNAL LIVER RETRACTOR IN LAPAROSCOPIC BARIATRIC SURGERY <u>Hideharu Shimizu</u>, <u>MD</u>, Tomasz Rogula, MD, Cleveland Clinic, OH

ET007 TRANSABDOMINAL ENDOSCOPIC PERICARDIAL ACCESS FOR EPICARDIAL ABLATION <u>Stephen W Unger, MD</u> Chairman Department of Surgery, Angelo La Pietra, MD, Jennifer D Davies, MD, Steven R DeBeer, MD, Mount Sinai Medical Center

ET008 NOVEL METHOD FOR COMPREHENSIVELY ASSESSING THE BIOMECHANICAL RISKS ASSOCIATED WITH THE USE OF MINIMALLY-INVASIVE SURGICAL INSTRUMENTS <u>Donald R Peterson, PhD MS</u>, Drew Seils, BS, Tarek Tantawy, BS, Angela Kueck, MD, M Kurt E Roberts, MD, University of Connecticut, Yale University

ET009 LASER GUIDED INSTRUMENT POSITIONING <u>Danny A Sherwinter, MD</u>, Qiang Liu, MD, Maimonides Medical Center Division of Minimally Invasive Surgery

ET010 LAPAROSCOPIC VISION PORT <u>David Earle, MD FACS</u>, John Romanelli, MD, Baystate Medical Center

ET011 ACCURATE HIGH-INTENSITY FOCUSED ULTRASOUND ABLATION IN A PORCINE LIVER MODEL THROUGH INTEGRATION OF REAL-TIME IMAGE GUIDANCE, ROBOTIC NAVIGATION, AND ELASTOGRAPHIC MONITORING <u>Daniel A Carnegie, MD</u>, Emad M Boctor, PhD, Xiaoyu Guo, Hyun-Jae Kang, Nishikant Deshmukh, Pezhman Foroughi, Everette C Burdette, PhD, Robert J Webster, III, PhD, Jessica Burgner, PhD, Michael A Choti, MD MBA, Department of Surgery, Johns Hopkins School of Medicine, Baltimore, MD 21287, USA., Department of Mechanical Engineering, Vanderbilt University, Nashville, TN 37235, USA.

ET012 FLEXDEX™: A MINIMALLY INVASIVE SURGICAL TOOL WITH ENHANCED DEXTERITY AND INTUITIVE CONTROL <u>James D Geiger, MD</u>, Shorya Awtar, PhD, University of Michigan

ET013 DEVELOPMENT OF NOVEL ELECTROSPUN ABSORBABLE POLYCAPROLACTONE (PCL) SCAFFOLDS FOR HERNIA REPAIR APPLICATIONS Gregory C Ebersole, MS MS, Evan G Buettmann, Matthew R MacEwan, BSE, Michael E Tang, BS, Margaret M Frisella, RN, <u>Brent D Matthews, MD</u>, Corey R Deeken, PhD, Washington University School of Medicine, St. Louis, Missouri

 $To send your \ questions \ and \ comments \ for this session \ Text \ ETSCI \ and \ your \ message \ to \ 22333 \cdot Tweet \ @poll \ ETSCI \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGES6E \ during \ the \ session \ the \ se$

Visit the exhibit hall for coffee and cookies between 1:30 - 3:30 pm

Pencil us in for next year:

April 17 - 20, 2013 | Baltimore, MD



*Included in Registration SuperPass (Option A) or Registration Option C

Inguinal Hernias: Treating the Other Guy's Complications

Chair: Edward Felix, MD
Co-Chair: David Brooks, MD

Location: Room 6AB

Some complications after laparoscopic and open inguinal hernia repair require remedial therapy. The purpose of this session is to describe these complications and the treatments available for each. A practical guide will be developed for each complication and the appropriate alternatives discussed by the speakers. Debate and questions will be encouraged.

Objectives:

At the conclusion of this session, participants will be able to:

- Determine the etiology of pain after inquinal hernia repair
- · Recognize the appropriate remedial therapy for complications that occur after inguinal hernia repair
- · Apply the techniques of remedial surgery

SCHEDULE

1:30pm	Overview of the Problem of Chronic Pain After Inguinal Hernia Repair	Archana Ramaswamy, MD
1:40pm	The Open Approach to Chronic Pain After Inguinal Hernia Repair	David Chen, MD
1:50pm	Laparoscopic Approach to Post Inguinal Hernia Repair Pain	Shirin Towfigh, MD
2:00pm	Overview of The Causes of Recurrence After Inguinal Hernia Repair. Are They Important?	George Ferzli, MD
2:10pm	An Open Approach Is the Best Technique for the Repair of Recurrent Hernias	David Brooks, MD
2:20pm	A Laparoscopic Approach Is the Best Technique for the Repair of Recurrent Hernias	Brian Jacob, MD
2:30pm	A Tailored Approach Is the Best Technique for the Repair of Recurrent Hernias	Guy Voeller, MD
2:40pm	Mesh Complications (Diagnosis, Treatment And Prevention)	Yuri Novitsky, MD
2:50pm	Case Presentations and Q&A: The Panel Pontificates	Edward Felix, MD & David Brooks, MD - Moderator and Referee

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SAGES 2012

Location: Room 6F



1:30 PM - 3:30 PM

*Included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS18 - Foregut

Moderators: Daniel J. Deziel, MD & Namir Katkhouda, MD

S095 ELECTRICAL STIMULATION THERAPY (EST) OF THE LOWER ESOPHAGEAL SPHINCTER (LES) IS SUCCESSFUL IN TREATING GERD – FINAL RESULTS OF OPEN-LABEL PROSPECTIVE TRIAL <u>Leonardo Rodríguez, MD</u>, Patricia Rodríguez, RN, Beatriz Gómez, BSc, Juan C Ayala, MD, Jorge Saba, MD, Alberto Perez-castilla, MD, Manoel. G Neto, MD, Surgery, CCO OBESIDAD Y DIABETES, Santiago, Chile

S096 REVISION OF FAILED TRADITIONAL FUNDOPLICATION USING ESOPHYX TRANSORAL FUNDOPLICATION <u>Reginald C. W Bell, MD</u>, Katherine D. Freeman, NP, Rachel Hufford, RN, SurgOne P.C.

S097 SURGICAL OUTCOMES AND OPERATIVE RISK OF LAPAROSCOPIC TOTAL GASTRECTOMY FOR GASTRIC CARCINOMA: RESULTS FROM A LARGE SINGLE CENTER COHORT On Jeong, MD, Young Kyu Park, MD PhD, Mi Ran Jeong, MD, Kwang Yong Kim, MD, Department of Surgery, Chonnam National University Hwasun Hospital, South Korea

S098 LAPAROSCOPIC APPROACHES TO GASTRIC GASTROINTESTINAL STROMAL TUMORS (GIST): AN INSTITUTIONAL EXPERIENCE. Michael J Pucci, MD, Francesco Palazzo, MD, Pei-wen Lim, BS, Karen A Chojnacki, MD, Ernest L Rosato, MD, Adam C Berger, MD, Thomas Jefferson University Hospital, Department of Surgery, Philadelphia, PA, USA

S099 CAN FINDINGS ON ESOPHAGOGRAPHY PREDICT PALLIATION OF ACHALASIA AFTER LAPAROSCOPIC HELLER MYOTOMY AND ANTERIOR FUNDOPLICATION? Alexander S Rosemurgy, MD, Krishen Patel, Kenneth Luberice, BS, Harold Paul, BS, Abigail Espeut, BS, David S Estores, MD, H. Worth Boyce, MD, Sharona Ross, MD, University of South Florida, Department of Surgery, Tampa Florida Tampa General Medical Group, Tampa General Hospital, Tampa Florida

S100 COMPARISON OF OPEN AND LAPAROSCOPIC GASTRECTOMY WITH LYMPH NODE DISSECTION FOR GASTRIC CANCER Bac Nguyen Hoang, Prof PhD, Long Vo Duy, Ms, Long Tran Cong Duy, Ms, Thuan Nguyen Duc, MD, University Medical Center, Hochiminh city, Vietnam S101 MINIMAL INVASIVE SURGICAL APPROACH FOR THE TREATMENT OF GASTROPARESIS Joerg Zehetner, MD MMM, John C Lipham, MD, Farrokh Ravari, MD, Shahin Ayazi, MD, Afshin Skibba, MD, Ali Darehzereshki, MD, Rodney J Mason, MD, Namir Katkhouda, MD, USC Department of Surgery

S102 GASTRIC ELECTRICAL STIMULATION FOR DRUG-RESISTANT GASTROPARESIS Nv G Jayanthi, MD FRCS, Sp L Dexter, MD FRCS, Ai Sarela, MD FRCS, Department of Upper Gastrointestinal, Metabolic & Bariatric Surgery, St James's University Hospital, Leeds, UK

S103 MOTOR RESPONSE TO MULTIPLE RAPID SWALLOWS (MRS) CAN PREDICT DYSPHAGIA IN PATIENTS SCHEDULED FOR LAPAROSCOPIC ANTIREFLUX SURGERY Nathaniel Stoikes, MD, Jesse Drapekin, RA, Anisa Shaker, MD, Vladimir Kushnir, MD, L. Michael Brunt, MD, C. Prakash Gyawali, MD, Division of Gastroenterology and Section of Minimally Invasive Surgery, Washington University School of Medicine, St. Louis

S104 PARTIAL FUNDOPLICATION RESULTS IN EXCELLENT OUTCOMES AND BETTER DYSPHAGIA CONTROL THAN TOTAL FUNDOPLICATION AFTER LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR Vladan N Obradovic, MD, Girish Luthra, MD, Aamir Akmal, MD, Dancea C Horatiu, MD, Wai M Yeung, MD, Mohanbabu Alaparti, MD, Mathew E Plank, PAC, Andrea L Plank, Jon D Gabrielsen, MD FACS, Anthony T Petrick, MD FACS, Geisinger Medical Center, Danville Pennsylvania

S105 THORACOSCOPIC ESOPHAGECTOMY WHILE IN A PRONE POSITION FOR ESOPHAGEAL CANCER: A PRECEDING ANTERIOR APPROACH METHOD <u>Soji Ozawa, MD DMSc</u>, Eisuke Ito, MD, Akihito Kazuno, MD, Osamu Chino, MD DMSc, Department of Gastroenterological Surgery, Tokai University School of Medicine

S106 COMBINED PARAESOPHAGEAL HERNIA REPAIR AND PARTIAL LONGITUDINAL GASTRECTOMY IN OBESE PATIENTS WITH SYMPTOMATIC PARAESOPHAGEAL HERNIAS John H Rodriguez, MD, Kevin El-hayek, MD, Poochong Timratana, MD, Matthew Kroh, MD, Bipan Chand, MD, Cleveland Clinic Foundation

To send your questions and comments for this session Text SS18 and your message to 22333 · Tweet @poll SS18 and your message · Go to http://pollev.com/SAGES6F during the session

SAGES Concurrent Session SS19 - Videos – HPB (Hepatobiliary and Pancreas) Location: Room 4

Moderators: Edward H. Phillips, MD & Sharona Ross, MD

V027 LAPARO-ENDOSCOPIC SINGLE SITE (LESS) DISTAL PANCREATECTOMY AND SPLENECTOMY <u>Sharona B Ross, MD</u>, Franka Co, BS, Harold Paul, BS, Kenneth Luberice, BS, Edward Choung, MD, Alexander S Rosemurgy, MD, University of South Florida & Tampa General Medical Group V028 PURE LAPAROSCOPIC ANATOMICAL LIVER POSTERIOR SEGMENTECTOMY IN SEMI-PRONE POSITION. <u>Tetsuo Ikeda, MD PhD</u>, Yoshihiko Maehara, MD PhD, Department of Surgery and Science, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan.

V029 LAPAROSCOPIC RESECTION OF THE EXTRA HEPATIC BILE DUCT AND BILIARY RECONSTRUCTION FOR CONGENITAL BILIARY DILATATION Takeshi Naitoh, MD FACS, Takanori Morikawa, MD, Masahiro Iseki, MD, Masayuki Kakyo, MD, Naoki Tanaka, MD, Kazuhiro Watanabe, MD, Fuyuhiko Motoi, MD, Toshiki Rikiyama, MD, Yu Katayose, MD, Shinichi Egawa, MD FACS, Michiaki Unno, MD, Tohoku University Hospital, Department of Surgery

V030 SIMULTANEOUS LÁPAROSCOPIC RESECTION OF COLORECTAL CANCER AND SYNCHRONOUS LIVER METASTASES <u>Go Wakabayashi</u>, <u>MD PhD FACS</u>, Takeshi Takahara, MD, Yasushi Hasegawa, MD PhD, Naoko Ito, MD, Masahiro Takahashi, MD PhD, Hiroyuki Nitta, MD PhD, Department of Surgery, Iwate Medical University School of Medicine

V031 TWO BIRDS WITH FIVE TROCARS: LAPAROSCOPIC PANCREATICODUODENECTOMY AND RIGHT HEMICOLECTOMY Rebecca Kowalski, MD, Niket Sonpal, MD, Jennifer Montes, MD, Paresh C Shah, MD FACS, Lenox Hill Hospital, Northshore-LIJ Health System, Hofstra Medical School, New York, NY

V032 BILIARY ENDOSCOPY AND LITHOTRIPSY OF BILIARY STONES <u>Jordan A Siegel, MD</u>, David Imagawa, MD, Laura Findeiss, MD, Jaime Landman, MD, University of California, Irvine

V033 EXTRAHEPATIC GLISSONEAN ACCESS IN LAPAROSCOPIC ANATOMICAL LIVER RESECTION <u>Akihiro Cho, MD</u>, Hiroshi Yamamoto, MD, Osamu Kainuma, MD, Atsushi Ikeda, MD, Hiroaki Souda, MD, Yoshihiro Nabeya, MD, Nobuhiro Takiguchi, MD, Chiba Cancer Center Hospital, Japan V034 LAPAROSCOPIC FENESTRATION OF MULTIPLE LIVER CYSTS <u>Alexander Ramirez Valderrama</u>, MD, Joel Ricci, MD, Benjamin Samstein, MD FACS, Columbia University Medical Center, New York Hospital Queens

V035 SINISTROPOSITION: TRUE LEFT-SIDED GALLBLADDER. A RARE CONDITION IN A COMMON OPERATION. A SERIES OF THREE CASES Patrick Reardon, MD, Amanda Parker, MD, Michele A Riordon, MD, Vadim Sherman, MD, Brian J Dunkin, MD, The Methodist Hospital Department of Surgery; Methodist Institute for Technology, Innovation, and Education Houston, Texas 77030

V036 LAPAROSCOPIC LATERAL PANCREATICOJĒJUNOSTOMY <u>Daanish Kazi, DO</u>, Maurice Arregui, MD, St. Vincent's Hospital Indianapolis Indiana V037 SINGLE-PORT LAPAROSCOPIC HEPATECTOMY (WITH VIDEO) <u>Mitsuhiro Asakuma, PhD MD</u>, Koji Komeda, PhD MD, Yoshiharu Miyamoto, PhD MD, Fumitoshi Hirokawa, PhD MD, Tetsunosuke Shimizu, PhD MD, Yoshihiro Inoue, PhD MD, Michihiro Hayashi, PhD MD, Kazuhisa Uchiyama, PhD MD, Osaka Medical College

V038 LAPAROSCOPIC PANCREAS-PRESERVING RESECTION FOR ADENOCARCINOMA OF THE 3RD AND 4TH PORTION OF THE DUODENUM Giuseppe Portale, MD, Valentino Fiscon, MD, Giovanni Migliorini, MD, Flavio Frigo, MD, Department of General Surgery

*Included in Registration SuperPass (Option A) or Registration Option C

Solid Organ: MIS Endocrine and Spleen

Chair: John F. Sweeney, MD Co-Chair: Fiemu Nwariaku, MD

Location: Room 6D

Approaches to the work-up and surgical treatment of diseases related to the adrenal, spleen, thyroid and parathyroid can be challenging. This session includes presentations from experts regarding some of the key aspects relevant to these procedures, especially in performing them using MIS techniques.

Objectives:

At the conclusion of this session, participants will be able to:

- · Describe the indications for minimally invasive thyroidectomy
- · Describe the technique of minimally-invasive parathyroidectomy
- · Describe the surgical options for minimally-invasive adrenalectomy
- · Describe the evaluation of adrenal tumors including Pheochromocytoma
- · Describe application of laparoscopic splenectomy for management of hematologic disorders that require surgical intervention
- · Adopt strategies for deciding when an MIS approach is best

SCHEDULE

Approach for Splenectomy in Benign and Malignant Hematologic Disorders	S. Scott Davis, MD
Workup, Indications and Approaches for Minimally Invasive Surgery	Fiemu Nwariaku, MD
oma: Workup and Preparation for Surgery	Gerard Doherty, MD
ve/Video Assisted Thyroidectomy: Technique, Who, When, Where and How?	Dimitrios Linos, MD
ve Management of Pancreatic Neuroendocrine Tumors	C.Y. Lo, MD
	Quan-Yang Duh MD
	Jeffrey Norton, MD
i	Approach for Splenectomy in Benign and Malignant Hematologic Disorders Workup, Indications and Approaches for Minimally Invasive Surgery oma: Workup and Preparation for Surgery ive/Video Assisted Thyroidectomy: Technique, Who, When, Where and How? ive Management of Pancreatic Neuroendocrine Tumors Recurrent or Persistent Hyperparathyroidism: vasive Approach Appropriate? ate for Minimally Invasive Parathyroidectomy? tions, Technique and Management of Complications

 $To send your \ questions \ and \ comments \ for \ this \ session \ Text \ SOLID \ and \ your \ message \ to \ 22333 \cdot Tweet \ @poll \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ \cdot \ Go \ to \ http://pollev.com/SAGESGD \ during \ the \ session \ Text \ SOLID \ and \ your \ message \ to \ session \ the \ the \ session \ the \ the \ the \ session \ the \$

3:30 PM - 5:30 PM

*Included in Registration SuperPass (Option A) or Registration Option C

Robotic Surgery: Hope or Hype? Presidential Debate

Chair: Manabu Yamamoto, MD
Co-Chair: Richard Satava, MD

o-Chair: Richard Satava, MD

Location: Room 6AB

Robotic surgery has been introduced into more than 1500 institutions in the world. However, it is still controversial. In this session, SAGES presidents will debate the current status and future aspects of robotic surgery.

Obiectives:

Panel Discussion

At the conclusion of this session, participants will be able to:

- · List realistic and unrealistic aspects of robotic surgery
- · Discuss the latest technical information and indications of robotic surgery
- Identify the best procedures within GI surgery for patients in terms of clinical outcomes

SCHEDULE

3:30pm	REFEREE	Manabu Yamamoto, MD
3:35pm	Robotic Surgery: Hope	Mark Talamini, MD
3:50pm	Robotic Surgery: Hope	Richard Satava, MD
4:05pm	Robotic Surgery: Hype	Nathaniel Soper, MD
4:20pm	Robotic Surgery: Hype	W. Scott Melvin, MD
4:35pm	Debate – Answers Limited to 1-2 Minutes Each	Talamini/Satava vs Soper/Melvin

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*Included in Registration SuperPass (Option A) or Registration Option C

Advanced Open and Laparoscopic Ventral Hernia Repair

Chair: Adrian Park, MD

Co-Chair: Jonathan Critchlow, MD

Location: Room 6E

Location: Room 6F

Surgeons are commonly faced with the need to manage patients with ventral hernias. These hernias and these patients come in all shapes and sizes and often present unique challenges. Complex hernias seem to present with increasing frequency in many practices and the best approach may not always be apparent. This session will discuss relevant decision making and operative strategies for difficult and complex ventral hernias, provide updated management options, and address some of the new issues being discussed in this field.

Objectives:

At the conclusion of this session, participants will be able to:

- Categorize complex ventral hernias based on patient, anatomic and technical factors
- Recognize herniorrhaphy techniques and biomaterial (mesh) options to address these challenging hernias
- · Select and apply a management approach and biomaterial to best address their patients' challenging hernias

SCHEDUI F

3:30pm	Hernia Repair and the Previously Infected Mesh	Sergio Roll, MD
3:45pm	Hernia Repair in the Obese Patients and Smokers	Dimitrios Stefanidis, MD
4:00pm	Eccentric Hernias: Flank & Parastomal Bulges!	Brian Jacob, MD
4:15pm	Separation of Components-Latest & Greatest or Déjà Vu All Over Again?! (Update on techniques, indications and results)	Jonathan Critchlow, MD
4:30pm	The Importance of Restoring Function – What Is The Evidence; How Is It Done?	Scott Roth, MD
4:45pm	From Stem to Stern (Sub Xyphoid to Suprapubic) – Best Approaches and Evidence	Gina Adrales, MD
5:00pm	Panel Discussion (Audience Invited at Outset to Think of Cases or Scenarios to Ask of Panel)	

To send your questions and comments for this session Text VENTRAL and your message to 22333 · Tweet @poll VENTRAL and your message · Go to http://pollev.com/SAGES6E during the session

SAGES acknowledges an educational grant in support of this session from Gore & Associates

3:30 PM - 5:30 PM

*Included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS20 - Colorectal

Moderators: John A. Coller, MD & Steven D. Wexner, MD

- S107 DO EXPERIENCED OPEN SURGEONS LEARN LAPAROSCOPIC COLORECTAL SURGERY FASTER? A STUDY FOR THE NATIONAL TRAINING PROGRAM IN ENGLAND <u>Danilo Miskovic, MD</u>, Melody Ni, PhD, Amjad Parvaiz, FRCS, Austin Acheson, MD, Ian Jenkins, MD, John Griffith, MD, Mark Coleman, MD, George Hanna, PhD, Imperial College London
- S108 SHORT-TERM OUTCOMES OF LAPAROSCOPIC INTERSPHINCTERIC RESECTION FROM PHASE II TRIAL TO EVALUATE LAPAROSCOPIC SURGERY FOR STAGE 0/I RECTAL CARCINOMA: JAPAN SOCIETY OF LAPAROSCOPIC COLORECTAL SURGERY LAP RC (NCT00635466) Shoichi Fujii, MD PhD, Seiichiro Yamamoto, MD PhD, Masaaki Ito, MD PhD, Shigeki Yamaguchi, MD PhD, Kazuhiro Sakamoto, MD PhD, Yusuke Kinugasa, MD PhD, Yukihito Kokuba, MD PhD, Junji Okuda, MD PhD, Kenichi Yoshimura Kenichi Yoshimura, MD PhD, Masahiko Wata, Japan Society of Laparoscopic Colorectal Surgery
- S109 ACUTE VERSUS ELECTIVE LAPAROSCOPIC SIGMOID RESECTION FOR DIVERTICULITIS <u>Marty Zdichavsky, MD</u>, Tobias Meile, MD, Maximillian Von Feilitzsch, MD, Dörte Wichmann, MD, Alfred Königsrainer, MD, University Hospital Tuebingen, Germany
- S110 SURGICAL TREATMENT OPTIONS FOR RECTAL CARCINOID CANCER: TRANS-ANAL EXCISION VERSUS LOW ANTERIOR TOTAL MESORECTAL EXCISION Yz Wang, MD, A E Diebold, BS, J P Boudreaux, MD, D Raines, MD, R Campeau, MD, L Anthony, MD, E A Woltering, MD, Louisiana State University Health Sciences Center
- S111 PREGNANCY OUTCOMES FOLLOWING LAPAROSCOPIC-ASSISTED AND OPEN COLORECTAL CANCER SURGERY <u>F. A. Haggar</u>, <u>PhD MPH</u>, D B Preen, PhD, K Einarsdottir, PhD, R P Boushey, PhD MD, J Mamazza, MD, The Ottawa Hospital, The University of Ottawa; The School of Population Health, The University of Western Australia
- S112 COMPARISON OF EARLY MOBILIZATION AND DIET REHABILITATION PROGRAM WITH CONVENTIONAL CARE AFTER LAPAROSCOPIC LOW ANTERIOR RESECTION: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL <u>Sung-min Lee, MD</u>, Je-ho Jang, MD, Duck-woo Kim, PhD, Seung-chul Heo, PhD, Seung-yong Jeong, PhD, Kyu-ju Park, PhD, Sung-bum Kang, PhD, Department of Surgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital, Seoul National University Boramae Hospital, Seoul National University Hospital
- S113 LYMPH NODE RETRIEVAL IN COLORECTAL CANCER IN THE ERA OF MINIMALLY INVASIVE SURGERY: ARE WE FOLLOWING ONCOLOGIC PRINCIPLES? <u>Laila Rashidi, MD</u>, Mike L Kueht, MS, Aakash H Gajjar, MD, University of Texas Medical Branch, Galveston, Texas, USA
- S114 SHOULD ALL EXCISED RECTAL POLYPS BE TATTOOED? A PLEA FOR LOCALIZATION <u>Deborah Keller, MD</u>, Jane Jaffee, DO, Amit Khanna, MD MPH, Temple University Hospital
- S115 TRANSANAL VERSUS TRANSABDOMINAL SPECIMEN EXTRACTION WITH LAPAROSCOPIC LOW ANTERIOR RESECTION: A COMPARATIVE ANALYSIS ON 432 PATIENTS WITH RECTAL CANCER <u>Song Liang</u>, <u>MD PHD</u>, Morris E Franklin, Jr, MD FACS, The Texas Endosurgery Institute
- S116 SPHINCTER SPARING SURGERY FOR THE DISTAL 3 CM OF THE TRUE RECTUM: RESULTS AFTER NEOADJUVANT THERAPY AND MINIMALLY INVASIVE RADICAL SURGERY OR LOCAL EXCISION <u>George J Nassif, DO</u>, Henry Schoonyoung, MD, Sara Berman, BS, AI Denittis, MD, Erik Zeger, MD, Mo Mohiuddin, MD, Gerald Marks, MD, John H Marks, MD, Lankenau Medical Center
- S117 COLORECTAL CANCER FOLLOWING NEGATIVE COLONOSCOPY, IS 5-YEAR SCREENING THE CORRECT INTERVAL TO RECOMMEND? <u>Steven K Nakao, MD</u>, Iswanto Sucandy, MD, Steven Fassler, MD, Mark Zebley, MD, Soo Kim, MD, Abington Memorial Hospital
- S118 SIMULTANEOUS LAPAROSCOPY-ASSISTED RESECTION FOR SYNCHRONOUS GASTRIC AND COLORECTAL CANCER Byung-kwon Ahn, Seung-hyun Lee, Joong-jae Yoo, Sung-uhn Baek, Ki-young Yoon, Department of Surgery, Kosin University College of Medicine, Busan, South Korea

*Included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Sessions (accepted oral & video presentations)

SAGES Concurrent Session SS21 - Videos - Solid Organ/Foregut

Location: Room 4

Moderators: C. Daniel Smith, MD & Fredrick J. Brody, MD

V039 LAPAROSCOPIC TRANS-GASTRIC RESECTION OF LESSER CURVATURE GIST Mahmoud Abu Gazala, MD, Abed Khalaileh, MD, Yael Kopelman, MD, Harold Jacob, MD, Ram Elazary, MD, Avraham I Rivkind, MD, Yoav Mintz, MD, Hadassah Hebrew University Medical Center

V040 LAPAROSCOPIC GASTRODUODENOSTOMY AFTER ESOPHAGECTOMY FOR IMPAIRED GASTRIC EMPTYING <u>Edward D Auyang</u>, <u>MD MS</u>, Brant K Oelschlager, MD, Department of Surgery, University of Washington

V041 LAPAROSCOPIC MEDIAN ARCUATE LIGAMENT RELEASE <u>Richard M Peterson, MD MPH</u>, Stephen J Fenton, MD, University of Texas Health Science Center San Antonio; Wilford Hall Medical Center

V042 MINIMALLY INVASIVE REPAIR OF A DELAYED STRICTURE AND SALVAGE OF A REVERSED GASTRIC TUBE <u>John J Tiedeken, MD</u>, Lance Uradomo, MD, Fred Brody, MD MBA, The George Washington University Medical Center

V043 ESOPHAGEAL BALLOON-ASSISTED LAPAROSCOPIC HELLER MYOTOMY FOR ACHALASIA <u>David L Webb, MD</u>, Nathaniel Stoikes, MD, Ben Powell, MD, Guy R Voeller, MD, University of Tennessee Health Science Center Department of Surgery

V044 HYBRID RESECTION FOR GASTRIC SUBMUCOSAL TUMOR IN COMBINATION WITH SINGLE PORT LAPAROSCOPY AND PERORAL ENDOSCOPY Noriyuki Inaki, MD PhD, Hisashi Doyama, MD PhD, Yasuhiro Ishiyama, MD, Michihiro Yamamoto, MD, Hiroyuki Bando, MD PhD, Tetsuji Yamada, MD PhD, Ishikawa Prefectural Central Hospital

V045 LAPAROSCOPIC SPLENECTOMY FOR SPLENIC ARTERY ANEURYSM IN A PREGNANT PATIENT Amit Kaul, MD, <u>Ulises Garza, MD</u>, Angela Echeverria, MD, Felipe Maegawa, MD, Carlos Galvani, MD, Section of Minimally Invasive and Robotic Surgery, Department of Surgery, University of Arizona

V046 THE FEASIBILITY OF A TWO-INCISION APPROACH FOR VIDEO-ASSISTED THORACOSCOPIC LOBECTOMY <u>Hyun Koo Kim</u>, Ho Kyung Sung, Hyun Joo Lee, Jiae Min, Young Ho Choi, College of Medicine, Korea University Guro Hospital

V047 LAPAROSCOPIC HYPERTHERMIC INTRA-PERITONEAL CHEMOTHERAPY (HIPEC) FOR PERITONEAL CARCINOMATOSIS <u>Spiros P Hiotis, MD PHD</u>, Anna G Rosenblatt, BA, Daniel M Labow, MD, Mount Sinai School of Medicine

V048 PERORAL ENDOSCOPIC MYOTOMY FOR ESOPHAGEAL ACHALASIA <u>Amy K Yetasook, BA</u>, Jin-cheng Zhao, MD, Michael B Ujiki, MD, NorthShore University HealthSystem

V049 THORACOSCOPIC RESECTION OF GIANT MEDIASTINAL PARATHYROID TUMOR <u>Shalini Reddy, MD</u>, Steven D Schwaitzberg, MD, Cambridge Health Alliance, Harvard Medical School

V050 LAPAROSCOPIC ENUCLEATION OF PANCREATIC INSULINOMA WITH CONTROL OF INTRAOPERATIVE BLEEDING <u>Bernadette U Laxa, MD</u>, Barnard J Palmer, MD, William B Inabnet, MD, Mount Sinai School of Medicine

To send your questions and comments for this session Text SS21 and your message to 22333 • Tweet @poll SS21 and your message • Go to http://pollev.com/SAGES4 during the session

6:00 PM - 7:00 PM

Meet the Leadership Reception for Residents, Fellows & New Members

Location: Marriot Marquis, Coronado Terrace

7:30 PM - 11:00 PM

*Free to all SuperPass Registrants (Option A)

Don't miss the

SAGES/IPEG Gala –

An Evening on the Historic USS Midway Aircraft Carrier Museum

Featuring: The International Sing-Off (See page 82 for details)

Time: 7:30 - 11:00 PM

Location: 910 Harbor Dr., San Diego

FREE to all SuperPass Registrants (Option A)



SAGES Recognition of Excellence Award

Log onto SAGESPAGES during the Annual Meeting to learn To Whom, From Whom and Why. SAGES will announce recipients of the 2012 SAGES Recognition of Excellence Coin daily.

www.sages.org/sagespages



Time	Session	Location
Saturday, March	10, 2012	
8:00 AM - 9:30 AM	SAGES Panel: Champions for New Operations – Lessons Learned from Change Agents	Room 6D
8:00 AM - 9:30 AM	SAGES Panel: SAGES Response to Healthcare Reform	Room 6AB
8:00 AM - 9:30 AM	SAGES Symposium: Starting Your Career	Room 6E
8:00 AM - 10:00 AM	SAGES Mini Med School	Room 4
8:00 AM - 9:30 AM	SAGES Concurrent Session SS22: Robotics	Room 6F
9:30 AM - 11:00 AM	SAGES Plenary Session SS23: Plenary 2	Room 6AB
10:00 AM - 1:00 PM	Exhibits, Poster Session, Learning Center Open	Exhibit Hall C
11:00 AM - 11:45 AM	SAGES Gerald Marks Lecture: "The Changing Role of American Surgical Leadership" Michael J. Zinner, MD	Room 6AB
11:45 AM - 12:30 PM	SAGES Annual General Membership Business Meeting – All SAGES Members Encouraged to Attend!	Room 6D
12:00 PM - 1:00 PM	Mini Med School Interactive Experience	Room 4
12:00 PM - 1:00 PM	FREE LUNCH for all attendees	Exhibit Hall
1:00 PM - 2:30 PM	SAGES/ASMBS Panel: Bariatric Surgery Nightmares: Prevention and Management of Complications	Room 6AB
1:00 PM - 2:30 PM	SAGES Panel: MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments	Room 6D
1:00 PM - 2:30 PM	SAGES Panel: Innovation in the Era of COI and Transparency	Room 6F
1:00 PM - 2:30 PM	SAGES Concurrent Session SS24: Videos – Robotics	Room 6E
2:30 PM - 4:00 PM	SAGES Session: TeleMentoring and Remote Battlefield Surgery	Room 6AB
2:30 PM - 4:00 PM	SAGES/AORN Panel: MIS Patient Safety Checklist	Room 6D
2:30 PM - 4:00 PM	SAGES Panel: Mental Training	Room 6F
2:30 PM - 4:00 PM	SAGES Concurrent Session SS25: Videos – NOTES / Flex Endo	Room 6E



Save the Date!

SAGES Scientific Session & Postgraduate Course April 17 - 20, 2013, Baltimore, MD

SAGES Scientific Session & Postgraduate Course April 2 - 5, 2014, Salt Lake City, UT

SAGES Scientific Session & Postgraduate Course April 15 - 18, 2015, Gaylord Opryland Hotel, Nashville, TN



8:00 AM - 9:30 AM

*Included in Registration SuperPass (Option A) or Registration Option C

Champions for New Operations – Lessons Learned from Change Agents

Chair: Dennis L. Fowler, MD, MPH

Co-Chair: George Berci, MD Location: Room 6D

Introducing a major change in the delivery of surgical care is difficult. Surgeons who have developed new operations and a new operative paradigm will discuss their experience leading change.

Objectives

At the conclusion of this session, participants will be able to:

- Describe the risks of introducing a new surgical procedure or technique
- · Describe the impediments to change in surgical care delivery
- · List useful and ethical methods for introducing new surgical procedures and techniques
- · List individual methods for introducing new surgical procedures and techniques

SCHEDULE

Panel Discussion

8:00am	"The Delivery of Surgical Care – Impediments to Change"	Dennis Fowier, M.D
8:10am	Laparoscopic Common Bile Duct Exploration	George Berci, MD
8:25am	Laparoscopic Nissen	Lee Swanstrom, MD
8:35am	Laparoscopic Colectomy	Morris Franklin, MD
8:45am	Laparoscopic Adrenalectomy Whipple, and Endoscopic Parathyoidectomy	Michel Gagner, MD
8:55am	NOTES	David Rattner, MD

To send your questions and comments for this session Text CHAMPS and your message to 22333 · Tweet @poll CHAMPS and your message · Go to http://pollev.com/SAGES6D during the session

8·00 AM - 9·30 AM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES Response to Healthcare Reform

Chair: Eli Lerner, MD
Co-Chair: Matthew Hutter, MD

Location: Room 6AB

All faculty

The session will address the conflict between Healthcare reform Patient Protection and Affordable Care Act (PPACA) and advancing the practice of MIS as dollars become tighter. Discussion and debate will outline how Accountable Care Organizations (ACO's) and PPACA will change our practice.

Objectives:

At the conclusion of this session, participants will be able to:

- Describe the salient structure of PPACA and ACO's
- Intelligently evaluate how PPACA and its ACO components will affect their practices
- Understand how this major health care change will affect their patients
- Assess how they as practitioners may function in the new medical environment

SCHEDULE

8:00amQuality Issues and the ACOsFrank Opelka, MD8:20amWho pays for Health Care under the ACO systemPeter Carmel, MD8:40amWhat the PPACA does for Patient CareL.D. Britt, MD9:00amQ & A PanelPanel

To send your questions and comments for this session Text REFORM and your message to 22333 • Tweet @poll REFORM and your message • Go to http://pollev.com/SAGES6A during the session

A Gentle Reminder About Safety/Security:

We have taken every precaution to assure the safety and security of our guests and their possessions. However, we urge you to be aware and take simple steps to guard your possessions.

- Do not leave your purse or briefcase unattended.
- · Do not leave your iPad, laptop, phone or other electronic devices on the floor or out of your sight in a darkened room
- Be aware of your surroundings, in the convention center, in and around the downtown San Diego area.

Have a safe & secure meeting!

8:00 AM - 9:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

Starting Your Career

Chair: Blair Jobe, MD

Co-Chair: David Urbach, MD Location: Room 6E

SAGES has a rich history of embracing young, energetic surgeons who think outside of the box. The purpose of this symposium is to provide participants with an overview of the key issues that relate to beginning a career in surgery. Practical strategies for maximizing success in this realm will be discussed. Surgeons just starting their practices, fellows, residents and students will gain significant insights from the experts who have already been down this road.

Objectives:

At the conclusion of this session, participants will be able to:

- · Identify several concrete actions and tips that can be adopted to maximize early career success
- · Apply these actions and tips to launch a successful career path
- · Avoid common pitfalls that may be encountered at the beginning of one's career

SCHEDULE

8:00am	Introduction	Blair A. Jobe, MD
8:10am	What are the Characteristics of a Healthy Environment? – Academic and Private Practice	Julie Fuchs, MD
8:25am	Critical Components of Negotiation: When to Compromise and When to Hold Fast	Adrian Park, MD
8:40am	The Top 10 Pitfalls to Avoid When Beginning Your Career in Surgery	Brent Matthews, MD
8:55am	Setting Goals and Developing a Plan: The First Five Years in Practice	Melina Vassiliou, MD
9:10am	Q & A	All participants

To send your questions and comments for this session Text STARTUP and your message to 22333 · Tweet @poll STARTUP and your message · Go to http://pollev.com/SAGES6E during the session

8:00 AM - 9:30 AM

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Session (accepted oral & video presentations)

SAGES Concurrent Session SS22 - Robotics

Moderators: Mark A. Talamini, MD & Osamu Itano, MD

- S119 MALE URINARY AND SEXUAL DYSFUNCTION AFTER LAPAROSCOPIC VERSUS ROBOT-ASSISTED TOTAL MESORECTAL EXCISION FOR RECTAL CANCER Jong Pil Ryuk, MD, Gyu-seog Choi, MD, Jun Seok Park, MD, Soo Yeun Park, MD, Hye Jin Kim, MD, Whon-ho Choi, MD, Kyungpook National University Medical Center
- S120 ROBOTICALLY-ASSISTED LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH. THE UTILITY OF ROBOTIC SYSTEM IN BARIATRIC SURGERY <u>Iswanto Sucandy, MD</u>, Gintaras Antanavicius, MD FACS, Department of Surgery, Abington Memorial Hospital, Abington, Pennsylvania
- S121 THE ROLE OF THE ROBOTIC ASSISTED LAPAROSCOPIC TECHNIQUE IN THE UNCINATE PROCESS DISSECTION DEBATE Federico Gheza, MD, Stefano D'ugo, MD, Mario Masrur, MD, Paolo Raimondi, MD, David Calatayud, MD PhD, Francesco Bianco, MD, Subhashini Ayloo, MD FACS, Piercristoforo Giulianotti, MD FACS, UIC Chicago
- S122 IS HYBRID ROBOTIC LAPAROSCOPIC ASSISTANCE THE IDEAL APPROACH FOR RECTAL DISSECTION. Marek Zawadzki, MD, Slawomir J Marecik, MD, <u>Vamsi R Velchuru, FRCS</u>, John J Park, MD, Leela M Prasad, MD, University of Illinois, Chicago, USA, Advocate Lutheran General Hospital, Park Ridge, USA
- S123 ENDOWRIST VERSUS WRIST: A CASE-CONTROLLED STUDY COMPARING ROBOTIC VERSUS HAND ASSISTED LAPAROSCOPIC SURGERY FOR RECTAL CANCER Frederick H Koh, <u>Ker-kan Tan</u>, Charles B Tsang, Dean C Koh, Division of Colorectal Surgery, University Surgical Cluster, National University Health System, Singapore
- S124 ROBOT-ASSISTED LAPAROSCOPIC MAJOR HEPATECTOMY FOR BENIGN AND MALIGNANT PATHOLOGIES A COHORT STUDY <u>Eric C.h. Lai, MBChB FRACS</u>, Chung Ngai Tang, MBBS FRCS, George P.c. Yang, MBBS FRACS, Oliver C.y. Chan, MBChB FRCS, Michael K.w. Li, MBBS FRCS, Department of Surgery, Pamela Youde Nethersole Eastern Hospital, Chai Wan, Hong Kong SAR, China
- S125 GPU-ACCELERATED REAL-TIME TISSUE RECONSTRUCTION FOR SEMI-AUTOMATED IN-VIVO SURGERY Jedrzej Kowalczuk, MS, Jay Carlson, BS, Eric T Psota, PhD, Lance Perez, PhD, Shane Farritor, PhD, <u>Dmitry Oleynikov, MD</u>, University of Nebraska Medical Center, University of Nebraska-Lincoln
- S126 INITIAL ROBOTIC BARIATRIC SURGERY EXPERIENCE IN AN ESTABLISHED PROGRAM: A DESCRIPTIVE ANALYSIS. Anthony M Gonzalez, MD FACS FASMBS, Jorge R Rabaza, MD FACS FASMBS, Carmen Rodriguez, RN MSHSA, Maria Fuego, RN BSN, South Miami Hospital, Baptist Health South Florida, South Miami, Florida
- S127 ROBOTIC SPLEEN-PRESERVING DISTAL PANCREATECTOMY Chang Moo Kang, Sung Hoon Choi, Jin Hong Im, Ho Kyoung Hwang, Woo Jung Lee, Yonsei University College of Medicine, Seoul, Korea

 $To send your questions and comments for this session Text SS22 and your message to 22333 \cdot Tweet @poll SS22 and your message \cdot Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go to http://pollev.com/SAGES6F during the session Text SS22 and your message \text{-} Go$

AGES 2012

Scientific Session & Postgrad

Location: Room 6F

Location: Room 6AB

Location: Room 6AB



9:30 AM - 11:00 AM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES Session SS23: Plenary Session 2

Moderators: Steven D. Schwaitzberg, MD & Gerald Fried, MD

S128 ENDOSCOPIC SUBMUCOSAL DISSECTION FOR COLORECTAL TUMORS <u>Eun-jung Lee, MD</u>, Jae Bum Lee, MD, Suk Hee Lee, MD PhD, Do Sun Kim, MD PhD, Doo Han Lee, MD PhD, Du Seok Lee, MD PhD, Eui Gon Youk, MD PhD, Daehang Hospital

S129 RISK FACTORS AFFECTING OPERATIVE APPROACH, CONVERSION, AND MORBIDITY FOR ADRENALECTOMY: A SINGLE INSTITUTION SERIES OF 402 PATIENTS <u>James G Bittner Iv, MD</u>, Victoria M Gershuni, MS, Jeffrey F Moley, MD, Brent D Matthews, MD, Mary Quasebarth, RN, L Michael Brunt, MD, Sections of Minimally Invasive Surgery and Endocrine and Oncologic Surgery, Department of Surgery, Washington University School of Medicine

S130 PATIENT-REPORTED OUTCOMES AFTER SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY VS TRADITIONAL LAPAROSCOPIC CHOLECYSTECTOMY: A RANDOMIZED, PROSPECTIVE TRIAL Matthew Sappington, MD, B Todd Moore, MD, Daniel J Margolin, MD, G Brent Sorensen, MD, Fengming Tang, MS, Kimberly M Brown, MD, Saint Luke's Hospital of Kansas City, Department of Surgery, University of Missouri-Kansas City

S131 LAPAROSCOPIC SLEEVE GASTRECTOMY IN ADULT AND PEDIATRIC OBESE PATIENTS: A COMPARATIVE STUDY Aayed R Alqahtani, FRCSC FACS, Mohamed Elahmedi, MD, <u>Hussam Alamri, MD</u>, King Saud University, College of Medicine, Department of Surgery V051 ROBOTIC LIVER HEMANGIOMA RESECTION. FLUORESCENT IDENTIFICATION OF MICROHEMANGIOMAS WITH THE NEAR-INFRARED TECHNIQUE. <u>David Calatayud, MD PhD</u>, Luca Milone, MD, Stefano D'ugo, MD, Federico Gheza, MD, Mario Masrur, MD, Paolo Raimondi, MD, Enrique F Elli, MD, Francesco M Bianco, MD, Subashini Ayloo, MD, Pier C Giulianotti, MD FACS, University of Illinois at Chicago Medical Center V052 LAPAROSCOPIC SINGLE INCISION ANTERIOR RESECTION <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, R Parthasarthi, S Rajapandian, Jai Ganesh, GEM Hospital & Research Centre

To send your questions and comments for this session Text SS23 and your message to 22333 · Tweet @poll SS23 and your message · Go to http://pollev.com/SAGES6A during the session

SAGES acknowledges our Diamond Level Donors for their support of this session: Covidien, Ethicon Endo-Surgery

10:00 AM - 1:00 PM

Exhibit, Posters, Learning Center Open

11:00 AM - 11:45 AN

*included in Registration SuperPass (Option A) or Registration Option C

Marks Lecture –

"The Changing Role of American Surgical Leadership"
Michael Jeffrey Zinner, MD



Moseley Professor of Surgery, Harvard Medical School, Surgeon-in-Chief, Brigham and Women's Hospital Clinical Director, Dana-Farber/Brigham and Women's Cancer Center, Executive Director, Center for Surgery and Public Health, Brigham and Women's Hospital, Harvard Medical School and Harvard School of Public Health

Dr. Zinner is currently Moseley Professor of Surgery, Harvard Medical School as well as Surgeon-in-Chief, Brigham and Women's Hospital and Clinical Director, Dana-Farber/Brigham and Women's Cancer Center He earned his B.S. from the Johns Hopkins University, Baltimore, MD (Electrical Engineering) and an MD from the University of Florida School of Medicine. His postgraduate

studies include three electrical engineering courses at John Hopkins and the University of Florida. He served as an intern and resident at Johns Hopkins Hospital in Baltimore.

He served his country as a Major at the Walter Reed Army Institute of Research.

His academic appointments has taken him to Johns Hopkins, Downstate Medical Center, Brooklyn; UCLA School, and as the Longmire Professor of Surgery At UCLA Medical School prior to coming to Harvard. His contributions to various professional societies includes 45 years of work with the who's who of prestigious medical and surgical organizations including President of AAS, President SUS, Vice President SSAT, HONORARY FELLOWS COMMITTEE ASA, Board of Directors, American Board of Surgery, and current member of the AC S Board of Regents

He has served on six Editorial Boards: Journal of Surgical Research, Surgery, Journal of the American College of Surgeons, Annals of Surgery, Journal of GI Surgery and Surgical Laparoscopy & Percutaneous Techniques

He has been honored a myriad of times by his peers including:

Outstanding Teacher of the Year Award (Richard Wilson Award), from the residents and Harvard Medical School, Brigham and Women's Hospital, Award for Clinical Excellence, Castle Connolly Medical, Ltd., Joseph B. Martin Dean's Award for the Advancement of Women Faculty. Harvard Medical School, Association of Women Surgeons (AWS) 2008 National Award for the Advancement of Women in Surgery, ACS Division of Education Award for Commitment to Surgery Resident Education Program.

Dr. Zinner has presented 138 invited lectures and published 268 peer reviewed articles. He his know for championing the role of women in surgery and for his groundbreaking thinking on surgical leadership. He has written 19 chapters and 5 books. He is an acknowledged expert in gastrointestinal physiology/disease, gastrointestinal ulcers and stress ulcers, and common bile duct stones.

Discuss the evolution of American Health Care from 1700 through today and the influences from Charities, Education, Insurance, Government, Managed Care, Consumerism, Government II including the Affordable Care Act issues facing us today.

Objectives:

At the conclusion of this session, participants will be able to:

- Understand what health care and political issues got us to this point in US history.
- Take away the major themes and foci of the Affordable Care Act, including those that most prominently affect surgeons.
- Learn the major reasons why healthcare reform is so important to surgeons.

To send your questions and comments for this session

Text MARKSLEC and your message to 22333 \cdot Tweet @poll MARKSLEC and your message \cdot Go to http://pollev.com/SAGES6A during the session

SAGES acknowledges our Diamond and Platinum Level Donors for their support of this lecture:
Diamond: Covidien, Ethicon Endo-Surgery; Platinum: Karl Storz Endoscopy, Olympus America Inc., Stryker Endoscopy

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11:45 AM - 12:30 PM

SAGES Annual General Membership Business Meeting *All SAGES Members Encouraged to Attend!*

Location: Room 6D

AGENDA

President's Introduction - Steven Schwaitzberg, MD

Report of Ballots, Bylaws Changes, Introduction of new Officers / Board Members – Adrian Park, MD Committee Reports:

Finance / Assets FES
Development FUSE

Membership Research & Hernia Career Development

Legislative Quality, Outcomes & Safety

Publications / Journal Program
Guidelines Technology
Flexible Endoscopy Communications
Educational Resources Global Affairs

Resident Education Military Working Group

Continuing Education Liaison Groups (Bariatric, Ethics, Pediatric)

FLS

Remarks by Incoming President - W. Scott Melvin, MD

12:00 PM - 1:00 PM

FREE LUNCH in Exhibit Hall for all attendees
*Last change to visit Exhibits, Posters, and Learning Center

Posters will be on display, Thursday, Friday & Saturday. Poster presenters will be available for Q&A on Friday, from 12:30 - 1:30 PM

SAGES acknowledges our Diamond and Platinum Level Donors for their support of the poster session:

Diamond: Covidien, Ethicon Endo-Surgery

Platinum: Karl Storz Endoscopy, Olympus America Inc., Stryker Endoscopy

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1:00 PM - 2:30 PM

*included in Registration SuperPass (Option A) or Registration Option C

SAGES/ASMBS Bariatric Surgery Nightmares: Prevention and Management of Complications

Chair: Natan Zundel, MD Co-Chair: Alfons Pomp, MD

Location: Room 6AB

This joint symposium is geared for the general and/ or the bariatric surgeon seeing bariatric surgery patients while taking ED and weekend call. The diagnosis and management of acute post-surgical problems like leaks, bleeding, DVT/PE will be discussed as well as more chronic problems such as gastrointestinal obstruction and vitamins/mineral deficiencies as well as malnutrition. Best practice standards and liability issues will be addressed.

Objectives:

At the conclusion of this session, participants will be able to:

- · Identify and evaluate appropriate bariatric surgery patients for emergency surgery
- · Describe current endoscopic and surgical techniques to deal with bariatric surgery patients who present with acute and chronic problems
 - List and describe common nutrient deficiencies and learn how to treat them

SCHEDULE

1:00pm	Types of Surgery	Alfons Pomp, MD
1:15pm	Post -op Day 1 Complications	Robin Blackstone, MD
1:30pm	Surgical vs Non Surgical Management for Leaks and Bleeding After Bariatric Surgery	Natan Zundel, MD
1:45pm	Abdominal Pain 6 Months After Surgery	David Tichansky, MD
2:00pm	Acute Nutritional Deficiencies	Gregory Dakin, MD
2:15pm	Standard of Care	Philip Schauer, MD

 $To send your questions and comments for this session \textit{Text ASMBS} and your \textit{message to 22333} \cdot \textit{Tweet @poll ASMBS} and your \textit{message} \cdot \textit{Go to http://pollev.com/SAGES6A} during the session \textit{Text ASMBS} and \textit{The session of the policy of the of the$

SAGES acknowledges an educational grant in support of this session from Gore & Associates

1:00 PM - 2:30 PM

*included in Registration SuperPass (Option A) or Registration Option C

MIS Evolution: Single Port Minilaparoscopy & Deployable Instruments

Chair: Paul G Curcillo II, MD
Co-Chair: Sharona Ross, MD

Location: Room 6D

Over the past several years, strategies to reduce the invasiveness of MIS surgery have been increasingly explored. Single Port Surgery, through reduction in numbers of incisions, has yet to be proven beneficial, but has seen a growth in applications. Instrument conflicts and potential incisional hernia risks with single incision laparoscopy are issues with this platform that need to be addressed. Minilaparoscopy, with reduction in size of the instruments, was introduced in the 90's and never gained significant traction despite a good foundation in the literature. A resurgence of minilaparoscopy has begun, as yet another method of offering reduction in surgical trauma. Deployable instruments and retraction techniques that do not occupy a trocar are now being introduced and take reduction of incisions to its maximal potential. As MIS evolves further, which of these strategies will ultimately be adopted by surgeons? A likely scenario is a combined approach of all of these and NOTES approaches will lead to a new platform in MIS.

This session will explore these issues, present some of the latest technologies designed to facilitate reduced port procedures, and discuss evidence-based information about what is currently known in terms of benefits and risks. Attendees will be well positioned to decide what strategies they may wish to incorporate into their practices.

Objectives:

At the conclusion of this session, participants will be able to:

- Identify safe and unsafe techniques in Reduced Port Surgery
- Apply the new devices safely and cost efficiently to their practice
- Properly choose the correct patients and procedures for Reduced Port Surgery

SCHEDULE

1:00pm	Safe Development of Reduced Port Surgery	Erik Wilson, MD
		Alberto Ferreres, MD, PhD
1:10pm	Review of the Current Literature in Reduced Port Surgery	Alberto Ferreres, MD, PhD
1:30pm	Devices available for Reduced Port Surgical Techniques	Laurence Yee, MD
1:30pm	Devices available for reduced Fort Surgical Techniques	244.6.166 166,11.5
1:45pm	Complications in Reduced Port Surgery – Preventable errors in practice?	Homero Rivas, MD
•		
2:00pm	Combining Needlescopic and Deployable Instruments	Brian Dunkin, MD
2:15nm	Round Table O & A	

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1:00 PM - 2:30 PM

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Sessions (accepted oral + video presentations)

SAGES Concurrent Session SS24 - Videos - Robotics

Location: Room 6E

Moderators: Archana Ramaswamy, MD & Simon Bergman, MD

V053 REVISIONAL BARIATRIC SURGERY: FROM SLEEVE GASTRECTOMY TO ROBOTIC-ASSISTED GASTRIC BYPASS M. Masrur, MD, F. Gheza, MD, D. Calatayud, MD PhD, S. D'ugo, MD, F. M. Bianco, MD, E. F. Elli, MD FACS, Division of General, Minimally Invasive and Robotic Surgery, Department of Surgery, University of Illinois at Chicago, Chicago, Illinois, USA.

V054 ROBOTIC ASSISTED SINGLE INCISION LAPAROSCOPIC TOTAL EXTRAPERITONEAL BILATERAL INGUINAL HERNIA REPAIR <u>Luca Giordano, MD FACS</u>, Aria Health, Philadelphia, PA, USA

V055 ROBOTIC ASSISTED TOTAL COLECTOMY WITH TRANSRECTAL EXTRACTION -SINGLE DOCKING <u>Takayuki Dotai, MD</u>, Carrie Peterson, MD, Elisabeth Mclemore, MD, Santiago Horgan, MD, Mark Talamini, MD, Sonia Ramamoorthy, MD, Center for the Future of Surgery, Department of Surgery, University of California, San Diego

V056 LAPAROSCOPIC ASSISTED ROBOTIC ESOPHAGECTOMY Sheetal Nijhawan, MD, <u>Alisa M Coker, MD</u>, Michael Bouvet, MD, Nikolai Bildzukewicz, MD, Marcos Michelotti, MD, Takayuki Dotai, MD, Geylor Acosta, MD, Luciano Antozzi, MD, Juan S Barajas-gamboa, MD, Bryan Sandler, MD, Garth R Jacobsen, MD, Mark A Talamini,, Center for the Future of Surgery, Department of Surgery, University of California San Diego

V057 SINGLE QUADRANT ROBOTICALLY ASSISTED ROUX-EN-Y GASTRIC BYPASS: DESCRIPTION OF A SURGICAL TECHNIQUE Brad E Snyder, MD, Erik B Wilson, MD, Todd Wilson, <u>Nicholas M Brown</u>, <u>MD</u>, Nathan Miller, MD, University of Texas Health Science Center at Houston

V058 RESIDENT EDUCATION IN ROBOTIC SURGERY: BRIDGING THE GAP WITH A SURGICAL ROBOT IN A ROBOTIC PROCTECTOMY <u>Brian Bello</u>, Konstantin Umanskiy, Alessandro Fichera, Stephen Small, Univeresity of Chicago

V059 THE USE OF FLUORESCENCE IN ROBOTIC ADRENALECTOMY FOR PHEOCHROMOCYTOMA <u>Luca Milone, MD</u> PhD, David Calatayud, MD PhD, Mario Masrur, MD, Federico Gheza, MD, Stefano D'ugo, MD, Paolo Raimondi, MD, Enrique Elli, MD, Francesco Bianco, MD, Subashini Ayloo, MD, Pier Cristoforo Giulianotti, MD FACS, Division of General, Minimally Invasive, and Robotic Surgery, University of Illinois at Chicago

V060 ROBOTIC ASSISTED ULTRALOW ANTERIOR RESECTION WITH COLONIC J POUCH-ANAL ANASTOMOSISIS <u>Celeste Kang, MD</u>, Alessio Pigazzi, MD, Department of Surgery, University of California, Irvine School of Medicine

V061 ROBOTIC ASSISTED SINGLE INCISION TRANSGASTRIC RESECTION OF A 5 CENTIMETER GASTRIC MASS IN PATIENT STATUS POST CORONARY ARTERY BYPASS GRAFT WITH GASTROEPEPLOIC ARTERY <u>Luca Giordano, MD</u> FACS, Aria Health, Philadelphia,PA, USA

To send your questions and comments for this session Text SS24 and your message to 22333 · Tweet @poll SS24 and your message · Go to http://pollev.com/SAGES6E during the session

:00 PM - 2:30 PN

*included in Registration SuperPass (Option A) or Registration Option C

Innovation in the Era of Conflict of Interest and Transparency

Chair: Steven Stain, MD
Co-Chair: Aurora Pryor, MD

Location: Room 6F

This session will describe how an investigator/inventor can ethically advance new knowledge, including participating with industry and academic partners in how to bring new products to market, or new procedures into practice.

Objectives:

At the conclusion of this session, participants will be able to:

- Describe the necessary steps to develop a surgical product or procedure to market
- · List potential conflicts of interest when working with an industry partner
- · Understand the importance of evaluation of innovative products and procedures to affect patient care

SCHEDULE

1:00pm	How and Why to Work with an Industry Partner? Is the Conflict of Interest Worth It?	Aurora Pryor, MD
1:15pm	Ethics of Innovation and Appropriately Managing Conflict	David Easter, MD
1:30pm	Getting an Idea from Paper to Patient: What do you need to Know About the FDA, CMS, etc?	Raymond Onders, MD
1:45pm	Why work with Physicians: The Perspective of a Venture Capitalist	William Starling
2:00pm	Panel Discussion: Promoting Innovation while Managing Conflict –	Panel
	Case Presentations & Audience Response	

To send your questions and comments for this session Text COIERA and your message to 22333 • Tweet @poll COIERA and your message • Go to http://pollev.com/SAGES6F during the session



2:30 PM - 4:00 PM

*included in Registration SuperPass (Option A) or Registration Option C

TeleMentoring and Remote Battlefield Surgery

Chair: LTC Robert Lim, MD (U.S. Army)

Co-Chair: Ninh Nguyen, MD & LTC Matt Ritter, MD (U.S. Air Force)

Location: Room 6AB

Ninh Nguyen, MD

As civilian surgeons explore how to integrate technology to telementor surgeons in new operations, much can be learned by what the military has researched in performing remote surgery. This session will present current technologies used for this purpose, including a live demonstration of remote robotic surgery!

Objectives:

At the conclusion of this session, participants will be able to:

- List the benefits and capabilities of telemedicine and telementoring
- · Describe current capabilities of robotic surgery, specifically remote robotic surgery
- · Recognize the importance of combat medic training realism for multiple trauma patients and for hostile environments
- · Identify metrics of simulation training that can demonstrate competence for the combat medic or corpsmen

SCHEDULE

Telementoring in Medicine

		3, .
2:45pm	Use of Remote Robotic Surgery-Live demonstration from	Gordon Wisbach, MD
	Naval Medical Center San Diego to Camp Pendleton or USS Comfort	
3:00pm	Advances in Trauma Care Training via Simulation	COL Robert Rush, MD
3:15pm	Training and Practice Standards for Telepresence for Advanced Laparoscopy	Christopher Schlachta, MD
3:40pm	Current Medical Capabilities of the United States Military	VADM Adam M. Robinson, Jr. MD
		Surgeon General of the Navy

:00pm Panel Discussion

To send your questions and comments for this session Text TELEM and your message to 22333 · Tweet @poll TELEM and your message · Go to http://pollev.com/SAGES6A during the session

2:30 PM - 4:00 PM

2:30pm

*included in Registration SuperPass (Option A) or Registration Option C

SAGES/AORN MIS Patient Safety Checklist

Chair: Charlotte Guglielmi, RN
Co-Chair: L. Michael Brunt, MD

Location: Room 6D

This session will review various checklist and team communication strategies to enhance patient safety and improve clinical outcomes in the operating room. Practical tips on how to incorporate an MIS specific checklist into the OR and troubleshoot laparoscopic equipment problems will also be reviewed.

Objectives:

At the conclusion of this session, participants will be able to:

- · Identify the essential elements of both generic and MIS specific surgical checklists and discuss their impact on surgical outcomes
- Review mechanisms to enhance OR team communication and avoid errors of miscommunication or failure of communication
- · Identify strategies and steps for troubleshooting common laparoscopic equipment problems

SCHEDULE

2:30pm	Surgical Checklists and Why They Are Important	L. Michael Brunt, MD
2:40pm	Team Communication and Briefing/Debriefing	Dennis Fowler, MD
2:55pm	The SAGES/AORN Checklist	Charlotte Guglielmi, RN
3:10pm	Troubleshooting Laparoscopic Equipment Problems	Daniel Herron, MD
3:25pm	Lessons Learned from Communication Errors in the OR	John Paige, MD
3:40pm	Panel Discussion: How to Integrate an MIS Checklist into Your OR	Panel

To send your questions and comments for this session

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SAGES Recognition of Excellence Award

Log onto SAGESPAGES during the Annual Meeting to learn To Whom, From Whom and Why. SAGES will announce recipients of the 2012 SAGES Recognition of Excellence Coin daily.

www.sages.org/sagespages

2:30 PM - 4:00 PM

*included in Registration SuperPass (Option A) or Registration Option C

Mental Training

Chair: Raul J. Rosenthal, MD; Co-Chair: Rajesh Aggarwal, MD

Location: Room 6F

Scientific Session & Postgraduate Course

Surgeons have to perform many complicated fine-motor movements, which are not part of the normal repertoire of body movements, and they must do this under very stressful conditions. These demands are similar to those facing professional sportsmen. Striving to perfect complicated movements is the ultimate goal in surgery, and it is a goal shared with professional sports. Because of these common aspirations, it seems logical to us to combine surgery and sports science in an interdisciplinary fashion when designing training methods in surgery. Mental training, systematically and repeatedly imagining a movement or sequence of motor events without actually performing the physical act, has been validated and applied successfully in professional sports for a long time. This session will explore the use of these strategies in surgery.

Objectives:

At the conclusion of this session, participants will be able to:

- Describe the concept of mental training as it is applied in other disciplines
- · Explain how residents, fellows, and practicing surgeons can be trained in basic and advanced procedures
- · Describe techniques to expedite technical skills acquisition in surgery
- · Apply these training concepts in their practice and educational programs

SCHEDULE

2:30pm	What Can We Learn from Sports and Aviation When Teaching Surgery?	Raul J. Rosenthal, MD
2:45pm	What Are the Principles of Mental Training?	Rajesh Aggarwal, MD
3:00pm	How is Mental Training Different from Other Attention Resource Enhancing Strategies?	Dimitrios Stefanidis, MD
3:15pm	Outcomes of Mental Training	Rajesh Aggarwal, MD
3:30pm	Applying these Lessons to your Practice and Educational Programs	Neal Seymour, MD
3·45nm	Panel Discussion	Panel

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2:30 PM - 4:00 PM

*included in Registration SuperPass (Option A) or Registration Option C

Scientific Session Concurrent Sessions (accepted oral + video presentations)

SAGES Concurrent Session SS25 - Video - NOTES/Flex Endo

Location: Room 6E

Moderators: Bruce V. MacFadyen Jr, MD & David W. Rattner, MD

V062 A NOVEL COMBINED ENDOSCOPIC AND SURGICAL APPROACH TO RETRIEVE A RETAINED FOREIGN BODY CAUSING A RECTOVAGINAL FISTULA Faris M Murad, MD, Steven R Hunt, MD, Washington University in St. Louis

V063 ENDOSCOPIC SUTURE REPAIR OF FULL THICKNESS ESOPHAGOTOMY DURING PER ORAL ESOPHAGEAL MYOTOMY (POEM) FOR ACHALASIA <u>Ashwin A Kurian, MBBS</u>, Neil H Bhayani, MD, Christy M Dunst, MD, Kevin M Reavis, MD, Lee L Swanstrom, MD, Oregon Clinic and Foundation for Surgical Inovation and Education

V064 ENDOLUMINAL STOMACH-SPARING RESECTION OF GASTRIC GISTS Stephanie Downs-canner, MD, Kenneth Fasanella, MD, Kevin Mcgrath, MD, Kenneth K Lee, MD, University of Pittsburgh School of Medicine

V065 NOTES TOTAL COLECTOMY IN A HUMAN CADAVER <u>Kyung Su Han, MD</u>, Dae Kyung Sohn, MD PhD, David W Rattner, MD, Patricia Sylla, MD, Massachusetts General Hospital

V066 TRANSVAGINAL NOTES CHOLECYSTECTOMY: KEY TECHNICAL POINTS <u>Lucian Panait</u>, <u>MD</u>, Stephanie G Wood, MD, Robert L Bell, MD, Andrew J Duffy, MD, Kurt E Roberts, MD, Yale School of Medicine

V067 DIAGNOSTIC GASTRO-DUODENOSCOPY VIA A GASTRO-GASTRIC FISTULA PRIOR TO OVERSTITCH CLOSURE eric M Pauli, MD, University Hospitals Case Medical Center, Cleveland, OH

V068 ENDOSCOPIC-GUIDED TRANSGASTRIC LAPAROSCOPIC RETRIEVAL OF A DUODENAL STENT <u>Maureen M Tedesco, MD</u>, Tonya Kaltenbach, MD MS, Roy Soetikno, MD, Dan Eisenberg, MD MS, Stanford University Medical Center and Palo Alto VA HCS

V069 INCISIONLESS GASTRIC CANCER RESECTION USING ENDOSCOPIC SUTURING WITH PULLEY RETRACTION <u>Neil H Bhayani, MD MHS</u>, Ashwin A Kurian, MBBS, Kevin M Reavis, MD, Christy M Dunst, MD, Lee L Swanstrom, MD, The Oregon Clinic

V070 PURE TRANSVAGINAL LAPAROSCOPIC UMBILICAL HERNIA REPAIR <u>Stephanie G Wood, MD</u>, Lucian Panait, MD, Robert L Bell, MD, Andrew J Duffy, MD, Kurt E Roberts, MD, Yale School of Medicine

V071 REACHING THE UNREACHABLE: A NOVEL OVER THE SCOPE DEPLOYMENT METHOD FOR ENTERAL STENTS ric M Pauli, MD, Steve J Schomisch, PhD, Jeffrey A Blatnik, MD, David M Krpata, MD, Juan S Sanabria, MD, Jeffrey M Marks, MD, University Hospitals Case Medical Center, Cleveland, OH

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Pencil us in for next year:

April 17 - 20, 2013 | Baltimore, MD



8:00 AM - 10:00 AM ***Student ID Required**

SAGES Mini Medical School Boot Camp

Chair: James Butch Rosser, MD; Co-Chairs: Lisa Jane Jacobsen, MD MPH & John Romanelli, MD

Location: Room 4

An exciting new program will make its debut at SAGES 2012, SAGES Mini Med School. High school students from the San Diego area and SAGES membership will have the opportunity to experience the wonderful world of medicine and minimally invasive surgery. With projected physician and surgeon shortages in the future, this program is timely and hopefully will promote early decisions to join our noble profession. The day is power packed with classroom lectures, tours of the Learning Center and Exhibit Hall and the Top Gun Interactive Experience. Both cognitive and skill competitions with awards and prizes will be offered. So do not delay in contacting SAGES for more information because space is limited. The edge of the envelope for future surgeons will start here at SAGES Mini Med School 2012.

The 2012 SAGES Mini Med School is designed to expose high school students to the field of Surgery through lecture and simulation. Students will begin to appreciate that being in the OR is rewarding, important work, and fun.

8:00a	am Registration	
8:30a	am Welcome	James Butch Rosser, MD
8:40a	Putting Patients to Sleep for an Operation	Stephanie Jones, MD
8:50a	m Delivering Babies	Lisa Jane Jacobsen, MD MPH
9:00a	Anatomy of the Abdomen and Chest	Terrence Fullum, MD
9:10a	m Importance of Education	James Butch Rosser, MD
9:20a	m Robotics in MIS Surgery	Jay Redan, MD
0.20-	Fullifie Time	

Program limited to 100 students. Letter of recommendation from a high school teacher is required.

Faculty:

Jamie Adair, MDTerrence Fullum, MDEric Pauli, MDShawn Tsuda, MDLimaris Barrios, MDLisa Jane Jacobsen, MDKinga Powers, MDGenevieve ChartrandStephanie Jones, MDJay Redan, MDAbe Frech, MDYusef Kudsi, MDDana Telem, MD

This session is not accredited for CME by SAGES

12:00 PM - 1:00 PM

Mini Med School Interactive Experience

Location: Room 4

This is a power packed hour that will allow the students to show that they have the "right stuff" to join the ranks of laparoscopic surgeons one day. From video games that help decrease errors, to robotic helicopters to $FLS^{\mathbb{M}}$ and Top Gun drills, this will be a grand finale to the SAGES Mini Med School experience.

This session is not accredited for CME by SAGES

Scientific Session & Postgraduate Course

Hours of Operation:

Location: Room B2 & C

Thursday, March 8, 2012 9:30am - 3:30pm Friday, March 9, 2012 9:30am - 3:30pm Saturday, March 10, 2012 10:00am - 1:00pm

The Learning Center is a set of educational classrooms where attendees can gain knowledge and practice skills relevant to minimally invasive surgery. Station coordinators instruct individuals and small groups on topics that range from basic instrumentation to advanced laparoscopic skills. Participants may visit one or more stations that address their educational objectives and spend whatever time is necessary to meet their learning objectives.

The Learning Center is not accredited for CME by SAGES

1. Natural Orifice Translumenal Endoscopic Surgery (NOTES™)

Coordinator: Kai Matthes, M.D., Ph.D.

Natural Orifice Transluminal Endoscopic Surgery (NOTES™) is an emerging research area of minimally-invasive surgery. The development of new surgical procedures and devices can be simulated effectively in a training model. For the NOTES™ Station of the SAGES learning center, a novel ex-vivo simulator is used to provide a realistic training experience using commercially available laparoscopic and flexible endoscopic devices. The ex-vivo model consist of a complete porcine peritoneal cavity explant, which is harvested from the meat production industry, thoroughly cleaned, embalmed and modified to closely resemble human anatomy. Real tissue provides a realistic tactile feedback, which is essential to assess and train new techniques such as NOTES™. Laparoscopic surgeons without flexible endoscopic experience can learn how to operate a flexible endoscope and how to establish transgastric, transvaginal or transcolonic access in order to perform a peritoneal exploration. For the more advanced 'digestivists' with flexible endoscopic experience, organ resection (appendectomy, cholecystectomy, distal pancreatectomy, nephrectomy, liver lobe resection, hysterectomy, oophorectomy) or gastrointestinal anastomosis techniques (gastrojejunostomy, partial gastrectomy, colectomy) will be simulated.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Perform translumenal access of the peritoneal cavity by using a transgastric, transcolonic or transvaginal approach using flexible endoscopes with or without laparoscopic assistance
- Perform NOTES® appendectomy, cholecystectomy, distal pancreatectomy, nephrectomy, liver lobe resection
- Perform a secure closure of the translumenal access port using various techniques such as t-tags, clips or sophisticated closure devices

2. Top Gun & Top Gun for Kids

Coordinators: James "Butch" Rosser, MD Henry Lin, MD and Ryan Jones

This year is the 20th anniversary of Top Gun. A generation of laparoscopic Jedi have nationally and internationally learned laparoscopic suturing skills with the Top Gun Laparoscopic Skills and Suturing program. In recognition of this special occasion, all past participants in Top Gun can pick up a ribbon at registration in celebration of 20 years of excellence. There will be the at large competition in the Learning Center as usual and this year the MIS fellows will be invited to face off to see who is the "best of the best". In addition, this year Top Gun for Kids is back. A special competition between rivals from Army and Navy will be held to see who is number one. Top Gun this year will be power packed with aspiring master laparoscopic surgeons vying for awards, recognition and honor. Make sure that you don't miss the action as Top Gun comes home to San Diego where it all began.

The Top Gun Laparoscopic Skill Shootout Station will allow participants to establish and enhance basic laparoscopic skills and suturing ability. All participants can gain skill advancement no matter their baseline. The station will feature the validated "Rosser TOP GUN" skill development stations developed by Dr. Rosser and made famous at Yale. To date, over 6000 surgeons have participated around the world. Instructors will show tactics and techniques that will transfer readily into the clinical environment. In addition, participants will be competing for slots in the Top Gun Shoot Out that will crown one SAGES 2012 TOP GUN. The Shoot Out will take place on Friday, March 9th from 11:15am - 12:30pm.

*The competition and shoot out is a non-CME activity.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Review the Rosser suturing algorithm and be able to list and recite
- Perform dexterity skills and suturing exercises using the "Rosser TOP GUN" training stations
- Compete with other surgeons in the Top Gun Shoot Out

3. Fundamentals of Laparoscopic Surgery (FLS™) 2.0

Coordinators: Melina Vassiliou, MD Pepa Kaneva, MSc

This station will introduce participants to the Fundamentals of Laparoscopic Surgery (FLS™) didactic and technical skills modules. FLS™ was designed to teach the physiology, fundamental knowledge, and technical skills required to perform basic laparoscopic surgery, and is a joint ACS –SAGES program. Participants will use the interactive web-based format and the lap trainer boxes to become familiar with the program while working on their laparoscopic knowledge and skills. FLS™ 2.0 is the newly revised edition of the FLS™ didactic online study

guide. Over 90% of the overall content has been updated including hundreds of new photos, illustrations, links and videos. Meticulously written and reviewed by SAGES members, FLS™ 2.0 contains fresh material.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Describe the components of the FLS™ 2.0 program
- Explain some of the preoperative, intraoperative, and postoperative considerations fundamental to laparoscopic surgery
- Familiarize themselves with the FLS™ manual skills tasks and equipment

4. VR Simulation for Laparoscopic Surgery

Coordinator: Survranu De, Sc.D.

The virtual simulator (VBlast) will allow participants to perform five laparoscopic drills (Peg Transfer, Pattern Cut, Ligation Loop, and Intra- and Extra-Corporeal Suturing) in a virtual environment.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Perform Laparoscopic manual skills tasks using a new virtual reality trainer
- 5. Fundamentals of Endoscopic Surgery (FES™)

Coordinator: Thadeus Trus, MD

Come get hands-on experience in flexible endoscopy. This station will showcase the newly developed Fundamentals of Endoscopic Surgery (FES™) testing platform (the flexible endoscopy equivalent of FLS™) - the first validated hands-on test for gastrointestinal endoscopic skills. FES™ will be loaded on a Simbionix virtual reality simulator for you to "test drive". The station will also feature endoscopy training on real tissue using an explant model for mucosal banding, polypectomy, submucosal injection, clipping, and coagulation. Finally, video based education material is available to review the new SAGES flexible endoscopy hands-on training curriculum and preview the developing FES™ website.

This is your chance to practice your endoscopic skills with the help of expert proctors, or throw your hat into the ring to pit your skills against others in an FES™ shootout.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Evaluate the FES™ manual skills testing module
- · Assess his/her flexible endoscopy skills
- Develop basic endoscopic skills on virtual reality and real tissue simulation platforms
- Evaluate the SAGES flexible endoscopy handson training curriculum

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2012 Learning Center

6. Fundamental Use of Surgical Energy (FUSE™)

Coordinators: William Richardson, MD Carl Voyles, MD Malcolm Munro, MD

SAGES is developing an assessment examination to certify fundamental knowledge of the safe use of surgical energy-based devices in the operating room and other endoscopic procedural areas. This station will allow participants to review the basic science and technology behind energy sources in the OR, including their indications, correct use, trouble-shooting, and potential hazards.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Describe the basic technology of energy sources in the OR
- Demonstrate the correct use and indications of energy sources in clinical practice
- Assess the potential complications, hazards, and errors in the use of surgical energy sources

7. Guidelines and Standards of Practice

Coordinator: Robert Andrews, MD

SAGES has a track record of creating and disseminating guidelines for best practices within gastrointestinal and endoscopic surgery. Collaboration with other societies have also led to resources such as the MIS Checklist. This station will allow participants to review existing guidelines for standards of practice and patient safety, and provide resources for accessing this information effectively for their practices.

Objectives

At the conclusion of this activity, the participant will be able to:

- Identify critical patient safety issues relevant to the practicing surgeon
- Enumerate educational resources for learning about surgical patient safety
- Demonstrate competencies in one or more areas of patient safety

8. Single Incision Surgery: Instruments & Techniques

Coordinators: Brian Jacob, MD Gregory Dakin, MD Elliott Silverman, PA-C Rasa Zarnegar, MD

Single incision or single port access is emerging as an optional technique for entry into the abdominal cavity to perform a variety of different laparoscopic procedures. To date, there is dominantly-preferred entry method, but instead a variety of options exist that include using multiple trocars through a single skin incision or using one of many specially designed single port access devices. At this station, you will become familiar with both options. A variety of low-profile trocars that are routinely used in Single Incision will be available for use in an inanimate model. Additionally, you will be able to practice inserting and setting up a variety of single port access devices that are currently available for clinical use. By the end of your visit, you will be more familiarized with and more able to compare and contrast the different entry methods available to perform Single Incision operations. In addition, this station will also provide an opportunity to suture using single incision techniques in a trainer box and then to compare your skills to traditional laparoscopic suturing. Both straight instruments and articulating instruments will be compared. Participants will have the opportunity to use a variety of Single Incision instruments.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Perform different single incisions tasks such as suturing, running bowel, or dissecting
- Demonstrate how to insert and set up a variety of single port access devices
- Compare and contrast different entry methods available to perform Single Incision operations
- Demonstrate how to insert and set up a variety of single port access devices

9. Weight Loss Surgery

Coordinator: Gregg Jossart, MD Daniel Rosen, MD Shanu Kothari, MD

The learning curve for gaining proficiency in weight-loss procedures, specifically the sleeve gastrectomy at this station, may be shortened with proper instruction and training. The laparoscopic sleeve (vertical) gastrectomy is growing in popularity, yet the techniques employed vary widely on trocar positioning, stapling techniques, the use of buttress materials, and bougie sizes. At this station, a participant will be able to review a traditional sleeve gastrectomy procedure with an expert, and then get to perform a simulated sleeve gastrectomy in a training box. Newer procedures such as laparoscopic greater curvature plication will also be presented.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Review laparoscopic sleeve gastrectomy anatomy and technique.
- Participate in the basic steps of the laparoscopic sleeve gastrectomy
- Explain the basic anatomy and techniques of the laparoscopic greater curvature plication

10. Suturing & VR Suturing Simulation

Coordinators: Zoltan Szabo, PhD Dmitry Nepomnayshy, MD Jay Kuhn, MD

Participants receive intense hands-on suturing including intracorporeal techniques with instantaneous feedback. Laparoscopic tissue handling and complex suturing maneuvers will also be demonstrated. Virtual reality suturing simulators will be used to allow "virtual" suturing practice – no suture required, just a fancy videogame with needle driver handles instead of joysticks. Trainees will be able to compare their scores with established expert levels for both types of simulators.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Describe the key steps for intracorporeal suturing and knot-tying.
- Practice intracorporeal suturing and knot-tying in inanimate and virtual reality environments.
- Demonstrate proficiency compared to "experts".

2012 Learning Center

11. Laparoscopic Hernia

Coordinator: Gregory Mancini, MD **David Earle, MD**

The repair of the complex abdominal wall has continued to be a challenge for many specialists, and it remains an option to incorporate the use of laparoscopic techniques to augment outcomes in a number of hernia cases. For instance, to complete the repair of some challenging abdominal wall hernias, the surgeon may choose to employ an endoscopic component separation to release (or separate) the external oblique aponeurosis. Both open and laparoscopic techniques (also known as minimally invasive or "perforator sparing" techniques) are now employed to accomplish this portion of a complex abdominal wall repair, however there is never enough adequate training in this portion of the procedure. At this booth, both instructional video and box trainer hernia modules will allow participants to review the basic steps required to perform a minimally invasive component separation with experts in the field. This station will also have inanimate models that will help to review abdominal wall anatomy and to demonstrate the steps involved in an open hernia repair, laparoscopic ventral hernia repair, as well as a laparoscopic inguinal hernia repair.

Objectives:

At the conclusion of this activity, the participants will be able to:

- · Describe the anatomy of the abdominal wall
- · Describe learn the steps involved with performing a minimally invasive component separation
- · Practice mesh deployment and securing techniques

The Learning Center is not accredited for CME by SAGES

12. Media Madness

Coordinator: Archana Ramaswamy, MD

This station will highlight some of the new media advancements that SAGES now offers members. Participants will have the opportunity to explore and navigate through some of these new technologies such as:

iMAGES: www.sages.org/image_library SAGESTV: www.sages.tv SAGES WIKI: www.sageswiki.org SAGES PAGES: www.sages.org/sagespages

Objectives:

At the conclusion of this activity, the participant will be able to:

- · Upload new images and videos to SAGESTV and iMAGES
- · Gain access to the video and images library & have ability to edit and resubmit images
- Create new WIKI pages, edit existing pages, and learn how to search for WIKI pages
- Access SAGES PAGES, create a profile, create groups, access links to the other SAGES sites
- · List the benefits these sites offer members

13. Team Simulations

Coordinator: John Paige, MD

Team training through simulation enables safe and efficient performance in the operating theater. Simulation is evolving as an essential part of residency training and continuing surgical education. As with aviation, team training in surgery has been used for crisis management. However, performance measures may exist within technical, cognitive, and behavioral domains that affect cost and compliance as well as safety. This station will feature a mock endosuite that will allow surgeons to plan, execute, debrief, and improve upon best practices during surgery, with a focus on cost-containment, team/patient safety, and quality of care.

Objectives:

At the conclusion of this activity, the participant will be able to:

- · Use team-based concepts in optimizing time, compliance, performance, and quality during a common surgical procedure
- · Use technology and techniques in teambased training, including video-capture and debriefing
- · Generate templates for effective team training for residency programs and continuing education

14. Stats Tutor

Coordinators: Aurora Prvor, MD Sharon Bachman, MD

Applying statistical concepts and tests to clinical and academic surgical practices requires continuing education based on a strong fundamental understanding. This station will allow participants to review and apply basic and advanced statistical concepts such as power, correlation, and comparison, using appropriate methodologies.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Demonstrate use of important statistical concepts such as power analysis, correlation, comparisons of means
- Use appropriate statistical methodologies to solve real world statistical problems

15. Go Global

Coordinators: Horacio Asbun, MD Allan Okrainec, MD Thadeus Trus, MD

SAGES has a history of global collaboration and exchange of ideas, as well as volunteerism to help the less fortunate. This station will feature past and current endeavors to improve global volunteerism, collaboration, and innovation, and provide a venue to garner more support these initiatives.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Describe the opportunities available to SAGES members for participating in global initiatives
- · Access resources and volunteer for global initiatives and activities

16. Simulators for Pediatric Minimally Invasive Surgery

Coordinator: Georges Azzie, MD

This station will allow participants the opportunity to use prototype simulators for pediatric minimally invasive surgery. Participants will compare and contrast skill sets required on these pediatric simulators with the skill sets taught and tested on the existing adult Fundamentals of Laparoscopic Surgery (FLS) simulator.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Practice simulator tasks deemed pertinent to pediatric minimally invasive surgery
- Describe differences in performance of similar tasks between adult and pediatric simulators
- List limiting factors particular to pediatric minimally invasive surgery

SAGES acknowledges an educational grant in support of this venue from Stryker Endoscopy

SAGES acknowledges contributions in-kind in support of this venue from: Allergan, Angiotech, Applied Medical, Boston Scientific, Cooper Surgical, Covidien, Davol Inc., a BARD Company, Encision, Erbe, Ethicon Endo-Surgery, Ethicon Inc., Gore & Associates, Karl Storz Endoscopy, Olympus America Inc., Simbionix, Simulab, Stryker Endoscopy



SAGES Social Programs

Tours

This year SAGES will not host our own spouse tours. Once you have made hotel reservations, please contact either your hotel concierge or guest information staff person to get information about local tours. There will be local sites and information fliers and booklets available at the SAGES registration desk on site.

Are You Ready to Get Physical?

Are you and/or your spouse or partner, feeling sluggish while in sunny San Diego because that is a crime! If so, you might like to join our first ever SAGES "Lets Get Physical" aerobic class! The class will be held at the Marriott Marquis on Thursday, March 8 and Friday, March 9 in the Rancho Santa Fe room at 8:00 am. Join SAGES President Dr. Steven Schwaitzberg's wife Dr. Lisa Jacobsen, who will be running the class.

Put on your headband, grab those legwarmers and come join us!

Welcome Reception – A Slew of Equipment Debuts in the Exhibit Hall!

Date: Wednesday, March 7, 2012

Time: 5:30 - 7:30 PM Place: Exhibit Hall

Fee: No Fee for Registrants & registered guests

Dress: Business casual

Special promotions, presentations and entertainment. Great food! Open bar!

Note: Children under the age of 14 will not be permitted in the Exhibit Hall due to safety considerations.

SAGES Meet the Leadership Reception

for New SAGES Members Residents and Fellows

Date: Friday Evening, March 9, 2012

Time: 6:00 - 7:00 PM
Place: Coronado Terrace

Dress: Casual

SAGES is a family that values its new members AND new surgeons. Residents, fellows and new members: join us to chat, drink & snack with SAGES leaders many of whom are world acclaimed innovators in MIS surgery. The consummate networking opportunity.

Joint SAGES/IPEG Gala Event on the Historic USS Midway Aircraft Carrier and Museum

Dinner, ship tours and Sing-Off

Date: Friday Evening, March 9, 2012 Place: 910 Harbor Drive, San Diego

Time: 7:30 - 11:00 PM

Dress: Fun-Casual, wear dancing shoes

Fee: Included in Registration for SAGES Super Pass (Option A), & registered guests. Tickets: \$125.00 (for additional guests and SAGES Registration Options B & C)

Imagine experiencing life at sea aboard one of America's longest-serving aircraft carriers. Join us on this floating city at sea and walk in the footsteps of 225,000 Midway sailors who served on this tour-de-force. Premium open bar, fabulous buffet and the best band in San Diego will make for an unforgettable evening.

The evening will conclude with the 14th International Sing-Off.

After the Meeting: The 2012 SAGES Foundation Golf Outing

The 2nd Annual SAGES Foundation Golf Outing will be held at The Torrey Pines Golf Course in San Diego, CA on Sunday, March 11, 2012. The event includes transportation, lunch, practice range including golf balls, golf and cart fees, and post golf refreshments including beer and snacks. The cost of the event is \$300.00 and all proceeds will go to the SAGES Foundation. A portion of your participation fee will be tax-deductible to the fullest extent of the law.

For pre-registratnts only. For information on 2012 Golf, contact foundation@sages.org.

SAGES

Surgeons join SAGES because our primary mission is to:

- Provide revolutionary educational programs.
- Support and encourage achievement in endoscopic surgery for the surgeon.
- · Promulgate guidelines in standards of practice and **training** that reflect up-to-date scientific data and surgical thinking.
- Protect the **interests of our patients** in assuring them access to the BEST operation.
- Keep surgeons aware of innovative technology that will improve the practice of surgery.
- Support innovative endoscopic research.

Surgeons join because SAGES is an unconventional surgical association in the best sense of the word. It is a collegial group in which newcomers are welcomed like long-term members of the "family." SAGES members "networked" before that word had been invented. If you participate, you are valuable. If you work for the Society, you are invited into its leadership circle. SAGES is inclusive while preserving quality. It is statistically more difficult to have a paper accepted for **oral presentation** at a SAGES meeting than almost any other group. But new ideas are welcomed. We have a **service-oriented staff.** When you call with a question, someone answers it or finds the answer or helps you find out where to find the answer. This organization was founded FOR our members, and its primary responsibility is **TO** our members.

What We've Done in a Short Time:

SAGES (The Society of American Gastrointestinal and Endoscopic Surgeons) was founded in 1981 to foster, promote, support, and encourage academic, clinical, and research achievement in gastrointestinal endoscopic surgery. The Society has grown from fewer than 50 original members to more than 6,000 from every state and many countries.

SAGES...

- has a representative on the American College of Surgeons Board of Governors.
- is a Nominating Member of the American Board of Surgery.
- holds a seat in the House of Delegates of the A.M.A.
- operates FLS residents must pass FLS before being board certified.
- has its own Wiki-Pages, SAGES University, SAGES PAGES, iMAGES.

There are many benefits of membership in SAGES, but surgeons do not join just to **get discounts for** meeting registration or reserve spaces in our

basic and advanced resident courses.

For more information about SAGES, or to join the organization, please visit sages. org/membership or contact the membership department at (310) 437-0544, ext. 110.

IPEG Meeting: Schedule-at-a-Glance



PRE-MEETING COURSES

Tuesday, March 6, 2012

5:00 pm - 9:00 pm Postgraduate Lecture: MIS in Infants and Neonates Manchester Grand Hyatt Hotel - Douglas Pavilion A

CHAIR: George W. Holcomb III, MD

Wednesday, March 7, 2012

8:30 am - 11:30 am MIS in Infants and Neonates Hands On Lab (Animate) UCSD - Center for the Future of Surgery

CHAIR: Katherine Barsness, MD

CO-CHAIRS: Maria Marcela Bailez, MD & Milissa McKee, MD

1:00 pm - 5:00 pm Simulator Hands On Lab (Inanimate) Manchester Grand Hyatt - Manchester DE Ballroom

CHAIR: Philipp O. Szavay, MD

CO-CHAIRS: Karen Diefenbach, MD & John J. Meehan, MD

5:30 pm - 7:30 pm San Diego Convention Center - Exhibit Hall C

IPEG's 21ST ANNUAL CONGRESS

Thursday, March 8, 2012General Sessions are at the San Diego Convention Center - Room 6C

7:30 am - 8:45 am Morning Scientific Video Session: Coolest Tricks & Extraordinary Procedures MODERATORS: Carroll M. Harmon, MD, PhD, Tadashi Iwanaka, MD, PhD, & Timothy Kane, MD

8:45 am - 8:50 am Welcome Address: Carroll M. Harmon, MD, PhD, 2012 IPEG President

8:50 am - 10:00 am Scientific Session: Clinical & Basic Science

MODERATORS: Daniel Von Allmen, MD, Carlos Garcia-Hernandez, MD, & Benno Ure, MD, PhD

9:30 am - 3:30 pm **Exhibits Open** San Diego Convention Center - Exhibit Hall C

10:00 am -10:30 am **Break**

> CHAIR: Todd A. Ponsky, MD CO-CHAIR: Jeffrey Ponsky, MD

12:00 pm - 12:30 pm Presidential Address & Lecture: "Pediatric Endosurgery; A Brief History"

Carroll M. Harmon, MD, PhD

INTRODUCTION BY: Todd A. Ponsky, MD

12:30 pm - 1:45 pm Lunch Break (on own) and Exhibit Viewing

12:30 pm - 1:45 pm **Poster Tours** (Posters 1-76) San Diego Convention Center - Exhibit Hall C

CHAIR: Miguel Guelfand, MD

MODERATORS: Celeste Hollands, MD, Joseph Iocono, MD, Saleem Islam, MD, Martin Metzelder, MD,

Juan Moldes Larribas, MD, Sherif Emil, MD, Michele Ugazzi, MD, Patricio Varela, MD, & Suzanne Yoder, MD

1:45 pm - 2:15 pm Guest Lecturer: "Pushing the Envelope" - New Ideas in Pediatric Endoscopic Surgery

"What Can We Learn from Animals"?

Jeffrey J. Runge, DVM, DACVS

INTRODUCTION BY: Todd A. Ponsky, MD

2:15 pm - 3:15 pm Scientific Session: Gastrointestinal & Hepatobiliary – Part I

MODERATORS: Alan Flake, MD, Thanh Liem Nguyen, MD, & Juergen Schleef, MD, PhD

3:15 pm - 3:30 pm Lifetime Achievement Award: Thom E. Lobe, , MD, FACS, FAAP

PRESENTED BY: Carroll M. Harmon, MD, PhD

3:30 pm - 4:00 pm **Break**

4:00 pm - 4:30 pm Karl Storz Lecture: "The Impact of Advanced Technologies on the Future of Surgery"

Richard M. Satava, MD

INTRODUCTION BY: Carroll M. Harmon, MD, PhD

4:30 pm - 5:30 pm Panel: Inguinal Hernias

CHAIR: Holger Till, MD, PhD

CO-CHAIRS: Dariusz Patkowski, MD & C.K. Yeung, MD

IPEG Meeting: Schedule-at-a-Glance

		IPEG C
Friday, March 9,	2012 General Sessions are at the San Diego Conv	
7:30 am - 8:30 am	SAGES/IPEG Great Debates in Pediatric Bariatric Surgery CHAIR: Thomas H. Inge, MD CO-CHAIR: Janey Pratt, MD	
8:30 am - 9:30 am	Morning Scientific Video Session: Unexpected Findings, Troubles as MODERATORS: Gordon A. Mackinlay, OBE, Fraser Munro, FRCS, & Mark Wulk	
9:30 am - 10:00 am	Break	
9:30 am - 3:30 pm	Exhibits Open	San Diego Convention Center - Exhibit Hall C
10:00 am - 11:00 am	Scientific Session: Gastrointestinal & Hepatobiliary – Part II MODERATORS: Munther J. Haddad, FRCS, Mark A. Levitt, MD, & Long Li, MD)
11:00 am - 12:00 pm	Scientific Session: Robotics and Alternative Technologies MODERATORS: John J. Meehan, MD, David C. van der Zee, MD, & Kenneth V	Wong, MD
12:00 pm - 12:30 pm	Keynote Lecture: "Remote Presence, Telemedicine, and Healthcare Yulun Wang, PhD INTRODUCTION BY: Todd A. Ponsky, MD	Delivery"
12:30 pm - 1:45 pm	Lunch Break (on own) and Exhibit Viewing	
12:30 pm - 1:45 pm	Poster Tours (Posters 77-152) CHAIR: Shawn D. St. Peter, MD MODERATORS: Katherine Barsness, MD, Raul Bignon, MD, Karen Diefenbac Pablo Laje, MD, Sean Marven, MD, Milissa McKee, MD, Oliver Muensterer, M & Yuk Him Tam, MD	
1:45 pm - 2:45 pm	Panel: Difficult Situations in MIS CHAIR: Keith E. Georgeson, MD CO-CHAIRS: Jacob Langer, MD, Henri Steyaert, MD, & Atsuyuki Yamataka, M	D
2:45 pm - 4:00 pm	Scientific Session: Urogenital MIS MODERATORS: Maria Marcela Bailez, MD, Satoshi leiri, MD, & Philipp O. Szav	vay, MD
4:00 pm - 4:30 pm	Break	
4:30 pm - 5:30 pm	Panel: Chest Wall Deformities CHAIR: Marcelo H. Martinez Ferro, MD CO-CHAIRS: Michael J. Goretzky, MD, Klaus Schaarschmidt, MD, & Patricio V.	arela, MD
7:30 pm - 11:00 pm	IPEG/SAGES Main Event!	Historic USS Midway Aircraft Carrier and Museum
Saturday, March	10, 2012 General Sessions are at	the San Diego Convention Center - Room 6C
7:00 am - 8:15 am	Scientific Session: Miscellaneous MODERATORS: Manuel Lopez, MD, Daniel J. Ostlie, MD, & Yuk Him Tam, MD	
8:15 am - 8:45 am	General Assembly MODERATOR: Carroll M. Harmon, MD, PhD	
8:45 am - 9:00 am	Awards: Coolest Tricks – PRESENTED BY: Carroll M. Harmon, MD, PhD Basic Science – PRESENTED BY: Shawn D. St. Peter, MD IRCAD – PRESENTED BY: Todd A. Ponsky, MD 2012 Research Grant – PRESENTED BY: Shawn D. St. Peter, MD	
9:00 am - 9:15 am	2011 Research Grant Presentation: "Long-Gap Pure Esophageal Atr Development of a Survival Rabbit Model and Minimally Invasive Re Todd A. Ponsky, MD, University Hospitals Case Medical Center	
9:15 am - 9:45 am	Break	
9:45 am - 10:45 am	Panel: IBD CHAIR: James D. Geiger, MD CO-CHAIRS: John H.T. Waldhausen, MD & Bruce Jaffray, MD	
10:00 am - 1:00 pm	Exhibits Open	San Diego Convention Center - Exhibit Hall C
10:45 am - 11:45 am	Scientific Session: Thorax MODERATORS: Maria Marcela Bailez, MD, Giovanna Riccipetitoni, MD, & Ste	3
11:45 am - 12:00 pm	Closing Remarks & Presentation of the IPEG 2013 President: Tadash	ni Iwanaka, MD, PhD

12:00 pm - 1:00 pm

Free Lunch in Exhibit Hall for all IPEG & SAGES attendees

MODERATOR: Carroll M. Harmon, MD, PhD



SAGES



	Society of American Gastrointestinal and Endoscopic Surgeons						
	Resource/Program	Description	Members	Non-Members			
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available on sag	S A GE S	SAGES TV is a central "searchable and fully navigational" depository for SAGES videos	 Upload/Share/Archive VideosRate/Review Videos 	View access only to video catalog			
	S-WIRI	S-Wiki is a surgical "Wikipedia" that has significant potential to become the most authoritative surgical reference on the web.	· Edit Existing Articles · Create New Articles	Read only Access to Articles			
ES Media Madness! Now	A A A A A A A A A A A A A A A A A A A	These webinars have been developed specifically for residents and will feature expert panelist from SAGES.	Register and Participate in SAGES Resident Webinars for Free!	Register and Participate in SAGES Resident Webinars for Free!			
G	SAGESPAGES THE SAGES SOCIAL NETWORK	SAGESPAGES is a surgeon-to-surgeon social network that will has replaced the previous SAGES member area.	Post enhanced member profiles Build "Friendships" with members Messaging between members Participate Committees Upload/Archive documents	 Search/View Member Profiles Read only access to public documents and updates 			
ES	SAGES niversity ducation • Research • Innovation	SAGES University facilitates online education content for MOC Part 2 Self assessment CME credit.	Full Access to complete all SAGES U Courses and obtain MOC Part 2 Self assessment CME credit	This Resource is for Members Only			
OURC	MOC MOC	MYCME/MYMOC is a central repository to track all SAGES awarded MOC Part 2 CME credit.	View and track all SAGES related CME Credit obtained from SAGES U and Live events	View and track all SAGES related CME Credit obtained from live events			
RES	► SAGES Guidelines	A complete list of all currently published SAGES Guidelines on the SAGES publication page.	On-line access to all SAGES Guidelines	On-line access to all SAGES Guidelines			
TRONIC	1950	SAGES International Proctoring Courses are a vehicle for SAGES to "give back" to the world commu- nity by leveraging its leading educational and training activities to become a leader in bringing safe minimally invasive surgery to the developing world.	SAGES Members may volunteer to participate in SAGES Go Global Activities				
LEC	► MIS Safety Checklist	A checklist developed by SAGES and AORN to aid operating room personnel in the preparation of	On-line access to all SAGES Guidelines	On-line access to all SAGES Guidelines			

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- **Bradley Champagne, MD,** Cleveland, OH, Associate Professor, Case Medical Center
- **Genevieve Chartrand,** Montreal, QC, Canada, Bachelor's, McGill University, Research Assistant, Steinberg Bernstein Center for Minimally Invasive Surgery, Montreal General Hospital
- **David Chen, MD,** Santa Monica, CA, Assistant Clinical Professor of Surgery, David Geffen School of Medicine at UCLA, Assistant Clinical Professor of Surgery, UCLA
- Woung Young Chung, MD, Seoul, Seodaemungu, South Korea, Professor., Yonsei University College of Medicine, Director of endocrine surgery division, Director of Severance robot & MIS training center, Yonsei University Health System (Severance hospital)



- **Ricardo V. Cohen, MD,** Sao Paulo, Brazil, Center for the Surgical Treatment of Obesity and Metabolic Disorders, Hospital Oswaldo Cruz
- John A. Coller, MD, Burlington, MA, Assistant Clinical Professor of Surgery, Tufts University School of Medicine, Senior Colon and Rectal Surgeon, Lahey Clinic
- Jonathan F. Critchlow, MD, Boston, MA, Assistant Professor of Surgery, Harvard Medical School, Beth Israel Deaconess Medical Center, Boston
- **Paul G. Curcillo II, MD,** Flourtown, PA, Associate Professor, Fox Chase Cancer Center, Director, Minimally Invasive Initiatives and Development, Fox Chase Cancer Center
- **Gregory F. Dakin, MD,** New York, NY, Associate Professor of Surgery, Weill Cornell Medical College, Associate Attending Surgeon, New York Presbyterian Hospital
- **Giovanni Dapri, MD,** Brussels, Belgium, Assistant Professor of Surgery, Department of Gastrointestinal Surgery, European School of Laparoscopic Surgery, Saint-Pierre University Hospital, Brussels, Belgiu
- **S. Scott Davis Jr, MD,** Atlanta, GA, Assistant Professor, Emory University, Assistant Professor, The Emory Clinic
- **Suvranu De, Troy, NY,** Professor, Rensselaer Polytechnic Institute
- **Aureo L. De Paula, MD,** Goiania, Goias, Brazil, Hospital de Especialidades
- **Teresa Catherine deBeche-Adams, MD,** Orlando, FL, Staff Colorectal Surgeon, Florida Hospital
- **Eric Joel DeMaria, MD,** Raleigh, NC, , Durham Regional Hospital
- **Thomas L. Dent, MD,** Santa Barbara, CA, Surgery Chair Emeritus, Abington Memorial Hospital
- **David Joseph Desilets, MD, PhD,** Southwick, MA, Assistant Professor of Clinical Medicine and Surgery, Tuft's University School of Medicine, Baystate Medical Center
- **Daniel J. Deziel, MD,** Chicago, IL, Helen Shedd Keith Professor and Chair, Department of General Surgery, Rush University, Senior Attending Surgeon, Rush University Medical Center
- **Gerard M. Doherty, MD,** Ann Arbor, MI, James Utley Professor and Chair of Surgery, Boston University, Surgeon-in-Chief, Boston Medical Center
- **Andrew J. Duffy, MD,** New Haven, CT, Associate Professor of Medicine, Yale University School of Medicine, Attending Surgeon, Yale-New Haven Hospital
- **Quan-Yang Duh, MD,** San Francisco, CA, Professor, University of California, San Francisco, Attending Surgeon, VA Medical Center, San Francisco

- **Brian J. Dunkin, MD,** Houston, TX, Professor of Clinical Surgery, Weill Cornell Medical College, Head, Section of Endoscopic Surgery, The Methodist Hospital
- Jeffrey Lewis Eakin, MD, Columbus, OH, Fellow, The Ohio State University , The Ohio State University Medical Center
- **David Bryan Earle, MD,** Springfield, MA, Assistant Professor of Surgery, Tufts University School of Medicine, Director of Minimally Invasive Surgery and Esophageal Physiology Lab, Baystate Medical Center
- **David W. Easter, MD,** San Diego, CA, Professor of Clinical Surgery, University of California at San Diego, Program Director in Surgery, VA Medical Center
- Michael A. Edwards, MD, Augusta, GA, Associate Professor, Georgia Health Sciences University, Chief, Minimally Invasive and Digestive Disease Surgery, MCGHealth Systems
- Michael B. Edye, MD, New York, NY, Professor of Surgery, Mount Sinai School of Medicine, Attending, The Mount Sinai Hospital, New York
- Jonathan E. Efron, MD, Owings Mills, MD, Associate Professor, Johns Hopkins University, Chairman of the Ravitch Division, Johns Hopkins Hospital
- James C. Ellsmere, MD, Halifax, NS, Canada, Assistant Professor of Surgery, Dalhousie University, Director of Minimally Invasive Surgery, QEII Health Sciences Centre
- Alex Escalona, MD, Vitacura, Santiago, Chile, Assistant Professor, Pontificia Universidad Catolica de Chile, Gastrointestinal Surgeon, Hospital Clinico Universidad Catolica de Chile
- **Steve Eubanks, MD,** Orlando, FL, Director of Academic Surgery, Florida Hospital, Medical Director of the Institute for Surgical Advancement, Florida Hospital
- **Robert D. Fanelli, MD,** Pittsfield, MA, Assistant Professor of Surgery, UMASS Medical School, Director of Surgical Endoscopy, Berskhire Medical Center
- **Tim Farrell, MD,** Chapel Hill, NC, Professor of Surgery, UNC-Chapel Hill, University of North Carolina Hospitals
- **Liane S. Feldman, MD,** Montreal, PQ, Canada, Associate Professor of Surgery, McGill University, surgeon, McGill University Health Centre
- **Edward L. Felix, MD,** Fresno, CA, Assistant Clinical Professor of Surgery UCSF, UCSF-Fresno, Director of Bariatric Surgery, Clovis Hospital
- **Alberto R. Ferreres, PhD,** Buenos Aires, Argentina, Professor of Surgery, University of Buenos Aires, Chairman Department of Surgery, UBA Hospital Dr. Carlos Bocalandro
- **Lorenzo E. Ferri, MD,** Montreal, PQ, Canada, Associate Professor, McGill University

- **George S. Ferzli, MD,** Staten Island, NY, Professor of Surgery, SUNY DownState Med Center, Chairman of Surgery, Lutheran Med
- **Aaron S. Fink, MD,** Atlanta, GA, Professor Emeritus, Department of Surgery, Emory University School of Medicine, Attending Surgeon, VAMC - Atlanta
- Samuel R.G. Finlayson, MD, Lebanon, NH, Director, Center for Surgery and Public Health, Harvard Medical School, Associate Surgeon, Brigham & Women's Hospital
- Craig P. Fischer, MD, Houston, TX, Associate Professor of Surgery, Weill Cornell Medical College, The Methodist Hospital, Program Lead, HPB Surgery, Chief Surgical Oncology
- James W. Fleshman, MD, St Louis, MO, Professor of Surgery, Chief Section of Colon and Rectal Surgery, Washington University in St. Louis, Barnes Jewish Hospital
- **Yuman Fong, MD,** New York, NY, Murray F. Brennan Professor in Surgery, Memorial Sloan Kettering Cancer Center, Professor, Memorial Sloan Kettering Cancer Center
- Antonello Forgione, MD, Milano, Italy, Scientific Director, AIMS Advanced International Mini-invasive Surgery Academy, General and Emergency Surgeon, Niguarda Cà Granda Hospital
- Dennis L. Fowler, MD, MPH, New York, NY, Professor of Clinical Surgery; Director, Reemtsma Center for Innovation and Outcomes Research, Columbia University College of Physicians and Surgeons, Medical Director, Simulation Center, New York Presbyterian Hospital
- Morris E. Franklin Jr, MD, San Antonio, TX, Director, Texas Endosurgery Institute, General Surgeon, Mission Trail Hospital
- **Abraham J. Frech, Jr, MD,** Boston, MA, Fellow, Harvard Medical School, Dr. D. Jones Fellow, Beth Israel Deaconess
- **Gerald M. Fried, MD,** Montreal, PQ, Canada, Professor and Chairman, Department of Surgery, McGill University Faculty of Medicine, Surgeon-in-Chief, McGill University Health Centre Hospitals
- **Karl H. Fuchs, MD,** Frankfurt, Germany, Prof. Dr., Goethe University Frankfu, Markus-Krankenhaus
- Julie Fuchs, MD, Dallas, TX, Assistant Professor of Surgery, UT Southwestern , Children's Medical Center Dallas
- Pascal R. Fuchshuber, MD, Moraga, CA, Clinical Associate Professor of Surgery, UCSF, UCSF-East Bay, MD, PhD, FACS, Kaiser Walnut Creek Medical Center
- **Terrence Fullum, MD,** Washington, DC, Howard University
- **Daniel J. Gagne, MD,** Pittsburgh, PA, Clinical Professor of Surgery, Temple University School of Medicine, Director of Bariatric Surgery, West Penn Allegheny Health System

- **Michel Gagner, MD,** Montreal, PQ, Canada, Clinical Professor of Surgery, Florida International University, Chief, Bariatric and Metabolic Surgery, HMC Hospital
- Manoel P Galvao Neto, MD, Sao Paulo, Brazil, Scientific coordinator, Gastro Obeso Center, Sao Paulo, Brazil
- **Denise W. Gee, MD,** Boston, MA, Instructor in Surgery, Harvard Medical School, Massachusetts General Hospital, Assistant in Surgery, Massachusetts General Hospital
- **Daniel P. Geisler, MD,** Pittsburgh, PA, Associate Professor, West Penn Allegheny Health Systems, West Penn Allegheny Health Systems
- Virgilio George, MD, Indianapolis, IN, Assistant Professor of Surgery Colorectal Surgery, Indiana university School of Medicine, Colorectal Surgery, Indiana University Hospital
- **Piero Cristoforo Giulianotti, MD,** Chicago, IL, Professor of Surgery, University of Illinois at Chicago, Chief of General Surgery, University of Illinois at Chicago
- Carlos D. Godinez, MD, Jacksonville, FL, MIS Fellow, Clinical Instructor, University of Maryland School of Medicine, MIS Fellow, Clinical Instructor, University of Maryland Medical Center
- Matthew I. Goldblatt, MD, Milwaukee, WI, Associate Professor, Medical College of Wisconsin, General Surgeon, Froedtert Hospital
- **Christopher J. Gostout, MD,** Rochester, MN, Professor of Medicine, Mayo Clinic School of Medicine, Director of Developmental Endoscopy, Mayo Clinic
- Jon C. Gould, MD, Milwaukee, WI, Associate Professor of Surgery, Medical College of Wisconsin, Chief, Division of General Surgery, Froedtert Hospital
- **Teodor Grantcharov, MD, PhD,** Toronto, ON, Canada, Associated Professor, University of Toronto, Staff Surgeon, St. Michael's Hospital
- Jacob Andrew Greenberg, MD, Madison, WI, Assistant Professor of Surgery, University of Wisconsin School of Medicine and Public Health, University of Wisconsin Hospital and Clinics
- Frederick L. Greene, MD, Charlotte, NC, Clinical Professor of Surgery, University of North Carolina School of Medicine, Chairman, Department of Surgery, Carolinas Medical Center
- Charlotte Guglielmi, BSN, RN, CNOR, Boston, MA, MA, BSN, RN,CNOR, Perioperative Nurse Specialist, Beth Israel Deaconess Medical Center
- **Niraj J. Gusani, MD,** Hershey, PA, Assistant Professor of Surgery, Medicine & Public Health Sciences, Penn State College of Medicine, Penn State Hershey Medical Center
- **Seung S Gwon, MD, MS, FACS,** El Centro, CA, Surgeon, El Centro Regional Medical Center

- **Eric M. Haas, MD,** Houston, TX, Program Director, Minimally Invasive Colorectal Surgery Fellowship, University of Texas Medical School at Houston, Faculty, The Methodist Hospital
- **Giselle G. Hamad, MD,** Pittsburgh, PA, Associate Professor of Surgery, University of Pittsburgh, Magee-Women's Hospital of UPMC
- **Daniel Hashimoto, MD,** London, UK, Visiting Research Fellow, Imperial College London
- **Imran Hassan, MD,** Springfield, IL, Assistant Professor, SIU School of Medicine
- **Robert H. Hawes, MD,** Orlando, FL, , Florida Hospital
- Jeffrey W. Hazey, MD, Columbus, OH, Associate Professor of Surgery, The Ohio State University, Attending Surgeon, The Ohio State University Medical Center
- **B. Todd Heniford, MD,** Charlotte, NC, Professor, Carolinas Medical Center, Chief, Division of Gastrointestinal and Minimally Invasive Surgery, Carolinas Medical Center
- Daniel M. Herron, MD, New York, NY, Professor of Surgery, Mount Sinai School of Medicine, Chief, Laparoscopic and Bariatric Surgery, Mount Sinai Medical Center
- **Kelvin D. Higa, MD,** Fresno, CA, Clinical Professor of Surgery, UCSF, Director of Minimally Invasive and Bariatric Surgery, Fresno Heart and Surgical Hospital
- **Deborah Hogg, BS,** Dallas, TX, Research Study Coordinator, UT Southwestern
- Michael D. Holzman, MD, Nashville, TN, Lester & Sara Jayne Williams, Chair of Academic Surgery; Associate Professor of Surgery, Vanderbilt University, Vanderbilt University Medical Center
- Santiago Horgan, MD, San Diego, CA, Professor of Surgery., University of California San Diego, Chief Division Minimally Invasive Surgery, UCSD Medical Center
- **Eric Steven Hungness, MD,** Chicago, IL, Assistant Professor of Surgery, Northwestern University
- **Steven R. Hunt, MD,** St Louis, MO, Assistant Professor of Surgery, Washington University School of Medicine, Barnes-Jewish Hospital
- **John Hunter, MD,** Portland, OR, Mackenzie Professor and Chair, Dept. of Surgery, Oregon Health & Science University
- Matthew M. Hutter, MD, Boston, MA, Assistant Professor, Harvard Medical School, Director, Codman Center for Clinical Effectiveness in Surgery, Mass. General Hospital
- **Woo Jin Hyung, MD,** South Korea, Associate Professor, Yonsei University College of Medicine, Severance Hospital
- Sayeed Ikramuddin, MD, Minneapolis, MN, Professor of Surgery, University of Minnesota, University of Minnesota Medical Center, Fairview

- **Thomas H. Inge, MD,** Cincinnati, OH, Professor of Pediatrics and Surgery, University of Cincinnati, Pediatric Surgeon, Cincinnati Children's Hospital Medical Center
- Haruhiro Inoue, MD, Yokohama, Japan, Professor, Digestive Disease Center, Showa University Northern Yokohama Hospital, Professor, Digestive Disease Center, Showa University Northern Yokhama Hospital
- **Osamu Itano, MD,** Tokyo, Japan, Assistant Professor, Department of Surgery, Keio University, School of Medicine, Instructor, Keio University Hospital
- Gretchen Purcell Jackson, MD, PhD,
 Nashville, TN, Assistant Professor of Surgery
 and Biomedical Informatics, Vanderbilt
 University, Assistant Professor of Surgery,
 Monroe Carell Jr. Children's Hospital at
- **Brian P. Jacob, MD,** New York, NY, Assoc Clin Prof of Surgery, Mount Sinai Medical Center, Mount Sinai
- Garth R. Jacobsen, MD, Rancho Santa Fe, CA, Assistant Professor of Surgery, UCSD, UCSD Medical Center
- **Lisa Jane Jacobsen, MD, MPH,** Boston, MA, Assistant Professor, Tufts School of Medicine, Attending Physician, Tufts Medical Center
- **Blair A. Jobe, MD,** Pittsburgh, PA, Professor of Surgery , University of Pittsburgh , Surgeon, UPMC Shadyside
- **Ryan Jones,** Lakeville, CT, Student, The Hotchkiss School
- **Daniel Bougere Jones, MD,** Boston, MA, Professor, Harvard Medical School, Vice Chair in Surgery, Office Technology & Innovation, Chief, Minimally Invasive Surgical Services;, Beth Israel Deaconess Medical Center
- Stephanie B. Jones, MD, Wayland, MA, Associate Professor, Harvard Medical School, Vice Chair for Education, Department of Anesthesia, Critical Care and Pain Medicine, Beth Israel Deaconess Medical Center
- **Gregg H. Jossart, MD,** San Francisco, CA, Director, Minimally Invasive Surgery, California Pacific Medical Center, Director, Minimally Invasive Surgery, California Pacific Medical
- **Pepa Kaneva, MSc,** Montreal, QC, Canada, MSc, McGill University Health Centre, Montreal General Hospital
- Namir Katkhouda, MD, Los Angeles, CA, Professor and Vice Chairman for clinical affairs, University of Southern California, Director, Bariatric surgery program, USC University hospital and LAC -USC Medical Cente
- **Michael L. Kendrick, MD,** Rochester, MN, Associate Professor of Surgery, Mayo Clinic

- Leena Khaitan, MD, Chagrin Falls, OH, Associate Professor of Surgery, University Hospitals, Case Medical Center, Director of Minimally Invasive and Bariatric Surgery, University Hospital, Geauga Medical Center
- **Saurabh Khandelwal, MD,** Seattle, WA, Assistant Professor, University of Washington, Director, Bariatrics, UWMC
- Michael L. Kochman, MD, Philadelphia, PA, Wilmott Family Professor of Medicine, Perelman School of Medicine at the University of Pennsylvania, Vice-Chair of Medicine for Clinical Services, Hospital of the University of Pennsylvania
- James R. Korndorffer, MD, New Orleans, LA, Professor, Department of Surgery, Tulane University, Tulane University Hospital and Clinic
- **Shanu N. Kothari, MD,** La Crosse, WI, Director of Minimally Invasive Bariatric Surgery, Gundersen Clinic, Gundersen Health System
- Omar Yusef Kudsi, MD, Boston, MA, MD, MBA, Harvard Medical School, Surgery fellow, Beth Israel Deaconess Medical Center
- Jay N. Kuhn, MD, Holyoke, MA, Assistant Professor of Surgery, Tufts University School of Medicine, Staff Surgeon, Baystate Medical Center
- Marina Kurian, MD, New York, NY, Asst Professor of surgery, NYU School of Medicine, Medical Director NYU Langone Medical Center, Comprehensive Weight Loss Program, NYU medical center
- **Antonio M. Lacy, MD,** Barcelona, Spain, Professor of Surgery, University of Barcelona, Chief of Gastrointestinal Surgery, Hospital
- Sergio W. Larach, MD, Orlando, FL, Clinical Associate Profesor Surgery Florida State University, Florida State University, Program Director Colon & Rectal Surgery, Florida Hospital Orlando
- **Wai Lun Law, MD,** Hong Kong, China, Professor of Surgery, The University of Hong Kong, Honorary Consultant, Queen Mary Hospital
- **Michele Ledgerwood, MPP,** Independent Consultant
- **Sang W. Lee, MD,** New York, NY, Associate Professor, Weill-Cornell Medical College, Associate Attending, New York Presbyterian Hospital
- **Eli N. Lerner, MD,** Jacksonville, FL, Surgical Faculty, University of Florida, Attending Surgeon, Shands- Jacksonville
- **Robert B. Lim, MD,** Honolulu, HI, Assistant Clincal Professor of Surgery, Tripler Army Medical Center, Chief of Metabolic and Bariatric Surgery, Tripler Army Medical Center
- Henry Lin, MD, Bethesda, MD, Walter Reed National Military Medical Center Bethesda, Minimally Invasive and Bariatric Surgeon, Walter Reed National Military Medical Center Bethesda

- **Dimitrios A. Linos, MD,** Athens, Greece, Lecturer, Harvard Medical School, Director of 1st Surgical Clinic, Hygeia Hospital
- **C.Y. Lo, MD,** Hong Kong, China, Honorary Professor, The University of Hong Kong, Department of Surgery, Queen Mary Hospital
- Kirk Allen Ludwig, MD, Milwaukee, WI, Associate Professor of Surgery, Medical College of Wisconsin, Chief of Colorectal Surgery, Froedtert Memorial Lutheran Hospital
- **Bruce V. MacFadyen Jr, MD,** Augusta, GA, Professor of Surgery, Medical College of Surgery, Professor of Surgery, Medical College of Georgia Hospital
- **David M. Mahvi, MD,** Chicago, IL, Professor of Surgery, Northwestern University- Feinberg school of Medicine, Northwestern Memorial Hospital
- **Gregory J. Mancini, MD,** Knoxville, TN, Assistant Professor of Surgery, University of Tennessee, University of Tennessee Medical Center
- Peter W. Marcello, MD, Burlington, MA, don't use, Vice Chairman, Department of Colon & Rectal Surgery, Lahey Clinic, Burlington, MA
- Daniel R. Marcus, MD, Los Angeles, CA,
- **Jeffrey M. Marks, MD,** Cleveland, OH, associate professor, case medical center, director of surgical endoscopy, university hospital
- John H. Marks, MD, Wynnewood, PA, Professor, Lankenau Institute for Medical Research, Chief, Section of Colorectal Surgery, Main Line Health System (3 hospitals)
- Michael R. Marohn, MD, Baltimore, MD, Associate Professor of Surgery, Johns Hopkins University School of Medicine, Director, Minimally Invasive Surgery Training & Innovation Center (MISTIC), Johns Hopkins
- Jose M. Martinez, MD, Miami, FL, Associate Professor of Surgery, University of Miami, Miller School of Medicine, Chief, Section of Surgical Endoscopy, University of Miami Hospital
- Samer G. Mattar, MD, Indianapolis, IN, Associate Professor of Surgery, Indiana University, Medical Director, IU Health Bariatrics, Indiana University Health North
- Kai Matthes, MD, Berlin, MA, Assistant Professor, Harvard Medical School, Director, Developmental Endoscopy, Beth Israel Deaconess Medical Center and Children'
- **Brent D. Matthews, MD,** St Louis, MO, Professor of Surgery, Department of Surgery, Washington University in St Louis, Chief, Section of Minimally Invasive Surgery, Barnes-Jewish Hospital
- **Thomas P. McIntyre, MD,** Brooklyn, NY, Assistant Professor, SUNY Downstate School of Medicine, Director of Minimally Invasive Surgery, Kings County Hospital Center

- **Elisabeth C. McLemore, MD,** La Jolla, CA, Assistant Professor of Surgery, University of California, San Diego, MD, FACS, FASCRS, UC San Diego Health System
- Ozanan Ricardo de Oliveira Meireles, MD, Boston, MA, Instructor in Surgery, Harvard Medical School, Assistant in Sugery, Massachusetts General Hospital
- John D. Mellinger, MD, Springfield, IL, Professor and Chair of General Surgery, Southern Illinois University, General Surgery Residency Program Director, Southern Illinois University
- **Lora M. Melman, MD,** St Louis, MO, Resident in General Surgery, Washington University School of Medicine, Barnes-Jewish Hospital
- W. Scott Melvin, MD, Columbus, OH, Professor of Surgery, The Ohio State University, Director, Center for Minimally Invasive Surgery/Director Division GenGl Surgery, Tho Ohio State University Medical Center
- Marc P. Michalsky, MD, Columbus, OH, Associate Professor of Clinical Surgery, The Ohio State University, College of Medicine, Surgical Director, The Center for Healthy Weight and Nutrition, Nationwide Children's Hospital
- **Dean J. Mikami, MD,** Columbus, OH, Assistant Professor of Surgery, The Ohio State University, Assistant Professor of Surgery, The Ohio State University Medical Center
- Yoav Mintz, MD, Jerusalem, Israel, Senior Lecturer, Hadassah- Hebrew University Medical Center, Director of the Center for Innovative Surgery, Hadassah- Hebrew University Medical Center
- Katherine A. Morgan, Charleston, SC,
- **Malcolm G. Munro, MD,** Los Angeles, CA, Professor, University of California, Los Angeles, Director of Gynecologic Services, Kaiser Permanente Los Angeles Medical Center
- **Kenric M. Murayama, MD,** Philadelphia, PA, Professor of Surgery, Univ. of Pennsylvania, Chief of Surgery, Penn Presbyterian Medical Center
- Matthew G. Mutch, MD, St Louis, MO, Associate Professor of Surgery, Washington University School of Medicine, Barnes-Jewish Hospital
- **Alex P. Nagle, MD,** Chicago, IL, Associate Professor of Surgery, Northwestern University, Northwestern Memorial Hospital
- **Deborah Nagle, MD,** Boston, MA, Assistant Professor of Surgery, Harvard Medical School, Chief, Division of Colon and Rectal Surgery, Beth Israel Deaconess Medical Center
- **Russell Nauta, MD,** Cambridge, MA, Professor of Surgery, Harvard University, Mt. Auburn Hospital
- Bradley J. Needleman, MD, Columbus, OH,
- **Dmitry Nepomnayshy, MD,** Burlington, MA, Assistant Proffessor of Surgery, TUFTS University, Associate Program Director General Surgery, Lahey Clinic

- **Amy Neville, MD,** Montreal, PQ, Canada, Fellow, Minimally Invasive Surgery, McGill University, Montreal General Hospital
- Ninh Tuan Nguyen, MD, Orange, CA, Professor of Surgery, University of California Irvine Medical Center, Chief, Division of Gastrointestinal Surgery, University of California, Irvine Medical Center
- **Abdelrahman A. Nimeri, MD,** Abu Dhabi, United Arab Emirates, Adjunct Staff Endocrine & Metabolic Institute Cleveland Clinic, SKMC managed by Cleveland Clinic, Head, Division of General, Thoracic, & Vascular Surgery, SKMC
- **Jeffrey A. Norton, MD,** Stanford, CA, Chief of General Surgery, Stanford University, Stanford Hospital and Clinics
- **Yuri Novitsky, MD,** Farmington, CT, Associate Professor of Surgery, Case Western Reserve University, Co-Director, Case Comprehensive Hernia Center, UH Case Medical Center
- **Fiemu E. Nwariaku, MD,** Dallas, TX, Assoc Professor of Surgery and Associate Dean for Global Health, UT Southwestern Med Ctr, UT Southwestern Medical Center University Hospital
- **Brant K. Oelschlager, MD,** Seattle, WA, Professor of Surgery, University of Washington Department of Surgery, University of Washington Medical Center
- Allan E. Okrainec, MD, Toronto, ON, Canada, Assistant Professor, University of Toronto, Deputy Head, Division of General Surgery, Toronto Western Hospital - University Health Netwo
- **Dmitry Oleynikov, MD,** Omaha, NE, Professor of Surgery, University of Nebraska Medical Center, Director of Minimally Invasive and Computer Aided Surgery, Nebraska Medical Center
- **Craig Olson, MD,** Dallas, TX, Assistant Professor, University of Texas Southwestern, St. Paul University Hospital
- Raymond P. Onders, MD, Shaker Heights, OH, Associate Professor of Surgery, Case Western Reserve University, Director of Minimally Invasive Surgery, University Hospitals Case Medical Center
- **Frank Opelka, MD,** New Orleans, LA, Vice Chancellor of Clinical Affairs, LSU Health Sciences Center
- **Christian Otto, MD,** Houston, TX, Associate Professor, Baylor College of Medicine, Emergency Medicine, Ben Tuab General Hospital
- **John T. Paige, MD,** New Orleans, LA, Associate Professor of Clinical Surgery, Louisiana State University School of Medicine
- **Chinnasamy Palanivelu, MCH(GE),**Coimbatore, Tamil Nadu, India, Director, GEM

Coimbatore, Tamil Nadu, India, Director, GEM Hospital and Research Center, GEM Hospital and Research Center

- Harry Papaconstantinou, MD, Temple, TX, Associate Professor of Surgery, Texas A&M University System Health Science Center, Executive Vice Chairman Department of Surgery; Chief of Colon and Rectal Surgery, Scott and White Memorial Hospital and Clinic
- **Adrian Park, MD,** Annapolis, MD, Dr Alex Gillis Professor of Surgery, Dalhousie University, Chairman, Department of Surgery, Capital District Health Authority
- **Eduardo Parra-Davila, MD,** Celebration, FL, Director of Minimally Invasive and Colorectal Surgery, Florida Hospital Celebration Health
- **Eric M. Pauli, MD,** Hummelstown, PA, LaparoEndoscopic Fellow, University Hospitals Case Medical Center
- **Silvana Perretta, MD,** Strasbourg, France, Professor, IRCAD, University of Strasbourg, PH, practicien hospitalier, NHC Strasbourg
- **Edward H. Phillips, MD,** Los Angeles, CA, Clinical Associate Professor of Surgery, University of Southern California, Los Angeles County Hospital, Executive Vice-Chairman, Department of Surgery, Cedars-Sinai Medical Center
- **Melissa Susan Phillips,** Knoxville, TN, Assistant Professor, University of Tennessee
- **Alessio Pigazzi, MD,** Irvine, CA, Associate Professor of Surgery, University of California, Irvine
- **Alfons Pomp, MD,** New York, NY, Leon C. Hirsch Professor of Surgery, Weill Medical College of Cornell University, Attending Surgeon, New York Presbyterian Hospital
- **Jaime Ponce, MD,** Dalton, GA, Director for Bariatric Surgery, Hamilton Medical Center
- Jeffrey L. Ponsky, MD, Moreland Hill, OH, Professor and Chairman, Department of Surgery, Case Western Reserve University School of Medicine, Surgeon-in-Chief, University Hospitals Case Medical Center
- **Dana D. Portenier, MD,** Durham, NC, Program Director, Duke Minimally Invasive and Bariatric Fellowship; Co Director Duke Center for Meta, Duke University Medical Center, Duke Health System
- **Benjamin K. Poulose, MD,** Nashville, TN, Benjamin Poulose. M.D., M.P.H., Vanderbilt University, Assistant Professor, Surgery, Vanderbilt University Medical Center
- Kinga A. Powers, MD, Roanoke, VA, Assistant Professor, Virginia Tech Carilion School of Medicine, Trauma/General/bariatirc Surgeon, Carilion Clinic
- Janey S.A. Pratt, MD, Bopston, MA, Assistant Professor in Surgery, Harvard School of Medicine, Associate Surgeon, Massachuetts General Hospital
- Jose Manuel Prince, MD, New Hyde Park, NY, Assistant Professor, Hofstra North Shore-LIJ School of Medicine, Director, Minimally Invasive Surgery, Cohen Children's Medical Center of NY

- **Aurora Dawn Pryor, MD,** Stony Brook, NY, Professor of Surgery, Stony Brook University Medical Center, Division Chief, General Surgery, Stony Brook University Hospital
- Carla Marie Pugh, MD, PhD, Chicago, IL, Associate Professor of Surgery, Northwestern University, Director of Northwestern's Center for Advanced Surgical Education, Northwestern Memorial Hospital
- **Archana Ramaswamy, MD,** Columbia, MO, Assistant Professor of Surgery, University of Missouri, General Surgeon, University of Missouri Hospital and Clinics
- **Almino Ramos, MD,** Sao Paulo, Brazil, MD, Gastro Obeso Center, Medical Director, Gastro Obeso Center
- **Bruce J. Ramshaw, MD,** Ormond Beach, FL, Chairman, General Surgery, Halifax Health
- **G. V. Rao, MS, MAMS,** Sohajiguda, Hyderabad, India, Chief of Surgical Gastroenterology and Minimally Invasive Surgery, Asian Institute of Gastroenterology, Director, Asian Institute of Gastroenterology
- **David W. Rattner, MD,** Boston, MA, Professor of Surgery, Harvard Medical School, Chief Division of General and Gastrointestinal Surgery, Massachusetts General Hospital
- **Thomas E. Read, MD,** Burlington, MA, Professor of Surgery, Tufts University School of Medicine, Program Director, Staff Surgeon, Lahey Clinic Medical Center
- Patrick R. Reardon, MD, Houston, TX, Clinical Professor of Surgery, Weill Cornell Medical College; Chief, Section of Foregut Surger, The Methodist Hospital, Director of Advanced MIS Training; Surgical Director, The Methodist Hospital Reflux Center: , The Methodist Hospital
- **Kevin M. Reavis, MD,** Portland, OR, Esophageal and Foregut Surgeon, The Oregon Clinic, Affiliate Assistant Professor, Oregon Health & Science University
- **Jay Redan, MD,** Celebration FL, Associate Professor of Surgery, University of Central Florida
- **Christine J. Ren-Fielding, MD,** New York, NY, Associate Professor of Surgery, NYU School of Medicine, NYU Medical Center
- **William S. Richardson, MD,** New Orleans, LA, ochsner clinic, division chief of general surgery, Ochsner Clinic
- **E. Matt Ritter, MD,** Bethesda, MD, Cheif, Academic Surgery / Assistant Professor of Surgery, Uniformed Services University, Chief, Laparoscopic Surgery, National Naval Medical Center
- **Homero Rivas, MD,** Stanford, CA, Assistant Professor, Stanford University, MD, MBA, FACS, Stanford University Medical Center
- **Kurt E. Roberts, MD,** New Haven, CT, Assistant Professor, Yale School of Medicine, Yale-New Haven Hospital

- **Thomas N. Robinson, MD,** Denver, CO, Associate Professor, Surgery, University of Colorado
- Adam M. Robinson, MD, Bethesda, MD,
- **Sergio Roll, MD,** Sao Paulo, Brazil, MD, PhD, Clinical Professor of Surgery, University Positivo-School of Medicine, Brazil, Sírio-Libanês Hospital, Sírio-Libanês Hospital
- John R. Romanelli, MD, Springfield, MA, Assistant Professor of Surgery, Tufts University School of Medicine, Medical Director, Robotic and Bariatric Surgery, Baystate Medical Center
- **Luisangel A. Rondon, MD,** Dallas, TX, Fellow, UT Southwestern in Dallas
- Alexander Steven Rosemurgy, MD, Tampa, FL, Professor of Surgery, Tampa General Hospital, Director Surgical Digestive Disorders/Chief of Surgery Section, Tampa General Hospital
- **Daniel Joseph Rosen, MD,** New York, NY, Attending Surgeon, Beth Israel Medical Center
- Michael J. Rosen, MD, Cleveland, OH, associate Professor of Surgery, Case Medical Center, Chief, Division of Gastrointestinal and General Surgery, University Hospitals of Cleveland
- Stuart A Rosenberg, MD, Boston, MA, Senior Lecturer on Medicine, Harvard Medical School, President and CEO, Harvard Medical Faculty Physicians at BIDMC
- **Raul J. Rosenthal, MD,** Weston, FL, Professor of Surgery, Herbert Wertheim School of Medicine, Florida International University, Chairman, Bariatric and metabolic Institute and Section Head of Minimally Invasive Surgery, Cleveland Clinic Florida
- **Sharona B. Ross, MD,** Tampa, FL, Assistant Professor of Surgery, University of South Florida, Minimally Invasive Surgeon, Tampa General Hospital
- **Howard M. Ross, MD,** Fair Haven, NJ, Associate Clinical Professor of Surgery, UMDNJ, Chief, Colon and Rectal Surgery Director, Crohn's and Colitis Management center, Riverview Medical Center
- James B. Rosser Jr, MD, Spring, TX, Professor of Clinical Surgery, Morehouse School of Medicine, Attending Surgeon, Grady Memorial Hospial
- **John Scott Roth, MD,** Lexington, KY, Associate Professor of Surgery, University of Kentucky, Chief, Gastrointestinal Surgery, University of Kentucky Chandler Medical Center
- **COL Robert Rush, MD,** Olympia, WA, Chief, Dept of Surg, Madigan Army Med Ctr
- Ajit K. Sachdeva, MD, Chicago, IL, Director, Division of Education, American College of Surgeons, Adjunct Professor of Surgery, Feinberg School of Medicine, Northwestern Universi
- **Barry A. Salky, MD,** New York, NY, Professor of Surgery; Division of Laparoscopic Surgery, Mount Sinai School of Medicine, Attending Surgeon, Mount Sinai Hospital

- **Bryan J. Sandler, MD,** San Diego, CA, Assistant Professor of Surgery, University of California, San Diego, Assistant Professor of Surgery, University of California, San Diego
- Dana R. Sands, MD, Weston, FL, Staff Surgeon, Director Colorectal Physiology Center, Cleveland Clinic Florida
- **Richard M. Satava, MD,** Seattle, WA, Professor of Surgery, University of Washingotn Medical Center, Professor of Surgery, University of Washington Medical Center
- Philip R. Schauer, MD, Cleveland, OH, Professor of Surgery, Lerner College of Medicine, Director, Advanced Laparoscopic & Bariatric Surgery, Clevleand Clinic
- **Bruce D. Schirmer, MD,** Charlottesville, VA, Stephen H. Watts Professor of Surgery, University of Virginia Health System, Vice Chair, Department of Surgery, University of Virginia Health System
- Christopher M. Schlachta, MD, London, ON, Canada, Professor, Departments of Surgery and Oncology, Schulich School of Medicine and Dentistry, The University of Western Ontario, Medical Director, CSTAR (Canadian Surgical Technologies and Advanced Robotics), University Hospital, London Health Sciences Centre
- **Benjamin E. Schneider, MD,** Boston, MA, Instructor in Surgery, Harvard Medical School, Beth Israel Deaconess Medical Center
- **Steven D. Schwaitzberg, MD,** Cambridge, MA, Associate Professor of Surgery, Harvard Medical School, Chief of Surgery, Cambridge Health Alliance
- **Daniel J. Scott, MD,** Dallas, TX, Associate Professor of Surgery, University of Texas Southwestern Medical Center, Director, Southwestern Center for Minimally Invasive Surgery
- Niazy M. Selim, MD, PhD, MBC, Kansas City, KS, Associate Professor, University of Kansas
- **Neal E. Seymour, MD,** Springfield, MA, Professor, Tufts University, Division Chief General Surgery, Baystate Medical Center
- **Phillip P. Shadduck, MD,** Durham, NC, Assistant Consulting Professor, Duke University
- Paresh C. Shah, MD, New York, NY, Program Director General Surgery, Hofstra Medical School, Chief of Laparoscopic Surgery, Lenox Hill Hospital North Shore LIJ Health System
- **Lelan F. Sillin, MD, MS(Ed),** Burlington, MA, Professor of Surgery, Tufts University School of Medicine, Staff Surgeon; Director of Simulation & Professional Development, Lahey Clinic
- **Elliott Silverman, PA-C,** New York, NY, Director SAIL Surgical Simulation & Innovation Center, Weill Cornell Medical College
- **C. Daniel Smith, MD,** Jacksonville, FL, Professor and Chair, Mayo School of Medicine, Surgeon-In-Chief, Mayo Clinic - Florida

- Nathaniel J. Soper, MD, Chicago, IL, Loyal and Edith Davis Professor and Chair of Surgery, Northwestern University Feinberg School of Medicine, Surgeon-in-Chief, Northwestern Memorial Hospital
- Steven C. Stain, MD, Albany, NY, Professor and Chair, Albany Medical College, Chief of Surgery, Albany Medical Center Hospital
- Michael Stamos, MD, Orange, CA, Professor and Chair, Department of Surgery, Univ ersity of California, Irvine, Chief of Surgery, University of California, Irvine Medical Center
- William N. Starling, Portola Valley, CA, N/A
- **Dimitrios Stefanidis, MD, PhD,** Charlotte, NC, Clinical Associate Professor of Surgery, University of North Carolina, Medical Director, Carolinas Simulation Center, Carolinas Medical Center
- **Greg V. Stiegmann, MD,** Aurora, CO, John H. and Cynthia H. Schultz Professor of Surgery, University of Colorado School of Medicine, Vice President Clinical Affairs/Head General Surgery, University of Colorado Hospital
- Nathaniel Floyd Nicolas Stoikes, MD, Memphis, TN, Assistant Professor, University of Tennessee Health Science Center
- Vivian E.M. Strong, MD, New York, NY, Associate Attending Surgeon, Memorial Sloan-Kettering Cancer Center, Associate Professor of Surgery, Weill Medical College of Cornell University
- **Lee L. Swanstrom, MD,** Portland, OR, Clinical Professor of Surgery, Oregon Health Sciences University, Director, Advanced GI Fellowship programs, Providence Health System
- John F. Sweeney, MD, Atlanta, GA, W. Dean Warren Distinguished Professor of Surgery, Emory University, Chief, Division of General and Gastrointestinal Surgery, Emory University
- **Zoltan Szabo, PhD,** San Francisco, CA, Visiting Professor, Institute of Surgical Research, University of Szeged Medical School, Hungary, Director, MOET Institute, San Francisco, CA
- Mark A. Talamini, MD, San Diego, CA, Professor and Chairman, Department of Surgery, University of California, San Diego, Surgeon-in-Chief, UCSD Medical Center
- **Eduardo Targarona, MD,** Barcelona, Spain, Professor of Surgery, Autonomous University of Barcelona, Director Unit Gastrointestinal & Hematological Surgery, Hospital de Santpau
- **Dana Alexa Telem, MD,** New York, NY, Advanced Laparoscopic Fellow, Massachusetts General Hospital
- **Christopher C Thompson, MD,** Boston, MA, Assistant Professor of Medicine, Harvard Medical School, Director of Therapeutic Endoscopy, Brigham and Women's Hospital
- **David S. Tichansky, MD,** Philadelphia, PA, Associate Professor of Surgery, Thomas Jefferson University, Director, Minimally Invasive and Bariatric Surgery, Thomas Jefferson University Hospital

- **Shirin Towfigh, MD,** Los Angeles, CA, Associate Professor, Cedars-Sinai Medical Center
- **Tung Tran, MD,** Pierrefonds, PQ, Canada, Resident, McGill University, Resident, McGill University Health Centre
- **L. William Traverso, MD,** Boise, ID, Clinical Professor of Surgery, University of Washington, Director, Center for Pancreatic Disease, St. Luke's Health Care System
- **Thadeus L. Trus, MD,** Lebanon, NH, Associate Professor of Surgery, Dartmouth-Hitchcock Medical Center, Dartmouth-Hitchcock Medical Center
- **Shawn T. Tsuda, MD,** Las Vegas, NV, Assistant Professor of Surgery, University of Nevada School of Medicine, Vice-Chief of Surgery, University Medical Center of Southern Nevada
- **Kiran Kalyan Turaga, MD,** Milwaukee , WI, Assistant Professor, Medical College of Wisconsin
- **David R. Urbach,** Toronto, ON, Canada, Professor of Surgery and Health Policy, Management and Evaluation, University of Toronto, Staff Surgeon, University Health Network
- Kent R. Van Sickle, MD, San Antonio, TX, Associate Professor of Surgery, University of Texas Health Science Center San Antonio, University Health Systems
- **J. Esteban Varela, MD,** St Louis, MO, Associate Professor of Surgery, Washington University in St. Louis, Barnes Jewish hospital
- Melina C. Vassiliou, MD, Montreal, PQ, Canada, Assistant Professor of Surgery, McGill University Health Centre, Assistant Professor of Surgery, Montreal General Hospital
- **Vic Velanovich, MD,** Tampa, FL, Professor of Surgery, University of South Florida, Director, Division of General Surgery, Tampa General Hospital
- **Ashley Vernon, MD,** Boston, MA, Instructor, Harvard Medical School, Associate Surgeon, Brigham & Women's Hospital

- **Guy R. Voeller, MD,** Germantown, TN, Professor of Surgery, University of Tennessee
- **Theodoros Voloyiannis, MD,** Houston, TX, Clinical Assistant Professor of Surgery, Colon and Rectal Surgery, University of Texas Houston, Health Sciences Center, Chairman of Surgery, Memorial Hermann Hospital Southeast
- Carl Voyles, MD, Jackson, MS, Associate Clinical Professor of Surgery, University of Mississippi, Mississippi Baptist Hospital
- **Danielle S Walsh, MD,** Greenville, NC, Clinical Associate Professor, East Carolina University, Pitt County Memorial Hosptial
- R. Matthew Walsh, MD, Cleveland, OH, Professor and Chairman, Lerner College of Medicine at CWRU, Cleveland Clinic
- Mark J. Watson, MD, Dallas, TX, Associate Professor, Ut Southwestern Dallas, Co-Director Southwestern Center For Minimally Invasive Surgery, St. Paul University Hospital
- **Steven D. Wexner, MD,** Weston, FL, associate dean for academic affairs and professor of surgery, florida atlantic university, chief academic officer, cleveland clinic florida
- **Richard Larry Whelan, MD,** New York, NY, Professor of Surgery, Columbia University, Chief Of Surgical Oncology, St. Luke's Roosevelt HospitaL
- Mark H. Whiteford, MD, Portland, OR, Clinical Associate Professor, Oregon Health & Science University, Director, Colorectal Surgery Program, Providence Portland Medical Center
- **David Williams, MD,** Newmarket, ON, Canada, President & CEO, Southlake Regional Health Centre
- **Erik B. Wilson, MD,** Houston, TX, Associate Professor of Surgery, UTHealth - Medical School, Medical Director, Bariatric Surgery, Memorial Hermann Hospital - TMC
- Errawan R. Wiradisuria, MD, Cilandak-Jakarta, Indonesia, Digestive Surgeon and Laparoscopic Surgeon, Persahabatan General Hospital, Jakarta, Indonesia, Private Hospital, Premier Bintaro Hospital - Ramsay Group

- **Gordon G. Wisbach, MD,** San Diego, CA, Assistant Professor of Surgery, Uniformed Services University of the Health Sciences, Staff Surgeon, Naval Medical Center San Diego
- Bruce M. Wolfe, MD, Portland, OR,
- **Sherry M. Wren, MD,** Palo Alto, CA, Professor of Surgery, Stanford University, Chief, General Surgery, Palo Alto Veterans Health Care System
- **Manabu Yamamoto, MD,** Tokyo, Japan, Director and Chairman, Adachi Kyosai Hospital
- Laurence F. Yee, MD, San Francisco, CA, Associate Clinical Professor of Surgery, University of California, San Francisco, Vice Chairman, Department of Surgery, California Pacific Medical Center
- **Tonia M. Young-Fadok, MD,** Phoenix, AZ, Professor of Surgery, Mayo Clinic, Chair, Division of Colon and Rectal Surgery, Mayo Clinic
- **Rasa Zarnegar, MD,** New York, NY, Assistant Professor, Weill Cornell Medical College, New York Presbyterian Medical Center
- **Michael J Zinner, MD,** Boston, MA, Professor, Harvard Medical School, Surgeon-in-Chief, Brigham and Women's Hospital
- **Jeffrey Zitsman, MD,** New York, NY, Associate Clinical Professor, Columbia University, Morgan Stanley Children's Hospital of NY Presbyterian
- **Ricardo Zorron, MD,** Rio de Janeiro, Brazil, MD, PhD, Director, Innovative Surgery Division, Klinikum Bremerhaven Reinkenheide, Bremerhaven. Ge
- **Natan Zundel, MD,** Miami Beach, FL, Clinical Professor of Surgery, F I U Herbert Wertheim College of Medicine



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Alex P. Nagle Takeshi Naitoh Kanyu Nakano Steven K Nakao George J Nassif Shoji Natsugoe Russell Nauta Fernando A Navarro Bradley J. Needleman **Dmitry Nepomnayshy** Amy Neville Sheetal Nijhawan Abdelrahman A. Nimeri José F Noguera Jeffrev A. Norton Fiemu E. Nwariaku Vladan N Obradovic Hideto Oishi Allan Okrainec Frank Opelka Nathan T Orr Christian Otto Soji Ozawa John T. Paige Chinnasamy Palanivelu Pradeep Pallati Lucian Panait Ivanesa Pardo Jae Bum Park Soo Yeun Park Eric M. Pauli Silvana Perretta Kyle A Perry Richard M. Peterson Edward H. Phillips Melissa Susan Phillips Jensen T Poon Giuseppe Portale Kinga A. Powers Jose Manuel Prince Michael J Pucci Wissam Raad Harvey C Rainville Sonia L. Ramamoorthy Armando Ramirez Alexander Ramirez Valderrama Almino Ramos G. V. Rao Laila Rashidi J Roberto Ramirez Gavidia Shalini Reddy Rebecca J Rhee Jason F Richardson William S. Richardson Erwin Rieder Homero Rivas Adam M. Robinson John H Rodriguez John R. Romanelli Luisangel A. Rondon Daniel Joseph Rosen Stuart A Rosenberg Raul J. Rosenthal Howard M. Ross Sharona B Ross COL Robert Rush, MD Jong Pil Ryuk Ajit K. Sachdeva José Salinas

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David Joseph Desilets

Woo Jin Hyung

Tetsuo Ikeda

Noriyuki Inaki

Osamu Itano

Gretchen Purcell Jackson



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Name	Commercial Interest	What was received	For what role	Other
John Abele	Boston Scientific Corporation	Other	Board Member	
Gina L. Adrales	WL Gore	Honoraria	Speaking/Teaching	+
Matthew R. Albert	Applied Medical	Ownership Interest	Consultant	1
Matthew R. Albert	Lifecell	Honoraria		+
			Speaking/Teaching	+
	NITI	Honoraria	Speaking/Teaching	
	THD America	Honoraria		<u> </u>
Jeffrey W. Allen	Allergan	Honoraria	Consultant	
Mehran Anvari	Ethicon Endo Surgery	Honoraria	Advisory Committee	
	Covidien	Honoraria	Speaking/Teaching	
	Mako	Honoraria	Advisory Committee	
	Valentx	Research	Consultant	
Horacio J. Asbun	Doctor's Company	Consulting Fee	Consultant	
Sharon L. Bachman	Ethicon	Other	Other	Director of Resident Education skills labs
Reginald C. W Bell	EndoGastric Solutions	Honoraria	Speaking/Teaching	
George Berci	Karl Storz	Research	Other	Grant Recipient
_	Karl Storz	Royalty	Other	Patent Owner
	Storz Endoscopy	Research	Consultant	Ī
Ramon Berguer	Ethicon	Honoraria	Speaking/Teaching	
Desmond H. Birkett	Microline Surgical	Consulting Fee	Board Member	
	Medical Surgical Technologies Ltd	Honoraria	Advisory Committee	
	EndoDynamix	Honoraria	Advisory Committee	1
			Advisory Committee Advisory Committee	+
Inmas C Bitter are	Cambridge Endo	Honoraria Consulting Fee	Speaking/Teaching	+
James G. Bittner	Ethicon Endo-Surgery	 	 	+
Robin P. Blackstone	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Enteromedics/Maestro	Research	Other	Principal Investigator in Trial Multicenter trial (FDA A Trial)
Stacy Brethauer	Ethicon Endo-Surgery	Consulting Fee	Consultant	<u> </u>
	Apollo Endo-Surgery	Consulting Fee	Consultant	
	Bard Davol	Consulting Fee	Consultant	
	Covidien	Honoraria	Speaking/Teaching	
	Ethicon Endo-Surgery	Honoraria	Speaking/Teaching	
	Ethicon Endo-Surgery	Consulting Fee	Advisory Committee	İ
	Ethicon Endo-Surgery	Consulting Fee	Consultant	
Fredrick J. Brody	Ethicon	Consulting Fee	Consultant	none
	Nutricia North America	Consulting Fee	Consultant	
	ViiNetwork	Other	Consultant	1
	Covidien	Consulting Fee	Consultant	†
Dwight Bronson	Covidien	Salary	Management Position	
Kimberly M Brown	Covidien	Other	Other	PI recipient of an educational grant through Covidien's grant program.
Wendy A. Brown	Applied Medical	Other	Speaking/Teaching	
	Allergan	Research	Other	Our research group recieves an unrestricted research grant from Allergan
L. Michael Brunt	Lifecell Corp	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
Jo Buyske	American Board of Surgery	Salary	Employment	
Alfredo M. Carbonell	W.L. Gore and Associates	Honoraria	Speaking/Teaching	
	W.L. Gore and Associates	Consulting Fee	Consultant	
	Ethicon Inc.	Consulting Fee	Advisory Committee	
Sally Carter	Covidien	Salary	Employment	
Bradley Champagne	Covidien	Consulting Fee	Consultant	1
Bipan Chand	Ethicon	Honoraria	Speaking/Teaching	†
Pan Chana	Ethicon	Consulting Fee	Consultant	1
				+
	Covidien Conef Adventis	Honoraria	Speaking/Teaching	+
	Sanofi-Adventis	Honoraria	Speaking/Teaching	+
	Covidien	Consulting Fee	Consultant	
	Bard	Research	Other	Research funding
	Sanofi-Adventis	Consulting Fee	Consultant	
	Bard	Consulting Fee	Consultant	
Paul G. Curcillo II	Storz	Honoraria	Speaking/Teaching	
	Microline	Honoraria	Speaking/Teaching	
	•	•		





Name	Commercial Interest	What was received	For what role	Other
Gregory F. Dakin	Ethicon	Honoraria	Speaking/Teaching	
2 ,	Covidien	Research	Speaking/Teaching	
Giovanni Dapri	Karl Storz, Tuttlingen, Germany	Consulting Fee	Consultant	
Suvranu De	Infocitex	Consulting Fee	Consultant	
	Charles River Associates	Consulting Fee	Consultant	
Corey R Deeken	Atrium Medical Corp.	Consulting Fee	Consultant	
•	C.R. Bard/Davol, Inc.	Consulting Fee	Consultant	
	Musculoskeletal Transplant	Research	Other	Principal Investigator
	Foundation			
	Covidien	Honoraria	Consultant	
	Covidien	Research	Other	Principal Investigator
	Musculoskeletal Transplant Foundation	Honoraria	Review Panel	
Conor P. Delaney	Ethicon	Consulting Foo	Speaking/Teaching	
Conor P. Delaney	Adolor	Consulting Fee Salary	Speaking/Teaching	
	Tranzyme	Consulting Fee	Consultant	
Eric Joel DeMaria	Teleflex	Consulting Fee	Consultant	
Eric Joei Demaria	Allergan	Consulting Fee	Advisory Committee	
	Ethicon	Honoraria	Consultant	
Tom R. DeMeester	Torax Medical	Consulting Fee	Consultant	
Andrew J. Duffy	Easy Lap	Consulting Fee	Advisory Committee	
Andrew J. Dully	Covidien	Consulting Fee	Consultant	
Brian J. Dunkin	Apollo Endosurgery	Consulting Fee	Consultant	
Dilaii 3. Dulikiii	Olympus	Honoraria	Speaking/Teaching	
	Ethicon	Consulting Fee	Advisory Committee	
	Boston Scientific	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
David Bryan Earle	Covidien	Other	Other	Fellowship Grant
David Di yun Lunc	Lifeguard	Other	Advisory Committee	Tellowship Grant
	Surgiquest	Honoraria	Advisory Committee	
	Novus Scientitfic	Honoraria	Speaking/Teaching	
	Davol	Honoraria	Consultant	
	Ethicon	Honoraria	Speaking/Teaching	
	Atrium Medical	Consulting Fee	Consultant	
David W. Easter	Histogen	Consulting Fee	Advisory Committee	
	Covidien	Honoraria	Speaking/Teaching	
James C. Ellsmere	Ethicon Endosurgery	Consulting Fee	Speaking/Teaching	
Alex Escalona	EndoStim	Research	Other	Principal Investigator
	GI Dynamics	Research	Advisory Committee	
Steve Eubanks	Transenterix	Honoraria	Scientific Advisory Board	
	Barosense	Ownership Interest	Other	Founder
Robert D. Fanelli	New Wave Surgical Corp.	Ownership Interest	Advisory Committee	
	Cook Surgical, Inc.	Royalty	Independent Contractor	
	New Wave Surgical Corp.	Ownership Interest	Board Member	
	Via Surgical, Inc.	Consulting Fee	Consultant	
	Ethicon Endosurgery, Inc.	Consulting Fee	Speaking/Teaching	
Tim Farrell	Teleflex	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Other	Other	Fellowship Support
Shane Farritor	Virtual Incision Corporation	Ownership Interest	Management Position	
Liane S. Feldman	Covidien	Other	Other	co_PI
	Ethicon Canada	Research	Other	Investogator-initiated research
Edward L. Felix	Cardica	Consulting Fee	Consultant	
Francesco Feroci	bbraun	Consulting Fee	Consultant	
Aaron S. Fink	New Mentor	Consulting Fee	Independent Contractor	
	Dialog Medical	Consulting Fee	Consultant	
Yuman Fong	Ethicon	Consulting Fee	Advisory Committee	
	Delcath	Consulting Fee	Advisory Committee	
	Covidien	Consulting Fee	Advisory Committee	
	Perfint	Consulting Fee	Advisory Committee	
Dennis L. Fowler	Surgical Excellence	Ownership Interest	Board Member	
	Promethean Surgical Devices Applied Medical	Ownership Interest Ownership Interest	Advisory Committee Board Member	

Nama	Commonsial Interest	What was received	For what role	Othor
Name Morris E. Franklin Jr	Commercial Interest			Other
Morris E. Franklin Jr	Aesculap	Consulting Fee Consulting Fee	Consultant Consultant	+
	Atrium W.L. Gore			
	Stryker	Honoraria Consulting Fee	Advisory Committee Advisory Committee	
	KCI	Consulting Fee	Consultant	+
	Ethicon	Honoraria		+
	Covidien	Honoraria	Speaking/Teaching Speaking/Teaching	
Michael G. Franz	Cook	Consulting Fee	Speaking/Teaching	
Michael G. Franz Gerald M. Fried	KCI CAE Healthcare	Consulting Fee Other	Consultant Other	Son works for CAE Healthcare in
Geraid M. Fried	CAE HealthCare	Other	Other	surgical training and simulation
	Ethicon Endosurgery	Research	Other	Co-investigator of investigator initiated research sponsored by industry
	Covidien	Research	Other	Principle investigator for investigator initiated research, supported by industry
	Covidien	Other	Other	Department Chair
Karl H. Fuchs	Olympus	Other	Consultant	
	Olympus Europe Holding	Research	Consultant	
Michel Gagner	Gore	Honoraria	Speaking/Teaching	
	Ethicon EndoSurgery	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
	Cine-Med Inc	Honoraria	Speaking/Teaching	
	Bariatric Times	Honoraria	Review Panel	
	MidBand	Other	Speaking/Teaching	
Manoel Galvao Neto	Apollo endosurgery	Consulting Fee	Consultant	
	GI Dynamics	Consulting Fee	Consultant	
	Ethicon EndoSurgery	Consulting Fee	Consultant	
	EndoStim	Consulting Fee	Consultant	
	Apollo Endo	Consulting Fee	Consultant	
	Alacer Biomedica	Consulting Fee	Advisory Committee	
R Ganz	Torax Medical	Consulting Fee	Consultant	
Daniel P. Geisler	Covidien	Honoraria	Speaking/Teaching	
Virgilio George	lifecell	Honoraria	Speaking/Teaching	
	Cook	Honoraria	Board Member	
Luca Giordano	intuitive surgical	Consulting Fee	Consultant	
Marisha Godek	Covidien	Salary	Employment	
Matthew I. Goldblatt	Gore	Research	Other	Investigator in industry sponsored study
	Covidien	Honoraria	Speaking/Teaching	•
Anthony M Gonzalez	Intuitive Surgical	Consulting Fee	Speaking/Teaching	•
Christopher J. Gostout	Apollo Endosurgery	IP Rights	Advisory Committee	•
Jon C. Gould	Covidien	Honoraria	Speaking/Teaching	•
Teodor Grantcharov	Ethicon Canada	Honoraria	Speaking/Teaching	
<u> </u>	Covidien Canada	Honoraria	Speaking/Teaching	•
Charlotte Guglielmi	University of Tampa	Honoraria	Speaking/Teaching	•
	Sedgwick CMS	Consulting Fee	Consultant	
	AORN	Other	Board Member	•
Eric M. Haas	Intuitive Surgical	Consulting Fee	Speaking/Teaching	
Jeffrey W. Hazey	Endoretics, Inc. Boston Scientific	Ownership Interest Other	Board Member Other	Educational Grant for research/ fellowship
	Ethicon	Consulting Fee	Advisory Committee	
	Ethicon	Other	Other	Educational grant
	Ethicon	Research	Independent Contractor	Zaacattoriai grant
	Stryker	Research	Independent Contractor	
B. Todd Heniford	MTF-Musculoskeletal Transplant Foundation	Other	Other	Research Grant
	Ethicon Endo Surgery	Other	Other	Research Grant
	Ethicon, Inc.	Other	Speaking/Teaching	
	WL Gore	Other	Other	Research Grants
Daniel M. Herron	Hourglass Technology	Ownership Interest	Consultant	
		Consulting Fee	Consultant	
	I Richard Wolf			
Kelvin D. Higa	Richard Wolf Surgiquest			
	Richard Wolf Surgiquest Ethicon Endosurgery	Consulting Fee Honoraria	Advisory Committee Speaking/Teaching	



News	Communicallystems	11/h - 4	Familiation	Other
Name Michael D. Holzman	Commercial Interest WL Gore	What was received Research	For what role Other	Other Participant in a multicenter
Wilchael D. Holzman	WL Gore	Research	Other	clinical trial
	UK Specialty Hospitals	Consulting Fee	Advisory Committee	- Chinical that
Santiago Horgan	Olympus	Consulting Fee	Speaking/Teaching	
	Stryker	Consulting Fee	Speaking/Teaching	
	Apollo	Stock	Other	Stock Holder
	Virtual Ports	Stock	Other	Stock Holder
	Intuitive	Consulting Fee	Speaking/Teaching	
	Valentx	Stock	Other	Stock Holder
	Gore	Honoraria	Speaking/Teaching	
	Eon Surgical	Stock	Other	Stock HOlder
	USGI	Stock	Other	Stock Holder
	Ethicon Endo Surgery	Consulting Fee	Speaking/Teaching	
	Ethicon	Other	Other	proctor
	Intuitive Surgical	Other	Speaking/Teaching	
	GORE Medical	Consulting Fee	Consultant	
	Olympus	Consulting Fee	Consultant	
	Allergan Medical	Consulting Fee	Consultant	
	Stryker Endoscopy	Consulting Fee	Consultant	+
	USGI	Consulting Fee	Consultant	ata aliba lalari
	Apollo Surgical	Other	Other	stockholder
	USGI Medical	Consulting Fee	Consultant	
	ValenTx NOVARE Medical	Consulting Fee Consulting Fee	Consultant Consultant	+
Eric S Hungness		Consulting Fee Consulting Fee	Advisory Committee	+
Enconunguess	Ethicon Endosurgery Terumo	Consulting Fee Consulting Fee	Consultant	+
	Boston Scientific	Consulting Fee	Consultant	
	Ethicon Endosurgery	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Consultant	+
	Olympus	Consulting Fee	Consultant	
	Olympus America	Research	Other	research collaboration
John Hunter	Springer, Inc.	Honoraria	Other	Editor in Chief, World Journal of
	эрдэ.,а.			Surgery
	Endogastric Solutions	Consulting Fee	Consultant	
David A. lannitti	Covidien	Honoraria	Speaking/Teaching	
	Davl	Honoraria	Speaking/Teaching	
	Ethicon	Honoraria	Speaking/Teaching	
	Microsulis	Other	Speaking/Teaching	
Sayeed Ikramuddin	Covidien	Consulting Fee	Consultant	
	EnteroMedics Inc.	Research	Other	Principal Investigator
	Ethicon Endo-Surgery	Honoraria	Speaking/Teaching	
William B Inabnet	Genzyme speakers' bureau	Other	Speaking/Teaching	
Thomas H. Inge	Ethicon	Research	Other	Research Grant Support
Haruhiro Inoue	Olympus	Iravel expense	Speaking/Teaching	
	Ethicon	Educational/research grant	Research	
	Boston	Educational/research	Research	+
		grant	nescuren	
Brian P. Jacob	Covidien	Honoraria	Speaking/Teaching	
Garth Jacobsen	Ethicon	Consulting Fee	Consultant	
	USGI	Consulting Fee	Consultant	
	Novare	Honoraria	Speaking/Teaching	
	MTF	Honoraria	Other	writing
	Life Cell	Consulting Fee	Consultant	
	Ethicon Endo	Honoraria	Consultant	
	Davol	Honoraria	Speaking/Teaching	
	Covidien	Other	Speaking/Teaching	
	GORE	Consulting Fee	Consultant	
	W.L. Gore	Honoraria	Speaking/Teaching	
	Ethicon	Honoraria	Speaking/Teaching	
	Bard/Davol	Honoraria	Speaking/Teaching	
Blair A. Jobe	Covidien	Other	Other	Research
	Olympus	Other	Other	research support
	Torax Medical	Other	Other	research support
	Sandhill	Other	Other	research support
	NinePoint Medical	Travel	Advisory Board	
Daniel Danie	Crospon	Other	Other	research support
Daniel Bougere Jones	Cine-Med	Royalty	Other	Book royalties

Name	Commercial Interest	What was received	For what role	Other
Saurabh Khandelwal	Covidien	Honoraria	Speaking/Teaching	Ì
Michael L. Kochman	Merck (wife)	Salary	Employment	İ
James R. Korndorffer	Covidian	Research	Consultant	i
	Klein and Company	Honoraria	Speaking/Teaching	İ
Matthew Kroh	Covidien	Honoraria	Speaking/Teaching	İ
	Bard	Honoraria	Speaking/Teaching	1
	Ethicon	Honoraria	Speaking/Teaching	i
	Intuitive	Consulting Fee	Consultant	
Marina Kurian	Covidien	Honoraria	Speaking/Teaching	
	Allergan	Honoraria	Speaking/Teaching	
Sergio W. Larach	Applied	Consulting Fee	Speaking/Teaching	
	Pacira	Consulting Fee	Speaking/Teaching	
John C Lipham	Medtronic	Consulting Fee	Consultant	
Bruce V. MacFadyen Jr	Soft Tissue Science	Consulting Fee	Advisory Committee	
Mamazza	Covidien	Research	Consultant	
Gregory J. Mancini	LifeCell	Consulting Fee	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	-
Peter W. Marcello	Applied Medical	Honoraria	Consultant	ļ
	Covidien	Honoraria	Consultant	
	Olympus	Honoraria	Consultant	
Daniel R. Marcus	Aesculap	Consulting Fee	Consultant	
	EasyLap	Consulting Fee	Consultant	
Jeffrey M Marks	WL GORE	Honoraria	Consultant	
	WL GORE	Honoraria	Advisory Committee	
	Apollo Endosurgery	Honoraria	Advisory Committee	
	Olympus	Honoraria	Consultant	
	Covidien	Honoraria	Consultant	
	Ethicon	Honoraria	Consultant	
	Boston Scientific	Honoraria	Consultant	Ì
John H. Marks	SurgiQuest	Honoraria	Advisory Committee	
	Covidien	Consulting Fee	Consultant	ĺ
	Covidien	Honoraria	Speaking/Teaching	i
	Glaxo Smith Kline	Consulting Fee	Consultant	i
Jose M. Martinez	Lifecell	Honoraria	Speaking/Teaching	
	Transenterix	Honoraria	Advisory Committee	
	Olympus	Honoraria	Speaking/Teaching	
	Bostons Scientific	Honoraria	Speaking/Teaching	1
	Transenterix	Consulting Fee	Advisory Committee	
Samer G. Mattar	Ethicon	Honoraria	Speaking/Teaching	1
Samer G. Mattar	Covidien			
Vai Matther		Honoraria	Speaking/Teaching Consultant	
Kai Matthes	Ovesco Endoscopy AG	Consulting Fee		
	EndoSim, LLC	Ownership Interest	Management Position	
	Olympus America Inc.	Other	Other	equipment support
Brent D. Matthews	Atrium Medical Corp.	Consulting Fee	Consultant	
	Ethicon, Inc.	Consulting Fee	Consultant	
	WL Gore	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Ethicon, Inc	Research	Preclinical Research Trial	Co-Investigator of Multicentered Clinical Trial
Elisabeth C McLemore	Applied Medical	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Intuitive Surgical	Honoraria	Speaking/Teaching	
	TransEnterix, Inc	Honoraria	Consultant	
N. Scott Melvin	Covidien	Other	Other	research and training grants
	Transenterix	Other	Advisory Committee	
	Surgiquest	Other	Advisory Committee	
	Stryker Endoscopy	Consulting Fee	Consultant	1
	Mederi Therapeutics	Research	Other	investigator
Andrew Miesse	Covidien	Salary	Employment	251.92151
Dean J. Mikami	Gore	Consulting Fee	Consultant	
vean J. Wiikaliii	Covidien	Research	Consultant	1





Name	Commercial Interest	What was received	For what role	Other
Yoav Mintz	Virtual Ports	Other	Advisory Committee	
	Ethicon Endosurgery Israel	Honoraria	Speaking/Teaching	1
	Lumenis	Consulting Fee	Consultant	1
	EasyNotes	Consulting Fee	Advisory Committee	1
	EasyLap	Consulting Fee	Advisory Committee	
	Silenseed	Consulting Fee	Consultant	
	Bio Medical Photonics	Other	Other	Academic Investigator Grant
	Consortium			
	EonSurgical	Ownership Interest	Consultant	
Tadao Mizoguchi	Kagoshima university hospital	Other	Other	Co-author
B Todd Moore	Ethicon	Honoraria	Speaking/Teaching	<u> </u>
, ioua moore	Covidien	Honoraria	Speaking/Teaching	
	Covidien	Other	Other	Educational grant to support
	L	C III F	C II .	MIS fellowship
Malcolm G. Munro	Ethicon Endosurgery Inc	Consulting Fee	Consultant	<u> </u>
	Ethicon Women's Health and Urology	Consulting Fee	Consultant	
	Karl Storz Endoscopy Americas	Consulting Fee	Consultant	+
	Boston Scientific	Consulting Fee	Consultant	
	Aegea Medical	Consulting Fee	Consultant	
	Bayer Women's Health	Consulting Fee	Consultant	+
	Gynesonics Inc	Consulting Fee	Consultant	†
Kenric M. Murayama	covidien, in	Honoraria	Speaking/Teaching	+
Matthew G. Mutch	Applied Medical	Consulting Fee	Consultant	†
G. MUCCII	Johnson and Johnson	Research	Other	Investigator initiated research
	Olympus	Consulting Fee	Consultant	congator minacea rescuren
Deborah Nagle	Covidien	Honoraria	Speaking/Teaching	
Ninh Tuan Nguyen	Ethicon	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	†
Yuri Novitsky	Lifecell	Honoraria	Speaking/Teaching	†
,	Davol	Consulting Fee	Consultant	1
	Kensey Nash	Consulting Fee	Consultant	1
Brant K Oelschlager	Torax Medical	Research	Other	Research Grant
	WI Gore	Research	Other	Research Grant
	Cook Biotech	Research	Other	Research Grant
	Restech	Research	Other	Research Supplies
	Endogastric Solutions	Research	Other	Research Grant
	Endogastric Solutions	Honoraria	Speaking/Teaching	
	Synovis Surgical Innovations	Research	Other	Research Grant
	Takeda	Research	Other	Research Grant
	Covidien	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Speaking/Teaching	Ī
	Covidien	Other	Management Position	
	Endogastric Solutions	Consulting Fee	Speaking/Teaching	
Allan E. Okrainec	Ethicon	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
Dmitry Oleynikov	Gore	Other	Other	Research Grant
	Virtual Incision corp	Ownership Interest	Board Member	
Craig Olson	Applied Medical	Other	Speaking/Teaching	
Raymond P. Onders	Synapse Biomedical	Ownership Interest	Management Position	
Juan P Pantoja	Ethicon endosurgery	Consulting Fee	Consultant	
Harry Papaconstantinou	Covidien	Honoraria	Speaking/Teaching	
Adrian Park	Stryker Endoscopy	Honoraria	Advisory Committee	
Eduardo Parra-Davila	Cook Medical Lab	Consulting Fee	Speaking/Teaching	
	Ethicon	Consulting Fee	Consultant	
	Intuitive	Consulting Fee	Speaking/Teaching	
Alessio Pigazzi	Covidien	Honoraria	Speaking/Teaching	
	Intuitive Surgical	Honoraria	Consultant	
Alfons Pomp	Covidien	Honoraria	Speaking/Teaching	
	W.L. Gore and Associates	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
Jaime Ponce	Cavu Medical	Consulting Fee	Consultant	
	Alergan	Consulting Fee	Consultant	
	Reshape Medical	Research	Consultant	
	Vibrynt	Consulting Fee	Consultant	
	Ethicon	Honoraria	Speaking/Teaching	
Jeffrey L. Ponsky				

Name	Commercial Interest	What was received	For what role	Other
Dana D. Portenier	Allergan	Consulting Fee	Speaking/Teaching	- Other
Duna D. I VI WILLIE	Covidien	Consulting Fee	Speaking/Teaching	+
Benjamin K. Poulose	Karl Storz, U.S.A.	Research	Other	Principal Investigator
Leela M Prasad	Ethicon Endosurgery	Other	Consultant	Timelparinvestigator
Total III Tabaa	Intuitive Surgical	Other	Consultant	
	Covidien	Other	Consultant	
Janey S.A. Pratt	Covidien	Consulting Fee	Consultant	
Aurora D Pryor	Transenterix	Ownership Interest	Consultant	
7141-014-011-401	Barosense	Ownership Interest	Consultant	
	Barosense	Ownership Interest	Advisory Committee	
	Covidien	Honoraria	Speaking/Teaching	
Carla Marie Pugh	Medical Education	Royalty	Other	Inventor
	Technologies, INC	1.15,5.1.7		
Archana Ramaswamy	Ethicon Inc	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
Bruce J. Ramshaw	Novus	Consulting Fee	Speaking/Teaching	
	STS	Consulting Fee	Advisory Committee	
	MTF	Research	Other	Grant
	Covidien	Honoraria	Board Member	
	Ethicon	Consulting Fee	Advisory Committee	
	WL Gore	Consulting Fee	Advisory Committee	
	Lifecell	Consulting Fee	Advisory Committee	
David W. Rattner	Olympus	Consulting Fee	Consultant	
	TransEnterix	Honoraria	Advisory Committee	
Thomas E. Read	Applied Medical	Ownership Interest	Consultant	
Patrick R Reardon	Karl Storz Endoscopy	Research	Speaking/Teaching	
Kevin M. Reavis	WL Gore	Honoraria	Speaking/Teaching	
	Endogastric Solutions	Consulting Fee	Consultant	
	Ethicon Endosurgery	Honoraria	Advisory Committee	
	Endogastric Solutions	Honoraria	Speaking/Teaching	
Christine J. Ren-Fielding	Allergan	Consulting Fee	Advisory Committee	
	Allergan	Consulting Fee	Speaking/Teaching	
	CAVU	Consulting Fee	Advisory Committee	
	ExploraMed	Consulting Fee	Advisory Committee	1
E. Matt Ritter	Henry M. Jackson Foundation	Other	Other	Unrestricted Educational Grants
Kurt E. Roberts	Covidien	Consulting Fee	Consultant	
	Novatract	IP Rights	Other	Co-founder
Thomas N Robinson	Covidien ConMed	Honoraria	Speaking/Teaching	+
		Honoraria	Speaking/Teaching	Educational Count
	Karl Storz	Research	Other	Educational Grant
	Gyrus	Other	Other	Educational Grant to support surgical training
	Medtronic	Research	Other	Research Grant
	Gyrus	Research	Other	Gyrus provides unrestricted
		- Neseuren		educational grants to support
				surgery training courses at our
	1/ 10: 5 1		0.1	surgical training center.
	Karl Storz Endoscopy	Research	Other	Karl Storz provides an unrestricted educational grant that support
				the surgical training center of
				which I am the medical director.
		1		1
	Conmed Electrosurgery	Honoraria	Speaking/Teaching	
Sergio Roll	Conmed Electrosurgery BBraun-Aesculap	Consulting Fee	Speaking/Teaching Consultant	
Sergio Roll			, , , , , , , , , , , , , , , , , , , 	
Sergio Roll	BBraun-Aesculap	Consulting Fee	Consultant	
Sergio Roll	BBraun-Aesculap Covidien	Consulting Fee Consulting Fee	Consultant Consultant	
Sergio Roll Alexander S Rosemurgy	BBraun-Aesculap Covidien Gore Ethicon Olympus	Consulting Fee Consulting Fee Consulting Fee	Consultant Consultant Consultant	
Alexander S Rosemurgy	BBraun-Aesculap Covidien Gore Ethicon	Consulting Fee Consulting Fee Consulting Fee Consulting Fee	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching	
_	BBraun-Aesculap Covidien Gore Ethicon Olympus	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria	Consultant Consultant Consultant Consultant Speaking/Teaching	
Alexander S Rosemurgy	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Speaking/Teaching Other	Research Grant Support
Alexander S Rosemurgy	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Speaking/Teaching	Research Grant Support Research Grants
Alexander S Rosemurgy	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Speaking/Teaching Other	
Alexander S Rosemurgy Michael J. Rosen	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore Davol	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other Other	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Speaking/Teaching Other Other	· · · · · · · · · · · · · · · · · · ·
Alexander S Rosemurgy Michael J. Rosen	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore Davol Olympus	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other Honoraria	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching	· · · · · · · · · · · · · · · · · · ·
Alexander S Rosemurgy Michael J. Rosen	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore Davol Olympus Covidien	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other Honoraria Honoraria Honoraria	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching Speaking/Teaching	Research Grants
Alexander S Rosemurgy Michael J. Rosen	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore Davol Olympus Covidien Covidien Covidien	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other Honoraria Honoraria Honoraria Research	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching Speaking/Teaching Speaking/Teaching Other Other	Research Grants Research support
Alexander S Rosemurgy Michael J. Rosen	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore Davol Olympus Covidien Covidien Covidien Covidien	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Honoraria Other Other Honoraria Honoraria Research Research	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching Other Other Other Other	Research Grants Research support
Alexander S Rosemurgy Michael J. Rosen	BBraun-Aesculap Covidien Gore Ethicon Olympus Covidien Llfecell W. L. Gore Davol Olympus Covidien Covidien Covidien Olympus Covidien Olympus Olympus	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria Honoraria Other Other Honoraria Honoraria Research Research Consulting Fee	Consultant Consultant Consultant Consultant Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching Speaking/Teaching Other Other Speaking/Teaching Other Consultant	Research Grants Research support





Name	Commercial Interest	What was received	For what role	Other
John Scott Roth	CR Bard	Honoraria	Consultant	
	MMDI	Research	Other	Investigator
	CR Bard	Research	Other	Investigator
	MTF	Research	Other	Investigator
Barry A. Salky	Neatstitch, LTD	Ownership Interest	Board Member	
	Cleanoscope	Other	Advisory Committee	
	B and A, LLC	Ownership Interest	Management Position	
Bryan Sandler	ValenTx	Consulting Fee	Consultant	
Richard M. Satava	InTouch Technologies	Ownership Interest	Other	own stock in company
	Ethicon Endosurgery	Honoraria	Other	Speaker
	Karl Storz	Consulting Fee	Consultant	
	Covidien	Honoraria	Consultant	
	Intuitive Surgical, Inc	Research	Other	I am Principal Investigator on the DoD/Intuitive Surgical, Inc grant to develop the Fundamentals of Robotic Surgery curriculum
Philip Schauer	Surgiquest	Ownership Interest	Advisory Committee	
	Surgical Excellence	Ownership Interest	Board Member	
	Stryker Endoscopy	Consulting Fee	Consultant	
	Ethicon Endosurgery	Consulting Fee	Advisory Committee	
	Bard-Davol	Consulting Fee	Consultant	
	Gore	Consulting Fee	Consultant	
	Remedy	Ownership Interest	Board Member	
	Cardinal/Snowden	Consulting Fee	Advisory Committee	1
	Barosense	Ownership Interest	Consultant	
Chuistambau M. Sahlashta			 	Cupport for adjustion programs
Christopher M. Schlachta	Stryker Canada	Other	Other	Support for education programs
	Ethicon Endosurgery	Consulting Fee	Advisory Committee	
Steven D. Schwaitzberg	Acuity Bio	Ownership Interest	Advisory Committee	
	Cambridge Endo	Ownership Interest	Advisory Committee	
	Olympus	Consulting Fee	Consultant	
	Surgiquest	Ownership Interest	Advisory Committee	
	Stryker	Consulting Fee	Consultant	
	Endocore	Consulting Fee	Independent Contractor	
	Neatstitch	Ownership Interest	Advisory Committee	
	MMDI	Consulting Fee	Consultant	
	MITI	Ownership Interest	Advisory Committee	
Daniel J Scott	Ethicon Endo-Surgery	Research	Consultant	
	Ethicon	Other	Other	sponsored research
	Karl Storz Endoscopy	Lab Equipment	Other	1
		Support	1	
	Magnetically Anchored	IP Rights	Other	Co-inventor
	Instruments	I mignis	Other	Co inventor
	Covidien	Other	Other	Sponsored research, advisory panel, teaching
	Accelerrated Technologies, Inc.	Consulting Fee	Consultant	parier, reaching
	Neat Stitch, Inc.	Consulting Fee	Consultant	
Ross Segan	Covidien	Salary	Management Position	
Niazy M. Selim	Intuitive Surgical	Honoraria	Speaking/Teaching	
Don J. Selzer	Cook Biotech, Inc.	Salary	Advisory Committee	1
DUII J. JEIZEI		Honoraria		
	W.L. Gore, Inc.		Speaking/Teaching	
Dhillin D Chadde-d-	Ethicon Endosurgery, Inc.	Honoraria	Speaking/Teaching	-
Phillip P. Shadduck	Ethicon Inc/Ethicon	Consulting Fee	Consultant	
	Endosurgery	l c lu s		
	TransEnterix	Consulting Fee	Consultant	
	LifeCell	Consulting Fee	Consultant	
	Allergan	Consulting Fee	Consultant	
Paresh C Shah	Stryker	Consulting Fee	Consultant	
	Johnson and Johnson	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Consultant	
	Stryker	Honoraria	Advisory Committee	
	Suturtek	Ownership Interest	Consultant	
	Transenterix	Ownership Interest	Consultant	
	Ventralfix	Ownership Interest	Management Position	
Danny A Sherwinter	Cook Biomedical	IP Rights	Other	Patent Holder
	Novatrac	Consulting Fee	Advisory Committee	
	Guidepoint global	Honoraria	Consultant	
	L Garachouric Aronai	Litorioraria	Consultant	<u> </u>

Name	Commercial Interest	What was received	For what role	Other
Scott A. Shikora	Covidien	Honoraria	Speaking/Teaching	dilei
Stott A. Silikola	EnteroMedics	Consulting Fee	Consultant	+
	Synovis	Honoraria	Consultant	+
	GI Dynamics	Ownership Interest	Advisory Committee	+
Brad E Snyder	Intuitive Surgical	Consulting Fee	Speaking/Teaching	
Nathaniel J Soper	Karl Storz	Other	Other	Equipment for research
rumamers soper	Covidien	Other	Other	Instruments & funds for
	Covidien	J Chief	Other	Resident Education
	Boston Scientific	Other	Advisory Committee	1
	Covidien	Honoraria	Speaking/Teaching	
	Covidien	Other	Speaking/Teaching	1
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	i
	Ethicon Endosurgery	Research	Other	Laboratory research
	Karl Storz	Research	Other	Lab research
	Miret Surgical	Ownership Interest	Advisory Committee	
	TransEnterix	Honoraria	Advisory Committee	
	TransEnterix	Ownership Interest	Advisory Committee	
	USGI medical	Other	Advisory Committee	1
	Transenterix	Ownership Interest	Other	Stock Options
	Boston Scientific	Other	Advisory Committee	<u> </u>
	USGI Medical	Other	Advisory Committee	i
	Miret Surgical, Inc.	Ownership Interest	Other	Stock Options
	TransEnterix	Stock options	Advisory Committee	7.1.1.1.2.1.0.1.0
	Karl Storz	Other	Other	Academic surgeon
	Miret Surgical, Inc.	Stock options	Advisory Committee	
G Brent Sorensen	Covidien	Other	Other	Educational grant to support
				MIS fellowship
	Ethicon	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
Michael Stamos	Niti Surgical	Consulting Fee	Consultant	
	Ethicon	Honoraria	Speaking/Teaching	
	Glaxo Smith Kline	Honoraria	Speaking/Teaching	
	Gore	Honoraria	Speaking/Teaching	
William N. Starling	TransEnterix, Inc.	Ownership Interest	Board Member	
	BaroSense, Inc.	Ownership Interest	Consultant	
Dimitrios Stefanidis	Gore	Honoraria	Speaking/Teaching	
	Ethicon	Honoraria	Speaking/Teaching	
	Bard	Honoraria	Speaking/Teaching	
Nathaniel Floyd Nicolas	Ethicon	Honoraria	Speaking/Teaching	
Stoikes	1			
Paul Swain	GivenImaging	Consulting Fee	Consultant	
Lee L. Swanstrom	Olympus	Research Support	Consultant	
	Cardica	Consulting Fee	Advisory Committee	
	USGI	Consulting Fee	Advisory Committee	
	Wolf	Royalty	Consultant	
	Boston Scientific	Consulting Fee	Consultant	
Thomas J Swope	Olympus	Other	Speaking/Teaching	
	Covidien	Other	Speaking/Teaching	
Zoltan Szabo	Karl Storz Endoscopy	Royalty	Consultant	
Mark Talamini	Max Endoscopy	Other	Board Member	
	Sanofi-Aventis	Consulting Fee	Consultant	
	Apollo Surgical	Other	Advisory Committee	
	Covidien	Other	Other	stockholder
	Ethicon Endosurgery	Honoraria	Consultant	
Christopher C Thompson	Valentx	Consulting Fees	Consultant	
	Vysera	Lab Support	Consultant	
	USGI Medical	Consulting Fees	Consultant	
	Olympus	Lab Equipment	Consultant	
	Endolumina	Ownership Interest	Consultant	
	Covidien	Travel Fees	Other	Educational grant for CME
	L		ļ	activity
	Covidien	Consulting Fee	Consultant	
	Boston Scientific	Consulting Fee	Consultant	
	Beacon Endoscopic	Ownership Interest	Consultant	
	BARD	Consulting Fee	Consultant	
David S. Tichansky	Cadence	Honoraria	Advisory Committee	
			1 - 1	10 10 1
Alfonso Torquati	Covidien ALLERGAN	Other Consulting Fee	Other Consultant	Research Grant





Name	Commercial Interest	What was received	For what role	Other
Shirin Towfigh	Ethicon, Inc.	Consulting Fee	Advisory Committee	
	Bard/Davol, Inc.	Consulting Fee	Advisory Committee	
Thadeus Trus	Boston Scientific	Consulting Fee	Consultant	
	Boston Scientific	Other	Consultant	
Kent R. Van Sickle	Covidien	Consulting Fee	Speaking/Teaching	
	Davol	Consulting Fee	Consultant	
Melina C. Vassiliou	Covidien	Research	Advisory Committee	
Guy R. Voeller	DAVOL	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Consultant	
	W.L. Gore	Consulting Fee	Consultant	
Theodoros Voloyiannis	Applied Medical Inc	Honoraria	Speaking/Teaching	
Mark J. Watson	ALLERGAN	Consulting Fee	Consultant	
Steven D. Wexner	EZ Surgical	Ownership Interest	Consultant	
	Neatstitch	Ownership Interest	Board Member	
	EZ Surgical	Consulting Fee	Consultant	
	Lifebond	Consulting Fee	Consultant	
	Intuitive Surgical	Ownership Interest	Consultant	
	Karl Storz Endoscopy	Royalty	Other	inventor
	Karl Storz Endoscopy America	Consulting Fee	Consultant	
	Karl Storz Endoscopy America	IP Rights	Other	inventor
	Incontinence Devices Inc	Consulting Fee	Consultant	
	Lifecell	Honoraria	Speaking/Teaching	
	Neatstitch	Consulting Fee	Consultant	
	Century Medical incorporated	Consulting Fee	Consultant	
	NITI	Consulting Fee	Consultant	†
	Oceana Therapeutics	Honoraria	Advisory Committee	
	Pacira Pharmaceuticals	Consulting Fee	Consultant	<u> </u>
	Signalomics Gmbh	Consulting Fee	Consultant	
	Unique Surgical Innovations	Ownership Interest	Management Position	
	Ventrus	Consulting Fee	Consultant	<u> </u>
	Medtronics	Consulting Fee	Consultant	
	Adolor/Glaxo Smith Kline	Honoraria	Speaking/Teaching	
	Covidien	IP Rights	Other	Linuantar
	CRH Medical		Other	inventor
Dishard Laws Whales		IP Rights		stock options
Richard Larry Whelan	Atrium Corporation	Research	Consultant	
	Olympus	Research	Speaking/Teaching	
	Ethicon Endosurgery	Consulting Fee	Consultant	
AA	Convatec	Consulting Fee	Consultant	
Mark H. Whiteford	Boston Scientific	Consulting Fee	Consultant	<u> </u>
	Richard Wolf Medical Instruments	Consulting Fee	Consultant	
Erik B Wilson	Intuitive Surgical	Consulting Fee	Speaking/Teaching	
ETIK B WIISOII	Olympus	Consulting Fee		
	 	 	Speaking/Teaching	
	Gore	Consulting Fee	Speaking/Teaching Speaking/Teaching	
D M W-16-	Ethicon Endo-Surgery	Consulting Fee	, 	
Bruce M. Wolfe	EnteroMedics	Research	Management Position	
	Crospon	Consulting Fee	Consultant	
Cl NA NV	Vindico	Honoraria	Speaking/Teaching	
Sherry M. Wren	Intuitive Surgical	Consulting Fee	Consultant	
Andrew S Wright	Covidien	Honoraria	Consultant	<u> </u>
Natan Zundel	Ethicon Endosurgery	Honoraria	Consultant	
	Olympus	Consulting Fee	Consultant	
	Covidien	Honoraria	Speaking/Teaching	
	CineMed	Honoraria	Speaking/Teaching	
	Applied	Honoraria	Advisory Committee	
	Apollo	Consulting Fee	Consultant	
	Apollo Endosurgery	Consulting Fee	Consultant	

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EFFECT OF ENZYMATIC DEGRADATION ON THE MECHANICAL PROPERTIES OF BIOLOGIC SCAFFOLD MATERIALS Afua H Annor, BS,
Michael E Tang, BS, Chi Lun Pui, BS, Gregory C Ebersole, MS MS, Margaret
M Frisella, RN, <u>Brent D Matthews, MD</u>, Corey R Deeken, PhD Washington
University in St. Louis

INTRODUCTION: In the body, biologic scaffolds are exposed to matrix metalloproteinases (MMPs) which are produced by inflammatory cells (neutrophils). Scaffolds must resist enzymatic degradation and support cellular attachment, neotissue deposition, and angiogenesis. The purpose of this study was to evaluate the effects of enzymatic degradation on the mechanical properties of biologic scaffold materials.

METHODS: Nine materials were evaluated (4 porcine dermis – PermacolTM, CollaMendTM, StratticeTM, XenMatrixTM; 2 human dermis – AlloMaxTM, FlexHD*; 2 bovine pericardium – Veritas*, PeriGuard*; and 1 porcine small intestine submucosa - SurgisisTM). Sixty (n=60) specimens were prepared of each. Ten specimens (n=10) were hydrated in saline at 37°C and subjected to uniaxial tension at a rate of 300mm/min until failure to establish the baseline "0 hour" properties before exposure to collagenase. The other fifty specimens (n=50) were incubated in a collagenase solution at 37°C for 2, 6, 12, 24, or 30 hours (n=10 each group). Specimens were then subjected to uniaxial tensile testing at a rate of 300mm/min until failure. A one-way analysis of variance (ANOVA) was performed, followed by a Fisher's LSD post-test as appropriate. Statistical significance was set at the p<0.05 level.

RESULTS: Tensile strength was significantly reduced after 30 hours of exposure to collagenase for CollaMendTM, AlloMaxTM, Veritas®, StratticeTM, XenMatrixTM, PermacolTM, and FlexHD® (p<0.01), while PeriGuard® demonstrated a slight increase in tensile strength (p=0.0188). Differences were also observed between crosslinked and non-crosslinked scaffolds of the same tissue type. For instance, crosslinked bovine pericardium (PeriGuard®) maintained greater tensile strength than non-crosslinked bovine pericardium (Veritas®) throughout all exposure periods (p<0.0001). Similarly, crosslinked porcine dermis (PermacolTM) maintained greater tensile strength than non-crosslinked porcine dermis (StratticeTM and XenMatrixTM) throughout all exposure periods (p<0.0001).

Some scaffolds did not survive the longer incubation periods and were so degraded that mechanical testing was not possible. Specimens were measurable for PermacolTM, CollaMendTM, StratticeTM, FlexHD®, and PeriGuard® scaffolds throughout all exposure periods up to 30 hours. However, specimens of SurgisisTM and Veritas® were only measurable up to the 6 hour exposure period, and specimens of XenMatrixTM and AlloMaxTM were only measurable up to the 12 hour exposure period.

CONCLUSIONS: Materials that deteriorate rapidly after in vitro enzymatic exposure may be at risk for rapid in vivo degradation and loss of strength when exposed to a wound environment with elevated levels of MMPs.

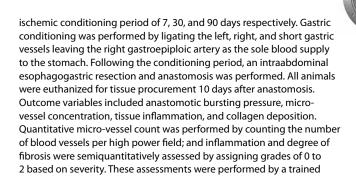
S002

GASTRIC ISCHEMIC CONDITIONING INCREASES NEOVASCULARIZATION AND REDUCES INFLAMMATION AND FIBROSIS DURING GASTROESOPHAGEAL ANASTOMOTIC HEALING

<u>Kyle A Perry, MD</u>, James Liu, MD, Ambar Banarjee, MD, Mark R Wendling, Nilay Shah, MD, W S Melvin, MD Center for Minimally Invasive Surgery, The Ohio State University, Columbus, OH

INTRODUCTION: Gastric pull-up reconstruction is the most common approach to esophageal replacement during esophagectomy. The incidence of anastomotic leak and stricture remain high, and gastric devascularization followed by delayed esophageal resection has been proposed to minimize these complications. We aimed to investigate the effect of ischemic conditioning duration on anastomotic wound healing in an animal model of esophagogastrectomy.

METHODS: North American Opossums (Didelphis virginiana) were randomized to 4 study groups. Group A underwent immediate resection and gastroesophageal anastomosis while Groups B, C, and D were treated with delayed resection and anastomosis following a gastric



pathologist blinded to the treatment groups.

RESULTS: 24 opossums were randomized to groups A (n=7), B (n=8), C (n=5) and D (n=4) and completed the protocol. Subclinical anastomotic leak was discovered at necropsy in 6 animals including 4 in group A, and 1 animal in groups B and C (p=0.295). The outcome data are summarized in the Table below. The anastomotic bursting pressure did not differ significantly between groups. Compared to animals undergoing immediate reconstruction, a 7 day ischemic conditioning time did not produce increased neovascularity. Animals with 30 day conditioning time, however, showed significantly increased microvessel counts compared to unconditioned animals. The degree of inflammation at the healing anastomosis decreased significantly as the ischemic conditioning period increased. Collagen density, a measure of anastomotic site fibrosis, varied from 0.5±0.5 in Group-A to a high of 1.8±0.4 in Group-B before declining to 1.2±0.8 and 0.6±0.5 in Groups C and D (p=0.022). CONCLUSION: Compared to animals undergoing immediate resection and anastomosis, those treated with 30 days of gastric ischemic conditioning showed significantly increased neovascularity and decreased inflammation at the healing anastomosis. These changes were not evident following 7 days of ischemic conditioning, whereas extending the ischemic conditioning period to 90 days resulted in decreased inflammation, fibrosis, and neovascularity. These data suggest that an ischemic conditioning period longer than 7 days is required to achieve the desired effect on wound healing. Larger studies will be required to assess the impact of a prolonged ischemic conditioning period on anastomotic strength.

Group	Α	В	C	D	p-value
Ischemic Conditioning Time (days)	0	7	30	90	
Bursting Pressure (mmHg)	64.7±34.4	52.4±38.3	65±24.1	67.3±21.9	0.350
Inflammation	1.8±0.4	1±0.5	0.8±0.8	0.3±0.5	0.008
Fibrosis	0.5±0.5	1.8±0.4	1.2±0.8	0.6±0.5	0.022
Microvessel Count (No./hpf)	19.5±1.6	18.8±0.8			0.491
	19.5±1.6		22.6±1.6		0.003
	19.5±1.6			14.3±1.8	0.001

S003

EFFECT OF OBESITY ON ADIPOGENIC DIFFERENTIATION OF ADIPOSE TISSUE-DERIVED HUMAN MESENCHYMAL STEM CELLS Jiegen Chen, PhD, Anna Spagnoli, MD, Alfonso Torquati, MD MSCI Duke University and University of North Carolina - Chapel Hill

Introduction: Adipose tissue dysfunction is an important feature of obesity characterized by marked changes in secretion of adipokines. These result in chronic vascular inflammation, oxidative stress, and activation of the renin-angiotensin system (RAS), eventually leading to cardiovascular disease (CVD). In several trials, bariatric surgery has been demonstrated to significantly reduce the risk of CVD. However there is a gap in knowledge about the molecular mechanisms by which bariatric surgery reduce the burden of CVD in obese individuals. Therefore, the aim of the present work is to study whether surgical induced weight loss regulates the expression of RAS-related genes during adipogenesis. Method: Mesenchymal stem cells (MSCs) were isolated from adipose tissue collected from the following three groups: 1) non-obese (mean BMI=28) controls (n=11); 2) obese subjects (mean BMI=51) undergoing gastric bypass surgery (GBS); and 3) subjects 1 year or more status post-GBS (mean BMI=30) undergoing elective surgery (n=3). These MSCs were induced to adipogenic differentiation. MSCs were treated with Angiotensin II in combination with Losartan (Angiotensin II receptor 1 blocker) and/or PD123319 (Angiotensin II receptor 2 blocker) during

differentiation. Differentiation and RAS-related gene expression were analyzed by quantitative RT-PCR. GraphPad Prism was used for data analysis. Student's t-test was used for group comparisons.

Results: As shown in the **Figure**, Angiotensinogen mRNA levels in MSCs and differentiated adipocytes were significantly higher (p<0.05) in the obese group than in the non-obese controls. Renin mRNA levels were significantly higher (p<0.05) in the obese group MSCs than in the non-obese and post-GBS groups. Angiotensin converting enzyme (ACE) mRNA levels were significantly lower (p<0.05) in the MSCs and adipocytes derived from the post-GBS group than in obese and non-obese controls. Serum angiotensin II levels were significantly lower (p<0.05) in the post-GBS group (52.1 \pm 4.2 pg/ml) than in the non-obese (85.4 \pm 12.4 pg/ml) and obese (84.7 \pm 10 pg/ml) groups. Angiotensin II treatment inhibited adipose MSCs differentiation into adipocytes in a dose dependent manner. The effect of Angiotensin II was mediated by both receptors. However, the receptor 2 blocker (PD123319) was more effective (p<0.05) in inhibiting Angiotensin II effects than the receptor 1 blocker (Losartan).

Conclusion: The adipogenic differentiation of adipose-derived MSCs is regulated by the RAS. We demonstrated that obese subjects are characterized by an up-regulation of the RAS related gene expressions in the adipose tissue. On the contrary, post-GBS subjects exhibit a pattern of RAS related gene expression similar to non-obese controls. This post-bariatric surgery change in RAS related genes can be one of the mechanism responsible for the CVD risk reduction induced by GBS.

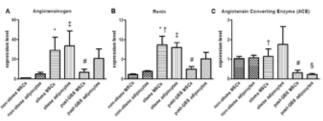


Figure. Renin-angiotensin system (RAS)-related gene expression during MSCs adipogenesis. Data expressed as mean \pm S.E.M. * for p<0.05, nonobese vs. obese in MSCs; # for p<0.05, non-obese vs. post-GBS in MSCs; † for p<0.05, obese vs. post-GBS in MSCs; † for p<0.05, non-obese vs. obese in adipocytes; § for p<0.05, non-obese vs. post-GBS in adipocytes.

S004

EFFECTS OF CARBON DIOXIDE PNEUMOPERITONEUM ON RENAL FUNCTION IN OBSTRUCTIVE JAUNDICE: AN EXPERIMENTAL STUDY

IN A RAT MODEL Merter Gulen, MD, <u>Mustafa Sare, MD</u>, Banu Sancak, MD, Mehmet Senes, MD, Seher Yuksel Department of General Surgery Gazi University School of Medicine, Department of Biochemistry Gazi University School of Medicine, Ankara Teaching and Research Hospital

Introduction: Laparoscopic approaches are being applied in all areas of surgery with an increasing frequency. Different effects of pneumoperitoneum and obstructive jaundice on many organ systems has been reported. Both pneumoperitoneum and obstructive jaundice impair the renal function, but the combined insult has not been previously examined. In this study, we aimed to investigate the effects of carbon dioxide (CO2) pneumoperitoneum on renal function in a rat model of obstructive jaundice.

Methods and Procedures: Forty-eight male Wistar-Albino rats weighing 350 to 400g were divided into eight groups including 6 rats in each group: group 1; sham-operated group, in group 2,3 and 4 a 5-10-15 mmHg CO2 pneumoperitoneum was induced respectively, group 5; obstructive jaundice group, group 6,7 and 8 obstructive jaundice with 5-10 and 15 mmHg pneumoperitoneum was induced respectively. CO2 pneumoperitoneum was provided by Veress needle, maintained for 60 min. Common bile duct was ligated and divided in the obstructive jaundice groups. After 2 days, a 5-10-15 mmHg pneumoperitoneum was induced by minilaparotomy with a Veress needle in group 6-7 and 8, maintained for 60 min. Blood samples were drawn for the measurement of standart biochemical accounts, cystatin-C and NGAL for the assessment of renal functions.

Results: There were no statistically significant differences between the all groups with regard to standart biochemical accounts for renal functions including BUN and creatinin (p>0.05). Furthermore NGAL values are high in obstructive jaundice groups and there were statistically significant differences between other groups (p<0.05). The obstructive jaundice with 10 and 15 mmHg pneumoperitoneum group cystatin-C values are high comparison with the same pressure of only pneumoperitoneum group. There were statistically significant differences between these groups (p<0.05).

Conclusions: Conventional renal function tests were normal while NGAL and cystatin-C was found to be effective in showing an early stage of renal injury. Renal injury became more apperent with obstructive jaundice potentiated by the pneumoperitoneum. Consideration and appropriate mesaures should be taken for the development of renal injury in patients with obstructive jaundice during pneumoperitoneum. **Keywords:** Obstructive jaundice, Pneumoperitoneum, Renal functions

S005

PRE- AND INTRA-OPERATIVE LIDOCAINE INJECTION FOR PREEMPTIVE ANALGESICS IN LAPAROSCOPIC GASTRECTOMY: A PROSPECTIVE RANDOMIZED DOUBLE-BLIND PLACEBO-

CONTROLLED STUDY <u>Tae Han Kim, MD</u>, Hyun Kang, MD, Yoo Shin Choi, MD, Joong Min Park, MD, Kyong Choun Chi, MD College of Medicine, Chung-Ang University

Background

The preemptive intravenous injection of local anesthetics is known to improve postoperative pains in abdominal surgery. The aim of this study is to assess the effect of intravenous lidocaine injection and analyze precise amount of pain by computerized PCA in patients who were undergoing laparoscopy assisted distal gastrectomy(LADG). Method

Double- blind placebo control was designed and 34 patients undergoing LADG for early gastric cancer were divided into two groups. Preoperatively and throughout the surgery group I received intravenous lidocaine injection and group C received normal saline injection for placebo. Postoperative outcomes, visual analogue scale (VAS), the button hit counts (BHC) from patient-controlled analgesia (PCA) and amount of consumed fentanyls were measured postoperatively.

The demographic data were similar between the groups. VAS score, BHC and fentanyl consumption were reduced in group I compared to group C (p<0.05). Distinctively, fentanyl consumption and BHC in group I showed significant decrease during the first 12hours of the study (p<0.05). Postoperative adverse event showed no difference except nausea were more frequent in the placebo group (p<0.039). Conclusion

In this study intravenous lidocaine injection showed significant reduction in fentanyl consumption and pain during the earlier postoperative time with more favorable outcomes.

S006

RADIOFREQUENCY ENERGY COUPLING TO COMMON LAPAROSCOPIC INSTRUMENTS: BEWARE OF THE CAMERA TIP Edward L Jones, MD,

Thomas N Robinson, MD, Paul N Montero, MD, Henry R Govekar, MD, Greg V Stiegmann University of Colorado School of Medicine, Aurora, CO

INTRODUCTION: Radiofrequency energy delivered by the monopolar "bovie" is used in virtually every laparoscopic operation. Electromagnetic coupling can occur between the active electrode and conductive laparoscopic instruments without direct contact by a phenomenon termed antenna coupling. The PURPOSE of this study was (1) to determine if, and to what extent, radiofrequency energy from the "bovie" couples to common laparoscopic instruments and (2) to describe practical steps a surgeon can take to minimize these potentially harmful effects.

METHODS: In a laparoscopic simulator, monopolar radiofrequency energy was delivered to a laparoscopic L-hook. The tip of either an unlit 10 mm camera or a 5 mm grasper was placed adjacent to, but not

touching, bovine liver tissue. Thermal imaging quantified the change in tissue temperature nearest the tip of the camera or grasper that was never in contact with the active electrode immediately at the end of the 5 second activation. Variables tested included generator power setting, parallel bundling versus separation of the camera cord and monopolar cord, and 4cm versus 20cm separation between the tip of the active electrode and the tip of the camera or grasper. Temperature rise is reported as a mean +/- standard deviation in degrees Celsius.

RESULTS: A five second activation (30 watts, coagulation mode, 4 cm separation between active electrode tip and camera or grasper tip) increased tissue temperature adjacent to the grasper tip by 2.2+/-2.2 degrees Celsius (p=0.013) and the camera tip by 38.2+/-8.0 degrees Celsius (p<0.001). The camera tip created significantly higher temperatures than the grasper tip (p<0.001). Lowering the generator power setting from 30 to 15 Watts decreased the heat generated at the tip of the camera (38.2+/-8.0 versus 13.5+/-7.5; p<0.001). Complete separation of the camera and active electrode cords reduced the heat generated at the tip of the camera by more than half when compared to parallel bundling of the cords (38.2+/-8.0 versus 15.7+/-11.6; p<0.001). Increasing the distance between the tip of the active electrode and the tip of the camera from 4 cm to 20 cm marginally reduced the amount of heat generated at the tip of the camera (38.2+/-8.0 versus 31.1+/-11.1; p=0.047).

CONCLUSIONS: Commonly used laparoscopic instruments couple monopolar radiofrequency energy without direct contact with the active electrode. This coupling phenomenon results in significant heat transfer from a non-electrically active instrument tip to adjacent tissue. An unlit, laparoscopic camera tip couples energy and heats tissue more than fifteen-fold higher in comparison to a grasper. Practical steps to minimize the amount of heat generated at the camera tip include: reducing the generator power setting, avoidance of parallel bundling of the camera and "bovie" cords, and increasing the distance between the instrument tip and the active electrode tip. These practical findings can alter how surgeons safely use monopolar energy during laparoscopic operations.

S007

COMPARISON OF SURGICAL PLUME GENERATION OF FIRST GENERATION CORDLESS (SONICISION) VERSUS TRADITIONAL LAPAROSCOPIC HARMONIC SCALPEL DEVICES USING A NOVEL REAL-TIME DIGITAL QUANTIFICATION TECHNIQUE Fernando J Kim, MD, David E Sehrt, BS, Shalini Tayal, MD, Wilson R Molina, MD Denver Health Medical Center, Tony Grampsas Cancer Center, University of Colorado Health Sciences Center

Introduction:To quantify the amount of obstruction by surgical plume generated from the first generation cordless and traditional ultrasonic harmonic scalpels (HS) on laparoscopic visibility and to examine the temperature profile for each instrument during activation and histological analysis.

Materials and Procedures:The Sonicision (cordless), Harmonic Ace, and SonoSurg were applied to bovine liver ex vivo on the industry specified minimum (min.-coagulation) and maximum (max.-cut) settings. Real time surgical plume formation was captured digitally after instrument activation. Images were recorded and analyzed using the ImageJ software via a laparoscope positioned in a laparoscopic trainer. The percentage of pixels containing plume in each video frame was measured and analyzed. Similarly, the FLIR infrared camera captured the activation temperature only generated by the instruments on both settings after control emissivity measurements were consistent with titanium (ϵ =0.400). Histological analysis of the tissue after activation was examined by Pathologist for a blinded analysis. Data is presented as Average \pm Confidence Interval. Statistical difference was considered for p<0.05.

Results: During 3 seconds of min activation, average plume formations in all instruments were statistically different and the lowest was the Sonosurg. During 2 seconds of max activation, the average plume formation was highest with Ace compared to other devices (Table 1). Temperature was measured after calibration and revealed that Ace had

the highest temp during min activation and Sonicision obtained the highest during max (Table 2). Histological analysis of tissue confirmed activation of the devices determined by coagulative necrosis at the edges, cautery effect, and inflammatory reaction compared to normal tissue.

Table 1. Maximum Plume Formation

	Sonicision	Ace	Sonosurg	p-value
Min Setting	*4.80 ± 1.76	*26.63 ± 7.56	*0.21 ± 0.16	< 0.001
Max Setting	8.76 ± 2.60	*12.65 ± 2.07	9.46 ± 2.58	0.020

Table 2. Maximum Temperature

	Sonicision	Ace	Sonosurge	p-value
Emissivity (Titanium Control)	0.401 ± 0.012	0.488 ± 0.037	0.394 ± 0.040	
Min Setting	172.09 ± 22.11	190.00 ± 13.83	*111.19 ± 11.79	< 0.001
Max Setting	*225.01 ± 9.61	194.24 ± 19.63	213.20 ± 10.10	0.020

Conclusion: Surgical plume can accurately be measured by digital image capturing real-time during laparoscopic US devices activation in the pelvic laparoscopic trainer. Temperature < 110°C produced minimal surgical plume formation while temperatures > 110°C produced greater amounts of plume and may interfere with surgical field visualization and increase time of surgery and efficiency. Variations of surgical plume formation and temperature generation by different laparoscopic devices, including the first generation cordless HS, may be attributed to device specifications such as blade shape, blade displacement, operating frequency, and clamping strength. The devices studied exhibited different degrees of plume production according to their maximum and coagulation settings.

S008

WORKLOAD ASSESSMENT OF SURGEONS: CORRELATION BETWEEN NASA TLX AND BLINKS Bin Zheng, MD PhD, Xianta Jiang, Msc, Geoffery Tien, Msc, Adam Meneghetti, MD, Neely Panton, MD, Stella Atkins, PhD University of British Columbia

Objective: Blinks are known as an indicator of visual attention and stresses. When an operator is overloaded, he will tend to blink less, and quickly. In this study, surgeons' mental workloads were assessed by eye blinks and the NASA Task Load Index (NASA TLX), a paper assessment. We hypothesized that surgeons who display physical signs of stresses during a laparoscopic procedure will report a high level of mental workload assessed at the end of the procedure with the NASA TLX.

Methods: While performing a partial cholecystectomy on a virtual reality trainer (SurgicalSim, METI Inc.), a surgeon's physical signs of stresses were captured continuously using our lightweight head-mounted eye-tracker (Locarna Systems Inc.). Blink frequency and duration were computed automatically using computer video-processing program. At the end of each procedure, the operating surgeon was required to complete the NASA TLX to further assess the workload experienced during the procedure. Surgical performance was measured by task time, trajectory of tool tips, and errors. Surgeons' blink frequency and duration were correlated to the outcomes of the NASA TLX reports. Workload outcome assessed by the NASA TLX were compared between two groups of surgeons who performed either low frequency (less than 6 blinks/minute) or high frequency of blinks (more than 6 blinks/minute during the procedure).

Results: A total of 42 surgical trials were recorded from 23 surgeons. The correlation coefficients (Pearson test) between NASA TLX and the blink frequency and duration were – 0.17 (P = 0.282) and 0.446 (P = 0.776), respectively. Surgeons who blinked less frequently reported a higher level of frustration (46 vs. 34, P = 0.047) and overall level of workload (57 vs. 47, P = 0.045) compared with those who blinked more frequently. Interestingly, task performance was not associated with the blink frequency performed by surgeons. Although the low-blink surgeons were more satisfied with their performance (60 vs. 43, P = 0.005), task time (P = 0.439), length of tool tip trajectory (P = 0.925), and number of surgical errors made in the procedure (P = 0.671) were not significantly different between the two blink groups.

Conclusion: Our research hypothesis was supported; the mental workload of surgeons assessed through a self-reported instrument matched well to the stresses recorded by physical signs. This study also demonstrated the value of using eye-tracking technology for assessment

of surgeon mental workload in the operating room. Surgeons with a high mental workload showed blinking with less frequency. As we can record the eye motion of surgeons with surgical video, we expect to develop a way to annotate difficult steps in the procedure and visualize the surgeon's mental state during the surgical procedure.

S009

MAGNETICALLY ANCHORED CAMERA AND PERCUTANEOUS INSTRUMENTS MAINTAIN TRIANGULATION AND IMPROVE COSMESIS COMPARED TO SINGLE-SITE AND CONVENTIONAL LAPAROSCOPIC

CHOLECYSTECTOMY Nabeel A Arain, MD MBA, Luisangel Rondon, MD, Deborah C Hogg, BS, Jeffrey A Cadeddu, MD, Richard Bergs, MS, Raul Fernandez, PhD, Daniel J Scott, MD University of Texas Southwestern Medical Center at Dallas (Departments of Surgery and Urology), University of Texas at Arlington (Texas Manufacturing Assistance Center)

Introduction: The purpose of this study was to evaluate operative outcomes and ergonomics using a new generation magnetically anchored camera (Magnetic Positioning Platform – MPP) in conjunction with novel 3mm percutaneous instruments (Percutaneous Surgical Set – PSS) compared to single-site (SSL) and conventional laparoscopic (LAP) cholecystectomy techniques.

Methods: Surgery residents and fellows (n=4) each performed 3 cholecystectomies (live porcine models) using 3 techniques (MPP/ PSS, SSL, LAP; randomized order following standardized tutorials). For MPP/PSS, a 70° FOV magnetic camera was introduced through an umbilical fascial defect and a 12mm trocar was placed (alongside the camera tether) for conventional instruments. Two 3mm instrument shafts were percutaneously inserted, intracorporeally mated with 5mm working heads, and used for retraction. For SSL, a multiport-access device was used; percutaneous retraction sutures, an articulating grasper, a hook-cautery, and a 5mm laparoscope were used. For LAP, a conventional 4-port technique (three-5mm and one-12mm trocar) was used. A single faculty surgeon served as proctor and assistant for all procedures. Operative outcomes were recorded. Surgeon-ratings (1-5 scale; 1=superior) were used to evaluate ease of dissection, ergonomics, technical challenges, and significant problems associated with each technique. Surgeon-workload was measured using a validated NASA-TLX survey (1-10 scale; 1=superior). A global rating survey (1-10 scale; 10=superior) was used to assess surgeon preference for each technique. Comparisons used ANOVA on ranks (Kruskal-Wallis); p<0.05 was considered significant.

Results: No significant differences were detected for operative times, critical views, adequacy of dissection, and bile-spillage; blood loss (cc) was significantly higher for SSL (16.3 \pm 10.3) vs. LAP (2.8 \pm 1.5, p<0.05) but not for MPP/PSS (4.8 \pm 3.8). Inadvertent damage to adjacent structures occurred in SSL (1-Keith needle stick to the colon, 1-cystic duct avulsion, and 1-burn to the diaphragm) but not for MPP/PSS or LAP. Combined incision-length (mm) was significantly smaller for MPP/PSS (29.3 ± 2.8) and SSL (29.3 ± 2.5) compared to LAP $(48.0 \pm 3.6, p<0.05)$. Compared to SSL (3.6 \pm 0.5), surgeon-ratings significantly favored MPP/ PSS (2.8 \pm 0.4) and LAP (1.7 \pm 0.2, p<0.05); ergonomics and technical challenges were both rated significantly inferior for SSL (4.3 \pm 1.0, 3.8 \pm 0.5, respectively) vs. LAP (1.5 \pm 0.6, 2.0 \pm 0.8, respectively; p<0.05) but not for MPP/PSS (2.5 \pm 1.0, 3.0 \pm 0.8, respectively). Both MPP/PSS (4.5 \pm 0.5) and SSL (4.8 \pm 1.0) were associated with significantly higher workload than LAP (2.5 \pm 0.6, p<0.05). Surgeon preference was significantly higher for LAP (8.7 \pm 1.3) vs. SSL (5.8 \pm 2.0, p<0.05), but not for MPP/PSS (7.1 \pm 1.8). Cosmesis was significantly better for MPP/PSS (9.5 \pm 0.6) vs. LAP (6.5 \pm 2.4, p<0.05) but not for SSL (8.8 \pm 1.3).

Conclusion: For senior level trainees, difficulties associated with SSL may limit their performance. The MPP/PSS technique allows triangulation and fewer technical difficulties compared to SSL and better cosmesis compared to LAP. Additional benefits may include less pain, reduced port-site herniation, and shorter recovery. Further development of these devices is warranted.

Disclaimer: These devices are not approved by the FDA for human use.

S010

DETERMINATION OF THE IDEAL POSTURE FOR THE SURGEON DURING LAPAROSCOPIC SURGERY Cas Van 't Hullenaar, MD, Maarten

Van Alphen, BSc, Matthijs Hendriks, BSc, Ivo Broeders, Professor Meander Medical Center, Amersfoort / University Medical Center Utrecht/Twente University, Eschede

Abstract

Background:

Physical discomfort is frequently reported by surgeons performing endoscopic procedures. Musculoskeletal fatigue and other physical complaints during laparoscopy can result in work related injuries for the surgeon and can potentially compromise patient's safety. Therefore improvement of ergonomics is of major importance. In this study, the ideal posture for endoscopic surgery was recorded in an experimental environment.

Materials and methods:

In this study the ideal posture was measured in 22 subjects holding laparoscopic instruments. An optical motion capture camera system with infrared reflective markers (VICON, 8 cameras with infrared technology) was applied to detect position. From these data joint angles and posture of the subjects were defined. All data were collected and processed using Matlab R2010a®.

Results

Subjects demonstrated an optimal position with slight flexion of the cervical spine (average 10°), a 20° abduction of the upper arms and an anteflexion of 15° in the shoulder. A flexed position of the elbows (average 96°) was considered most comfortable. Minimal rotation in the torso (below 5°) and a moderate angle between the instruments (average 27°) was recorded.

Conclusion:

The ideal posture in an experimental environment was determined. This will serve as background for future ergonomic studies in the operating theatre.

S011

UNIVERSAL MULTIFUNCTIONAL HD VIDEO SYSTEM FOR MINIMALLY INVASIVE, OPEN AND MICRO SURGERY Nicholas N Nissen, MD, Vijay Menon, MD, James Williams, BA, Steven D Colquhoun, MD, George Berci, MD Cedars-Sinai Medical Center, Los Angeles, CA

Introduction: Laparoscopy provides an important tool in the management of abdominal pathology, both as a method of staging prior to laparotomy and, increasingly, as a method of tumor removal. Some of the benefits of laparoscopic video systems include improved magnification and visualization of small structures, improved surgeon posture and fatigue, and use of the real-time video monitor and saved footage for documentation and education. The benefits of an intraoperative video system may be applicable to open surgery as well, but this has not been well explored.

Methods: We employed an HD video system to complement all phases of surgery including both laparoscopic and open aspects. For laparoscopy, a standard HD camera (1080p) is utilized for evaluation of operability (staging laparoscopy). In cases requiring exploration, a mechanical arm is attached to the operating table and the camera is mounted without the telescope, which provides video display of the case to all operating room participants. In cases requiring dissection or anastomosis of minute structures a special optical illumination system is attached to the same camera, which provides improved magnification and illumination for the surgeon. These critical components of surgery can then proceed with the surgeon working off the video monitor at a more convenient posture and with the benefits of video display. In select open cases the telescope can be reattached to the camera for inspection of areas that might otherwise be difficult to access, such as with diaphragmatic or retroperitoneal bleeding during a liver transplant or when draining multiloculated collections during pancreatic debridement.

Results/Conclusions: This approach of using a multifunctional video

system for open abdominal surgery has been utilized in 85 complex hepatobiliary and pancreatic surgeries. Clear benefits include: 1) improved interaction with anesthesia and other personnel not having direct vision of the operative field, including scrub nurses; 2) improved teaching of bystanders and assistants who are able to observe the case in real time on a monitor; 3) improved visualization of minute structures and areas difficult to access; and 4) improved capture and utilization of surgical video and images for education and documentation without the need for outside or non-sterile photo equipment. The benefits of lessening surgeon fatigue or lowering the complication rate with the use of operative microscopy is suggested and requires further study. This system can be employed with little added costs over a standard laparoscopy setup and has the potential to be widely utilized in surgical education programs.

S012 - Withdrawn

S013

ONCOLOGIC SAFETY OF LAPAROSCOPIC HEPATECTOMY VERSUS OPEN HEPATECTOMY IN HEPATOCELLULAR CARCINOMA Stephen Ky Chang, FRCS, Chee Wei Tay, MRCSEd, Wah Wah Hlaing, Ms, Iyer Shridhar Ganpathi, FRCS, Victor Tw Lee, FRCS, Krishnakumar Madhavan, FRCS National University Health System, Singapore

INTRODUCTION: Laparoscopic hepatectomy (LH) has increasingly become more established as a curative option for hepatocellular carcinoma (HCC), however, oncologic issues such as ability to achieve adequate margins, tumour size and location, port side recurrence and other peri-operative and post-operative issues remains poorly studied. This paper aims to study a university hospital experience of LH in HCC patients, compare the oncologic outcomes of patients who underwent open hepatectomy (OH), address oncologic issues in LH, give suggestions of surgical issues among HCC patients who underwent LH and also aim to identify risk factors of HCC recurrence.

METHODS AND PROCEDURES: 30 consecutive patients who underwent LH for HCC from August 2006 to August 2010 in a university hospital were retrospectively studied. These 30 patients who underwent LH were matched with 30 patients who underwent OH for HCC with similar age, extend of resection and cirrhosis status for comparisons.

Patient's demographic data such as age, sex, risk factor of HCC, Child's status, presence of cirrhosis were recorded. Oncologic data such as tumour size and location, resection margin in millimeter (mm), tumour characteristic, presence of recurrence, time to recurrence, follow up and survival were studied. Surgical data such as surgical approach (laparoscopic/hand-assisted/single-portal), operative time, and length of hospitalization were recorded.

All 60 patients from both groups will be divided into patients with recurrence and without recurrence; all parameters were examined to identify risk factors of HCC recurrence in general.

Continuous variables were compared using the Mann–Whitney U test and categorical variables were compared with chi-square test.

RESULTS: There is no statistically significant difference in mean operative time between LH and OH (266 vs 295 minutes). Patients who underwent LH had 5 days shorter in mean length of (6 vs 11, p=0.001). No statistical difference in 30 days mortality rate between 2 groups.

Mean tumour size was similar between 2 groups (40.6 vs 45mm). Negative resection margins were achieved in 97% in both groups, mean resection margins were 9.9 vs 8.2 mm (p=0.24). No statistically significant difference in histological features between the 2 groups. 8 (27%) patients in LH group versus 13 (43%) patients in OH group had recurrence of HCC, with the mean time to recurrence of 22 vs 33 months.

38% patients from both groups developed recurrence. In the subanalysis between recurrence and non-recurrence group, mean tumour size was statistically bigger in recurrence group (54 vs 35.6 mm, p=0.002). Resection margins were also statistically smaller in recurrence group, 4.6mm vs 11.8mm (p=0.002). There is no statistical difference in recurrence between LH and OH group.

CONCLUSIONS: Laparoscopic hepatectomy is a feasible curative treatment option for HCC; it can be performed to remove HCC bigger

than 5cm and certain centrally located tumours without any significant peri and post-operative issues by experienced surgeons. Adequate resection margin were achieved in 97% of the patients underwent LH, recurrence rate was similar with OH group. Tumour size and resection margin are the predictor of recurrence of HCC in both laparoscopic and open groups.

S014

CONSECUTIVE 87 CASES OF LAPAROSCOPIC PANCREATODUODENECTOMY: CHANGES OF CLINICAL OUTCOMES AND ITS IMPLICATION FOR CLINICAL APPLICATION Song Cheol

Kim, MD, Hae Ran Ha, RN, Hae R Seo, RN, Gi B Song, MD, Yong S Jung, MD, Yong H Kim, MD, Jae Bum Park, MD, Duck J Han, MD, Yun B. Choi Department of Surgery, University of Ulsan College of Medicine Introduction Laparoscopic pancreaticoduodenectomy have been regarded as an one of most challenging laparoscopic surgery. There have been only a few reports on laparoscopic pancreaticoduodenectomy (LPD) from experienced centers, and many have reported unsatisfactory clinical outcomes. Moreover there are no analytical reports according to time experience and its clinical implication. Aim of this study is to analysis the clinical outcomes of consecutive 87 cases of laparoscopic pancreatoduodenectomy chronologically and clinical feasibility and effectiveness

Method: Eighty-seven patients with benign or malignant lesions of the pancreatic head underwent laparoscopic pancreaticoduodenectomy (LPD) with or without pylorus preservation from Jun 2007. Most of them were performed with totally intracorporeal method except initial 10 cases, which had been performed with extracorporeal pancreaticojejunostomy. Because our series were mainly benign and low grade malignant lesion in pancreatic head, we analyzed the technical safety and effectiveness ,apart from oncologic outcomes. We regard that this point of view is the first step for approving the safety and effectiveness of this complex procedure

Results: Main indications were benign or low grade malignant diseases, such as intraductal papillary mucinous neoplasm (IPMN, n=38), solitary pseudopapillary tumor (n=13), neuroendocrine tumor (n=13), and others. There were 7 cases of peri-amupllary carcinoma. Mean operation time was 8.4 hrs, which was decreased year by year from 9.3 hr in 2007 to 6.5 hr in 2011. Oral intake was started on postoperative 3 days. Mean hospital stay was 15.2 days. Hospital stay was also shortened annually from 20.2 days in 2007 to 10.2 days in 2011. There was one case of mortality from postoperative bleeding in early stage. Rate of total surgical complication showed 30.8%, including 6.1 % of pancreatic fistula (ISGPF criteria). Total morbidity was also reduced from 30 % in 2007 to 16% in 2011. When data after learning period (in 2011) compared to open PD performed during the same period, it did not show difference in terms of operation time and morbidity rate, and showed significantly shorter hospital stays and cosmetic effect

Conclusion: This study reflects that LPD after some learning period can be adopted as a safe and effective clinical procedure for selected pancreatic head lesions. However further well- designed studies remain as a key factor for the LPD to be a wide accepted clinical procedure

S015

MINIMALLY INVASIVE APPROACHES TO INTRAHEPATIC AND EXTRAHEPATIC CHOLANGIOCARCINOMA Andrew A Gumbs, MD, Nicolas Jarufe, MD, Brice Gayet, MD PhD Summit Medical Group, Pontificia Universidad Católica School of Medicine, Institut Mutualiste Montsouris

Introduction: Due to the perceived difficulty in dissecting hilar cholangiocarcinomas off of the portal structures and in performing complex biliary reconstructions, very few centers have used minimally invasive techniques for these tumors. Furthermore, due to the relative rarity of this tumor when compared to hepatocellular carcinoma, only a few reports have focused on short and long-term results for intrahepatic cholangiocarcinoma.

Methods: Because of this, a review was undertaken by combining the experience of 3 international centers with expertise in complex

minimally invasive hepatobiliary surgery. Patients were entered into a database retrospectively, all patients with cholangocarcinoma were analyzed. Patients were divided into hilar cholangiocarcinomas and intrahepatic cholaniocarcinomas. The Bismuth classification was used to stratify the hilar cholangiocarcinomas.

Results: From December 2002- June 2011, a total of 14 patients were resected laparoscopically for cholangiocarcinoma. Nine patients had an intrahepatic lesion. Their mean age was 69 years (range= 48-86 years). Three patients (75%) required an extended major hepatectomy, 4 a major hepatectomy and 2 underwent minor hepatectomies. Eight patients with intrahepatic disease were stage I with 1 patient having stage II disease. This last patient had 3 lesions in segment IVb and had an R2 resection. Of the remaining patients, 7 had R0 resections with a final patient found to have R1 disease on final pathology. The mean resection margin was 11mm (range= 0-30mm). The median size of lesions resected was 67 mm (range= 30-70mm). The mean estimated blood loss (EBL) was 233 mL (range= 100-400mL). The median length of stay (LOS) was 11 days (range=6-21 days). Six out of 9 patients are currently alive with a median follow-up of 28 months. Five patients had a hilar lesion, their mean age was 73 years (range= 66-79 years). These patients had stage Ila (2 patients), Illa, Illb and IV, respectively. One of these patients (20%) was converted to an open procedure due to concerns for portal vein involvement. The patient with stage IV disease had an R1 resection on final pathology all other patients had R0 resections. The mean EBL was 240 mL (range=0-400 mL), the median LOS was 15 days (range=11-21 days). All patients are currently alive with a median follow up of 11 months (range= 3-18 months). None of the 14 patients developed port site recurrences. No patients required reoperation, but 2 patients developed bile leaks and a final patient developed a pulmonary embolism for an overall morbidity rate of 21%. The overall conversion rate was 7%. There were no mortalities at 30 or 90 days.

Discussion: Minimally invasive approaches for both intrahepatic and hilar cholangiocarcinomas appear feasible and safe. There is no increased rate of port site recurrences when cholangiocarcinomas are removed laparoscopically. Although short term results seem similar to the published open experience, longer-term follow-up is needed to see how disease free and overall survival is affected.

S016 - Withdrawn

S017

NORMOKINETIC BILIARY DYSKINESIA: A NOVEL DIAGNOSIS Christopher G Ducoin, MD MPH, Daryl D Wier, MD FACS Orlando Health,

<u>Christopher G Ducoin, MD MPH</u>, Daryl D Wier, MD FACS Orlando Health, Center for Digestive and Metabolic Surgery

Background: Biliary dyskinesia diagnosed with CCK-HIDA scan and ejection fraction less than 35% has been successfully treated by laparoscopic cholecystectomy, with resolution of symptoms ranging from 77%-97%. However, there is a population of patients with symptomatic biliary pain who are negatively worked-up, including a "normal" CCK-HIDA scan with ejection fraction greater than 35% that never receive a diagnosis, and thus no definitive treatment. For some of these patients their symptomatic biliary pain is reproduced during their CCK-HIDA. It is believed these patients have a novel diagnosis, Normokinetic Biliary Dyskinesia (NBD). NBD consists of an ejection fraction greater than 35%, a complete negative work up, and reproducible biliary pain with CCK-HIDA scan. It is hypothesized these patients will have resolution of biliary pain when treated with cholecystectomy.

Methods: With approval of the Institutional Review Board, a retrospective chart review was completed looking for patients with biliary pain in accordance with the ROME III criteria. Patient inclusion consisted of those with a negative work-up (minimum of normal ultrasound of the gallbladder and normal upper endoscopy), documented reproducible biliary symptoms on administration of CCK during their HIDA scan, and an ejection fraction greater than 35%. Treatment modality was laparoscopic cholecystectomy. Data points included: age, sex, duration of symptoms, biliary ejection fraction, duration of follow up, resolution of symptoms, type of surgery, and final pathology.

Results: Over a three year period from August 2008 until July 2011, 19 patients were found to fit the inclusion criteria for this study. All had documented reproducible biliary pain on administration of CCK during the HIDA scan and an ejection fraction greater than 35%, with a complete negative work up. There were 15 women and 4 men with a mean age of 48.4±13.0 years, all had an ejection fraction greater than 35% with a mean of 75.1±19.8%. The average duration of preoperative symptoms was 7±6 months and the average post-operative follow up was 6±3.5 months. Patients were followed in clinic and contacted at the termination of this study. All patients were treated with laparoscopic cholecystectomy. On final pathology 18 patients had chronic choelcystitis, and one patient had chronic cholecystitis with cholesterolosis. Of the patients included in this study, 16 had complete resolution of symptoms, two had partial resolution, and one had no change. There was a complete resolution rate of 84.2% and an improvement rate of 94.7%.

Conclusion: Utility of treating biliary dyskinesia diagnosed by CCK-HIDA and ejection fraction less than 35% with laparoscopic cholecystectomy has been established in the literature. We suggest that those patients who present with biliary pain, a complete negative work up, and reproducible symptoms on administration of CCK during their HIDA scan, will benefit from cholecystectomy regardless of ejection fraction. Those who will benefit greatest from this are those with an ejection fraction greater than 35% who currently are excluded from the diagnosis of biliary dyskinesia, and thus treatment. We hypothesize a new diagnosis, Normokinetic Biliary Dyskinesia and recommend cholecystectomy as treatment.

S018

SCREENING FOR THROMBOPHILIAS IN BARIATRIC SURGICAL

CANDIDATES Vincent Chavanon, Medical Student, <u>Gabriel E Herrera, MD</u>, Giselle Hamad, MD University of Pittsburgh Medical Center, University of Pittsburgh

Introduction: Obesity is an independent risk factor for the development of venous thromboembolism (VTE), which can add significant morbidity and mortality to bariatric surgery procedures. Obesity has been shown to be associated with hypercoagulable disorders. There is no consensus regarding the optimal method of thromboprophylaxis or the appropriate method for VTE risk stratification in bariatric surgery candidates. A better understanding of the hypercoagulability disorders associated with obesity may prompt the implementation of preventive strategies to decrease the postoperative incidence of VTE. The purpose of this study was to determine the prevalence of thrombophilias in this high-risk population.

Methods: Between August 2008 and March 2011, all bariatric patients undergoing preoperative evaluation for surgery underwent risk assessment for VTE. Risk factors for VTE were assessed, including personal or family history of VTE, body mass index (BMI) ≥ 60 kg/m2, pulmonary hypertension, obstructive sleep apnea, tobacco use, oral contraceptive use, hormone replacement therapy, and immobility. Serologic evaluation included platelet count, coagulation profile, and screening for thrombophilias. All patients were screened for the presence of both inherited thrombophilias (Protein C or S deficiency, Factor V Leiden, MTHFR mutation, prothrombin gene mutation and antithrombin III deficiency) and acquired thrombophilias (lupus anticoagulant and hyperhomocysteinemia). The prevalence of thrombophilias was determined. Patients were given heparin 5000 IU s.c. preoperatively and enoxaparin 40 mg s.c. every 12 hours postoperatively. Patients with hypercoagulable disorders, prior VTE, or BMI ≥ 60 kg/m2 were given extended prophylaxis with enoxaparin 40 mg b.i.d. for two to four weeks. Preoperative retrievable inferior vena caval (IVC) filters were placed in patients with prior VTE or BMI ≥ 60 kg/m2. The incidence of postoperative VTE was determined in the initial 30-day postoperative period.

Results: During the study period, 213 patients underwent preoperative bariatric evaluation and risk assessment for VTE. Overall, 98 patients (46%) were diagnosed with at least one thrombophilia, and 22 patients (10.3%) had 2 or more thrombophilias. The prevalence of

inherited thrombophilias was: protein C deficiency (1%), protein S deficiency (1.5%), Factor V Leiden (3%), MTHFR C677T homozygous (9.9%), MTHFR A1298C homozygous (7.8%), prothrombin gene mutation (3.6%) and antithrombin III deficiency (1%). The prevalence of acquired thrombophilias was: lupus anticoagulant (8.2%), and hyperhomocysteinemia (15.6%). Preoperative retrievable IVC filters were placed in 21 (9.9%) patients and extended prophylaxis was used in 76 (35.8%). One patient (0.46%) had a postoperative hemorrhage on the night of surgery and required reoperation. There was one pulmonary embolism (0.46%) on postoperative day 1 in a patient with hyperhomocysteinemia and compound heterozygous MTHFR. Another patient with one copy of the MTHFR gene had a deep vein thrombosis (0.46%) on day 21, 2 days after discontinuing the extended prophylaxis. There were no mortalities.

Conclusion: A substantial proportion of bariatric surgery patients present with inherited and acquired thrombophilias. Among the patients who received extended prophylaxis, the incidence of VTE was low. The preoperative screening for thrombophilias is a useful tool in guiding thromboprophylaxis in bariatric surgical patients.

S019

ANALYSIS OF PRACTICE PATTERNS IN 66103 LAPAROSCOPIC AND OPEN CHOLECYSTECTOMIES USING THE NSQIP DATABASE Jesse R. Gutnick, MD, Allan E Siperstein, MD Cleveland Clinic

INTRODUCTION: The National Surgical Quality Improvement (NSQIP) database provides an opportunity to observe practice patterns for cholecystectomy.

METHODS AND PROCEDURES: 66103 laparoscopic (LC) and open cholecystectomies (OC) +/- intra-operative cholangiograms (+IOC) and common bile duct explorations (+CBDE) were extracted from the NSQIP database (2007-2009) and analyzed with JMP Version 9.

RESULTS: Overall, LC=88.4%, Converted to OC=1.9%, OC=9.7%.

Table 1.	Percent a	nd operative time	s (minute	es) for chole+/-IOC/CBI	DE by	procedure type
		Chole only		Chole+IOC only		Chole+IOC+CBDE
Procedure	%	Time(SE)	%	Time(SE)	%	Time(SE)
LC	74.7	65.2(0.2)	24.7	73.1(0.3)	0.5	123.1(2.0)
Converted	78.3	126.1(1.8)	17.4	157.6(3.9)	4.4	195.8(7.7)
OC	75.9	118.9(1.0)	17.6	144.4(2.0)	6.5	169.0(3.3)

(Table 1: all p<0.0001 (SE=standard error))

Elevated bilirubin, aspartate transaminase, alkaline phosphatase are pre-operative risk factors for choledocholithiasis. In patients with 0, 1, 2, 3 risk factors elevated, IOC was performed in 24.2%, 30.0%, 37.8%, 41.5%, and IOC+CBDE was performed in 0.7%, 1.5%, 3.5%, 7.8% of patients (p<0.0001).

Cholecystectomy cases were performed by: attending alone in 37.6%, attending in the operating room with resident in 61.2%, attending in the operating suite in 0.9%, with attending not present or not entered in 0.3%.

Table 2. Percent, operative times (minutes), complication rates for LC, LC converted to OC, and OC by attending involvement

			Attending Alone			Attending with Resident		Attending in Suite	
Procedure	96	Time(SE)	Complication%	96	Time(SE)	Complication%	96	Time(SE)	Complication%
LC	91.8	54.2(0.2)	3.9	86.4	75.8(0.2)	3.8	81.4	82.0(2.0)	5.3
Converted	1.4	116.0(1.7)	16.2	2.3	114.3(1.4)	17.8	1.5	155.1(15.0)	22.2
OC	6.8	105.5(0.8)	19.2	11.3	134.0(0.6)	20.3	17.1	136.6(4.4)	21.1

(Table 2: all p < 0.0001, except p > 0.1 for complications rate by attending involvement)

Table 3. Percent,	opera	tive times	(minutes), comp	licatio	on rates for	chole+/-IOC+/-0	CBDE	by attendin	g involvement
			Attending Alone			Attending with Resident			Attending in Suite
Procedure	96	Time(SE)	Complication%	96	Time(SE)	Complication%	96	Time(SE)	Complication%
Chole-only	67.3	55.7(2.1)	5.0	7.5	79.8(0.3)	5.8	82.7	88.2(2.2)	7.9
Chole+IOĆ	31.7	63.1(0.4)	5.1	21.2	94.3(0.5)	5.9	16.3	112.8(5.1)	5.8
Chole+IOC+CRDE	1.0	117 9(2 1)	15.1	13	169 5(2 0)	18 3	1.0	136 2(20.1)	33.3

(Table 3: chole-only complication rate p=0.0009, other complication rates p>0.05, other p<0.0001)

Morbidity for all cholecystectomies, LC, Converted to OC, OC: 5.7%, 3.9%, 17.4%, 20.1% (p<0.0001). Return to operating room rate: 1.4% overall, LC 1.1%, Converted to OC 2.8%, OC 3.8% (p<0.0001).

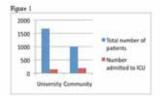
CONCLUSIONS: This large dataset reveals several patterns. Operative times are longer, conversion rates are higher, and OC are more common with resident involvement, but complication rates are negligibly higher, and may reflect case mix. OC and Converted cases have comparable

operating times and rates for morbidity, return to operating room, IOC, and CBDE, suggesting that conversion is most likely for elective indications other than choledocholithiasis, rather than intra-operative mishaps. IOC is performed less frequently than one would expect based on this dataset, i.e. pre-operative risk of choledocholithiasis and the minimal additional time for LC+IOC, or based on SAGES guidelines and teaching priorities. Similarly, LC+CBDE is rare in this dataset, despite its demonstrated utility. These data suggest that resident training in cholecystectomy is safe, but indicates missed opportunities to perform IOC and laparoscopic CBDE.

S020

OUTCOMES FOLLOWING DIAGNOSTIC LAPAROSCOPY FOR TRAUMA: A NATIONAL TRAUMA DATA BANK COMPARISON OF UNIVERSITY AND COMMUNITY HOSPITALS Wissam Raad, MD MRCS, J. Alexander Palesty, MD FACS, Juan A Sanchez, MD FACS The Stanley J. Dudrick Department of Surgery, Saint Mary s Hospital, Waterbury, CT

INTRODUCTION- Diagnostic laparoscopy is becoming increasingly popular at ruling out intra-abdominal injuries in hemodynamically normal trauma patients. It is usually utilized to prevent unnecessary exploratory laparotomies with their associated higher morbidity and cost. The goal of this study is to compare outcomes of diagnostic laparoscopy for trauma among community and university hospitals. METHODS- The National Trauma Data Bank between 2002 and 2007 (NTDB 7.2) was queried for all patients who underwent diagnostic laparoscopy in levels I and II community and university teaching centers. Comparisons were made reviewing hospital length of stay (LOS), intensive care unit LOS, ventilator days, major complication rate (pulmonary embolism, pneumonia, lower extremity deep vein thrombosis, pneumothorax, and wound infection), mortality, discharge pattern, and whether a laparotomy was performed in the same admission. Student t tests were used to determine statistical significance defined as P < 0.05. **RESULTS**- We identified 2674 cases (1674 performed in university centers, and 1000 from community centers). Severity of injuries and patients' characteristics were identified with GCS, systolic blood pressure, and Injury Severity Score (ISS) in the emergency department. The mean ISS approached 9 in university centers and 11 in community centers. The average number of hours to procedure was 26 for university centers and 35 for community centers. Average LOS was 7 and 8 and the average number of ICU days was 3 and 4 days for university and community centers respectively. Mortality rate was 1.5% and 2.1%. 18.5% of patients in university centers, and 24.4% in community centers had a laparotomy. The complications rate was low and similar between both groups. (Data is summarized in figure 1 and tables 1, 2, & 3). **CONCLUSION**-The comparisons between community and university hospitals in Level I and II trauma centers demonstrate no significant difference in terms of outcomes and complication rate in relation to diagnostic laparoscopy. LOS, ICU admissions and ventilator days were higher in community hospitals, however, there are multiple variables affecting those values including the higher ISS of the population presenting to community centers. University as well as community trauma centers should be encouraged to utilize diagnostic laparoscopy for trauma when indicated.



Severity of injury in ED	University	Community	Penine
Av. 0CS	13.24	13.54	0.967
Av.SBP	130.48	136.97	0.715
Av. ISS	9.01	10.76	0.000

Brown W	University	Community	Freise
Av. Age	29	30	0.213
Av. LOS days	0.69	8.10	0.017
Av. ICU days	2.53.	3.54	0.042
Arr. Visit days	1.13	1.97	0.039
Av. hm to procedure	26.67	35.37	0.136

Recorded events %	University	Community
Laparotomy rate	16.5	24.4
Routine home ducharge	79,4	72.6
Mortality	1.5	2.1
Wound infection	0.8	0.9
Porumonia	2.3	23
DVT	0.3	1.0
PE.	0.2	0.2
Intra-abdominal abscess	0.1	9.2
Paramothorax	0.3	0.7

S021

THE BENEFITS OF DIAGNOSTIC LAPAROSCOPY IN THE EVALUATION OF ABDOMINAL TRAUMA Jay N Collins, MD, Rebecca C Britt, MD, Leonard J Weireter, MD, L D Britt, MD MPH Eastern Virginia Medical School

INTRODUCTION: To evaluate the safety and efficacy of diagnostic laparoscopy (DL) against non-therapeutic laparotomy (NTL) in the setting of acute abdominal or thoracoabdominal trauma.

METHODS: A retrospective analysis of adult trauma patients older than 16 years admitted from September 1, 2005 to August 31, 2011 was performed. Hemodynamically normal patients with suspicion for intraabdominal injury after blunt or penetrating injury underwent either exploratory laparotomy or diagnostic laparoscopy based on the attending surgeon's preference. Patient demographics, hospital length of stay (LOS) and hospital complications were analyzed.

RESULTS: During the study period 7384 adult trauma patients, 5998 blunt and 1386 penetrating, were admitted. A total of 224 exploratory laparotomies were done of which 41 were non-therapeutic(NTL). DL was done in 40 patients. Twenty-three patients had no injury identified on diagnostic laparoscopy (NDL) and were soon discharged. Seventeen DL patients required repair of injuries, six done laparoscopically and 11 converted to open laparotomy for further evaluation and repair. Age (31.8 vs. 30.5), male gender (80% vs. 85%) and ISS (8.3 vs. 8.0) were similar in the NTL and DL groups. Blunt and penetrating injuries were seen in 6 and 34 of NTL and in 12 and 27 of DL patients. Mean hospital LOS was 1.8 days in NDL and 5.0 days in NTL patients (p = 0.01). Three complications, one subcutaneous abscess, one retained hemothorax and urinary retention, occurred in three NDL patients. NTL patients sustained 23 complications including ileus (12), wound infection (3), urinary tract infection (2), pneumonia, C. Difficile colits, respiratory failure requiring reintubation, splenectomy, atrial fibrillation and retained foreign body. No NDL patient had missed injuries or required re-exploration for a negative predictive value of 100%. Fifty-eight percent (23/40) DL patients safely avoided NTL. There were no deaths in either group.

CONCLUSION: In the evaluation of acute abdominal trauma with the hemodynamically normal patient, diagnostic laparoscopy is safer and allows for earlier discharge than NTL when abdominal injuries are not present. This will result in significant cost savings. Non-therapeutic laparotomy is associated with more significant complications and much longer LOS than DL.

S022

ENVIRONMENTAL CONTAMINATION AS A RESULT OF AEROSOLIZED BLOOD AND FLUID DURING LAPAROSCOPIC SURGERY. Richard K Englehardt, MD, Brent Nowak, Michael V Seger, MD, Frank D Duperier, MD

University of Texas Medical Center at Houston, Bariatric Medical Institute

Introduction: Laparoscopic surgery is known to provide many advantages to patients by reducing post-operative pain, shortening hospital stays, and reducing incision related co-morbidities. Surgeon and staff exposure to blood and body fluids has generally been reduced without the need to "open" the abdominal cavity. There is however a potential increase in risk for aerosolized droplets or tissue traveling considerable distances upon release of intra-abdominal pressure as can commonly occur with specimen extraction in laparoscopic surgery. This creates an environmental hazard for members of the surgical team. To date there are no studies which have sought to quantify or describe this common occurrence. This study aims to describe and provide a method of measurement of aerosolized blood and tissue contamination during evacuation of the pneumoperitoneum in laparoscopic surgery.

Methods and Procedures: Patients were selected at random from a cohort of patients undergoing either laparoscopic sleeve gastrectomy or laparoscopic Roux-en-Y gastric bypass. During these procedures a 15 mm trocar is placed in the left mid abdomen, and is typically removed for extraction of the gastric specimen or passage of an EEA surgical stapler. At the time of extraction of the 15 mm trocar, the

abdomen was insufflated to a pressure of 15 mm Hg, and a white board was placed horizontally 18 inches above the patient's abdomen. The test was repeated at 24 inches. The pneumoperitoneum was allowed to completely evacuate and the board was examined for particulate splatter. Using machine vision and computerized spatial analysis the boards were recorded, analyzed, and scored based on the distance, type, and quantity of particulate contamination. Histograms were developed to demonstrate the height and radius of aerosolization.

Results: A total of five initial tests were performed which demonstrated that at 18 inches from the level of the incision an average of 36 (16-62) particles visible to the naked eye were observed. When conducted from a height of 24 inches the average number of particles observed decreased to 12. Only blood and serous fluid was found as a contaminant on the boards at both 18 and 24 inches. Average radius of aerosolized contamination was 7 inches.

Conclusions: Evacuation of the pneumoperitoneum during laparoscopic surgery results in consistent visible contamination at distances of both 18 and 24 inches from the patient's incision. If methods are not undertaken to control the aerosolized spread of particles during release of the pneumoperitoneum, significant contamination to the surgical team can occur. These droplets are of variable size and may not be noticed making contact with one's skin. Pressurized droplets could also contact the eyes of surgical personnel, even those wearing eye protection. The results of this study suggest that not only should all members of the surgical team during a laparoscopic case wear appropriate protective barriers to prevent body fluid contact, but conscious measures should be undertaken to prevent environmental contamination during pneumoperitoneal evacuation. Simple steps such as reducing the intrabdominal pressure during extraction can dramatically reduce the amount of airborne fluid and tissue making the operating room safer for all.

S023

ASSESSING IMMEDIATE POSTOPERATIVE URINARY FUNCTION IN TAPP INGUINAL HERNIAS USING THE AMERICAN UROLOGICAL ASSOCIATION SYMPTOM SCORE FOR BPH Robert Mckay, MD Ellis Hospital

INTRODUCTION: To date, no sensitive measure has been used to quantify urinary symptoms in patients undergoing transabdominal preperitoneal (TAPP) inguinal hernia repair in the 24- to 48- hr postoperative period. The American Urological Society Score (AUASS) is a validated score for urinary symptoms for benign prostate hypertrophy (BPH). This has been applied to TAPP inguinal hernia repair. METHODS AND PROCEDURES: Men (n = 134), mean age 48.8 years (range, 20 to 87), underwent TAPP inquinal hernia repair. Hernia repair was divided into bilateral and unilateral repair. Unilateral repair was further divided into isolated direct and indirect hernia. Preoperative and postoperative 24- and 48-hr AUASS' were obtained. AUASS was recorded as: 1-7, mild; 8-19, moderate; or 20-35, severe. In each group, the 24- and 48-hr scores were compared with preoperative baseline scores and changes from the preoperative baseline scores were recorded. Isolated direct and indirect hernia and unilateral and bilateral hernia were compared. Descriptive statistics, Student's t- test, multiple regression, and repeated measures were used to compare outcomes. All patients received inhalational general anesthesia, with only minimal variation in anesthetic agents. Most received rocuronium +/-succinylcholine and reversal of neostigmine with glycopyrrolate +/- atropine. One surgeon performed all the surgeries. RESULTS: Overall, at 24 hr after surgery, the AUASS change from baseline increased significantly, indicating an overall worsening of urinary symptoms (p =.0008). At 48 hours, AUASS significantly improved from baseline, from moderate to mild (p=.0332). (Table 1) Multiple regression analysis showed no significant relationship existed between age and change in score from baseline to 48-hr. No significant difference occurred in changes in AUASS from baseline to 24- and 48-hr between isolated direct and indirect hernia repair, nor between bilateral and unilateral TAPP inguinal hernia repair. No patients required urinary catherization.

			Table 1 A	AUAS Score		
	n	baseline	24 hr	Δ at 24 hr	48 hr	Δ at 48 hr
Hernia overall	134	8.2 ± 6.6 moderate	10.8 ± 8.0 moderate	2.6	$6.9 \pm 7.2 \text{ mild}$	-1.3
Bilateral	27	8.8 ± 7.1 moderate	11.7 ± 9.6 moderate	2.9	8 ± 8.8 moderate	8
Unilateral	107	8 ± 6.5 moderate	10.6 ± 7.6 moderate	2.6	6.7 +/- 6.8 mild	-1.3
Direct	35	8 ± 6.8 moderate	10.5 ± 8.2 moderate	2.5	$7.4 \pm 7.7 \text{ mild}$	6
Indirect	39	8.3 ± 6 moderate	9.6 ± 6.8 moderate	1.3	6.1 ± 5.8 mld	-2.2

CONCLUSION: The AUASS significantly increased at 24-hr for TAPP inguinal hernia repairs, indicating a worsening of symptoms. At 48 hours, symptoms significantly improved from baseline, moderate to mild. The AUASS is a useful and sensitive tool to compare postoperative urinary symptoms in TAPP inguinal hernia repair.

S024

LOCAL ADAPTATIONS AIDS ESTABLISHMENT OF LAPAROSCOPIC SURGERY IN A SEMI-URBAN NIGERIAN HOSPITAL Adewale O Adisa, MBChB FWACS FMCSNig DMAS, Oladejo O Lawal, MBBS FMCSNig FWACS, Olukayode A Arowolo, MBBS FWACS, Olusegun I Alatise, MBChB FWACS Obafemi Awolowo University, Ile-Ife, Nigeria

Introduction: After several years of lagging behind due to several constraints, many general surgeons across Nigeria are now performing laparoscopic surgery. Many are however still concerned about its feasibility and safety in view of several local adaptations employed. Methods and procedure: All patients with general surgical conditions who had laparoscopic surgery from January 2009 through June 2011 in our hospital were prospectively studied. A modified laparoscopic set-up employing locally assembled and a few imported materials were employed for the procedures. Members of the operation team were trained locally to facilitate their familiarization with laparoscopic surgery. Results: One hundred and fifty-five patients whose ages ranged between 18 and 72 years had laparoscopic surgeries within the study period. These include 38(24.5%) laparoscopic cholecystectomies, 31(20.0%) appendectomies, 48(30.9%) diagnostic laparoscopy for staging and biopsy of intra-abdominal masses, 18(11.6%) laparoscopic adhesiolyses, 2(1.3%) colorectal surgeries, 5(3.2%) laparoscopic hernia repairs and 13(8.4%) other varied procedures. All diagnostic procedures were performed as day cases while the duration of hospital stay was 1-3 days for the therapeutic procedures. The commonest complication was superficial port site infection in 11(7.1%) patient. No mortality was recorded. Various local adaptation techniques were introduced to facilitate the establishment and sustenance of the procure in our setting leading to a rapid acceptance of the procedure among our patients and co-workers.

Conclusion: Our outcome shows the feasibility of laparoscopic surgery in Nigeria. We advocate similar local adaptations to increase the use of laparoscopic surgery in hospitals located in limited resource settings. Key words: Local adaptations, laparoscopic surgery, Nigeria.

S025

REMOTE EVALUATION OF LAPAROSCOPIC PERFORMANCE USING THE GLOBAL OPERATIVE ASSESSMENT OF LAPAROSCOPIC SKILLS

lan Choy, BEng MD MEd, Andras Fesco, BSc MD, Josephine Kwong, BScH MPA, Timothy Jackson, MD MPH, <u>Allan Okrainec, MD MHPE</u> Department of Surgery, University of Toronto, Temerty/Chang Telesimulation Centre, University Health Network, Toronto, Ontario, Canada

Telesimulation and telementoring have emerged as important tools in improving access to advanced surgical techniques amongst surgeons globally. With the continuing improvement in telecommunication infrastructure in the developing world, as well as support from programs such as the SAGES Go Global Initiative, telesimulation and telementoring have the potential to play a significant role in the global development of laparoscopic surgery.

In order for these tools to be used to provide surgical training in remote settings, an objective and reproducible assessment tool must be available to provide feedback to trainees. The objective of this study was to determine the feasibility of using the Global Operative Assessment

of Laparoscopic Skills (GOALS) assessment tool to assess laparoscopic skills remotely via the same telecommunication technology used in telesimulation and telementoring. A second objective was to identify how factors unique to remote assessment such as bandwidth and image quality influence the reliability of the the GOALS assessment tool.

Methods and Procedures: This study used an opportunity sample of 34 surgical trainees and general surgeons with varying experience levels. Study participants were evaluated for their technical performance during laparoscopic cholecystectomies (LC) by four expert observers. One observer was located in the operating room and observed the subject directly while the other three observers were located in remote locations within the same hospital. These remote observers viewed the operation using SkypeTM videoconferencing software on a laptop that received the direct video output from the laparoscope. The remote observers were randomly assigned, and blinded to, one of three bandwidth restrictions (unlimited, 256 kbits/s, and 64.4 kbits/s). All observers used the GOALS assessment tool to evaluate the trainee's technical skills. The Maryland Visual Comfort Scale (MVCS) was used by the remote observers to evaluate the video quality of their respective connections.

Results: The intraclass correlation coefficient (ICC) for the total GOALS score between local observers and all remote observers was 0.45 (95% confidence interval (CI) 0.23 to 0.69). The ICCs between local observers and high-bandwidth remote observers was 0.62 (95% CI 0.23 to 0.82), between local observers and medium-bandwidth remote observers was 0.52 (95% CI 0.19 to 0.75), and between local observers and low-bandwidth remote observers was 0.49 (95% CI 0.11 to 0.74). There was a statistically significant difference between the MVCS scores of the high and low-bandwidth observers (p=0.0004) and the medium and low-bandwidth observers (p<0.0001).

Conclusions: The results of this study demonstrated a positive correlation between GOALS scores of local observers and remote observers, with increasing reliability seen as the internet bandwidth increased. These findings support the use of the GOALS assessment tool in remotely evaluating laparoscopic surgical skills. Further research is needed to assess how this current system of remote assessment can be improved upon to obtain greater correlation for specific GOALS domains and how these tools affect surgical outcomes in the remote communities in which they are applied.

S026

DATA-BASED SELF-STUDY GUIDELINES FOR THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY EXAMINATION Maria A Cassera, BS, <u>Bin Zheng, MD PhD</u>, Lee L Swanstrom, MD Gastrointestinal and Minimally Invasive Surgery Division, The Oregon Clinic

Introduction: The goal of this study is to analyze residents' performance on the Fundamentals of Laparoscopic Surgery (FLS) manual skills tasks following the American Board of Surgery mandate in 2010, and provide a set of self-study reference guidelines for residents to optimize chances of passing the manual skills test.

The FLS program is frequently used for teaching and assessing the competence of surgical residents involved with laparoscopic procedures. The cognitive component of FLS teaches knowledge and problemsolving skills, and the manual skills component measures performance of laparoscopic tasks. In 2010, the American Board of Surgery mandated that all general surgery residents pass the FLS examination in order to qualify for the American Board of Surgery Certifying Examination. In preparing for the FLS test, residents usually adopt a self-learning strategy where practice time can be managed with more flexibility. However, with this self-learning strategy they lack guidance from experts and risk understudying for their high-stakes exam.

The goal of this project is to use the data from the first year of mandated examination to determine study goals for self-guided practice of the FLS manual skills tasks that will predict success with the examination.

Methods: The FLS manual skills score sheets for all PGY-5 residents in 2010 were supplied by the FLS Administrative Office. Score sheets list the time and accuracy of each of the 5 components of the exam, and

descriptive statistics were conducted on the results of these tests. Data was then grouped by the pass/fail results of the exam, and the minimal time requirement for passing each skill test was reported for guiding practice.

Results: In 2010, a total of 1048 proctored FLS tests were completed by PGY-5 residents. The mean task times achieved by all residents for the peg transfer was 84 ± 31 seconds, pattern cut was 139 ± 54 seconds, endoloop was 78 ± 29 seconds, extracorporeal suturing was 158 ± 66 seconds and intracorporal suturing was 168 ± 77 seconds. In the pass group (N = 988), the mean times to complete the peg transfer was 80 seconds, pattern cut was 134 seconds, endoloop was 75 seconds, extracorporeal suturing was 148 seconds and intracorporal suturing was 160 seconds. The suggested self-study goal for each test is 53 seconds for peg transfer, 86 seconds for pattern cut, 50 seconds for endoloop, 99 seconds for extracorporeal suturing, and 95 seconds for intracorporeal suturing. If a resident can reliably achieve these results during self-study, they will have an 84% chance of passing the exam.

Conclusion: Residents who are preparing to take the FLS test can refer to data presented in this study to set their practice goals. Having data based practice goals will help residents to improve the chances of passing their high-stakes FLS exams.

S027

COMPREHENSIVE PROFICIENCY-BASED INANIMATE TRAINING FOR ROBOTIC SURGERY: RELIABILITY, FEASIBILITY, AND EDUCATIONAL BENEFIT Nabeel A Arain, MD MBA, Genevieve Dulan, MD, Deborah C Hogg, BS, Robert V Rege, MD, Cathryn Powers, MD, Seifu T Tesfay, RN MS, Linda S Hynan, PhD, Daniel J Scott, MD University of Texas Southwestern Medical Center

Introduction: We previously developed a comprehensive, proficiency-based robotic training curriculum that aimed to address 23 unique technical skills identified via task deconstruction of robotic operations. Prior studies supported construct, content, and face validity. The purpose of this study was to assess reliability, feasibility, and educational outcomes associated with curricular implementation.

Methods: Over an 11-month period, novice robotic trainees (n=55: 47 residents, 5 faculty, and 3 fellows) from general surgery (n=20), urology (n=18), and gynecology (n=17) were enrolled in a 2-month curriculum which included: 1) online-didactics, 2) half-day hands-on tutorial, and 3) self-practice (individually scheduled sessions) using 9-inanimate exercises until proficiency levels were achieved. Each trainee completed a questionnaire (5-point Likert scale) and performed a single proctored repetition of each task before (pre-test) and after (post-test) training. Training was supervised by a designated proctor and feedback was given accordingly. Five exercises used FLS models with modifications (peg, clutch/camera peg, pattern-cut, and interrupted and running suture) and 4 used custom-made components (rubber-band, stairrubber-band, clutch/camera, and cutting-rubber-band). Each task was scored for time and errors using modified FLS metrics; task scores were normalized to proficiency levels and a composite score equaled the sum of the 9 normalized task scores. For inter-rater reliability (IRR; degree of agreement among raters), 3 trainees (3 repetitions per task) were scored by two trained raters on all 9 tasks and intra-class correlation coefficients (ICC; measure of reliability) were analyzed. Data from 8 experts was analyzed using ICC and Cronbach's alpha to determine test/retest reliability and internal consistency, respectively. Educational benefit was assessed by comparing baseline (pre-test) and final (post-test) trainee performance; comparisons used Wilcoxon signed rank test. Results: Of 55 trainees that pre-tested, 53 (96%) completed all curricular components in 9.0 to 16.8 hours. All 53 trainees reached proficiency for

all 9 exercises after completing an average of 71.6 \pm 28.2 repetitions over 5.0 \pm 1.4 hours; practice was completed during 3-8 self-practice

sessions with relatively extensive (4.8 ± 0.5) proctor feedback. Proficiency levels were rated as moderately difficult (2.9 ± 0.9) , highly appropriate (4.5 ± 0.7) , and provided excellent feedback (98% agreement amongst trainees). While trainees felt moderately to very comfortable with their laparoscopic skills (3.4 ± 0.9) , they had minimal prior robotic experience and poor comfort with robotic skills (1.8 ± 0.9) at baseline (pre-test) compared to final (post-test) (3.1 ± 0.8) , p<0.001). Analysis of IRR data for the composite score revealed an ICC of 0.96 [95% confidence interval (CI), 0.71-1.00; p<0.001]. Test/retest reliability was 0.91 [95% CI, 0.40-0.91; p<0.001] and internal consistency was 0.81. Performance improved after training for all 9 tasks and according to composite scores (548 \pm 176 vs. 914 \pm 81, p<0.001) demonstrating significant educational benefit. 100% of trainees indicated that their robotic skills improved.

Conclusion: This curriculum is associated with high reliability measures, was feasible for a large number of trainees, and resulted in significant performance improvement. Further studies and adoption are encouraged.

S028

LEARNING CURVE OF ENDOSCOPIC SUBMUCOSAL DISSECTION
(ESD) IN AN ESTABLISHED EXPERIMENTAL SETTING Masayuki Kato,
MD PhD, Yunho Jung, MD, Mark A Gromski, MD, Jongchan Lee, MD,
Navaneel Biswas, MD, Chuttani Ram, MD, Kai Matthes, MD PhD Beth Israel
Deaconess Medical Center, Harvard Medical School, Boston, MA

INTRODUCTION - Endoscopic submucosal dissection (ESD) has become a standard therapy for early gastric neoplasia in Asian countries. American endoscopists have been deliberate to adopt this therapy for gastric neoplasia, most likely secondary to a lower prevalence of the disease in Western countries and a decreased ability to develop necessary training and proficiency in the technique. From a safety and efficacy standpoint, simulation training may empower the endoscopist to be able to learn the basic tenets of ESD in a safe, controlled and supervised setting before trying first in humans. We report on a study to determine the learning curve of ESD in a simulated setting (EASIE-R, Endosim LLC, Berlin, MA) with an established validated ex-vivo endoscopic model.

MEHODS AND PROCEDURES - The study was designed as a prospective, randomized, ex-vivo study. Ex-vivo porcine organs were utilized in the EASIE-R endoscopic simulator. A total of 150 artificial lesions, each 2x2 cm in size, were created in fresh ex-vivo porcine stomachs at 6 different anatomical sites (fundus anterior and posterior, body anterior and posterior, antrum anterior and posterior). Three examiners (2 beginners, 1 expert) participated in this study. All parameters (procedure time, specimen size, en bloc resection status, perforation) were recorded by an independent observer for each procedure.

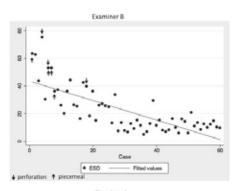
RESULTS: All 150 lesions were successfully resected with the use of the ESD technique by the three endoscopists. After 30 ESD cases, the two novices performed ESD with a 100% en-bloc resection rate and without perforation. For the procedures performed by the novices, the total time and perforation rate in the last 30 cases were significantly lower than during the first 30 cases (Table1&Figure1)

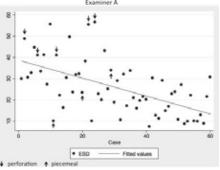
CONCLUSIONS: Our study suggests that performing 30 ESD resections in an ex-vivo simulator lead to a significant improvement in safety and efficiency. Future studies should randomize clinical trainees interested in ESD to having simulation training in addition to traditional training versus solely traditional training in ESD, and compare clinical outcomes.

Table1: Comparison between the first 30 cases and the last 30 cases

ExmaminerA (novice)	First 30cases	Last 30cases	p value	ExmaminerB (novice)	First 30cases	Last 30cases	p value
total time, minutes(±SD)	33.0±2.34	18.7±1.47	< 0.0001		32.6±3.07	11.6±0.91	< 0.0001
area, cm2(±SD)	7.9±0.48	7.5±0.36	0.24		9.46±0.54	9.67±0.32	0.634
En bloc resection %	90%(3/30)	100%(0/30)	0.039		83.3%(26/30)	100%(0/30)	0.0096
perforation %	16.7%(5/30)	0%(0/30)	0.0096		10%(3/30)	100%(0/30)	0.0389

Figure 1: The graph of the learning curve for ESD





S029

SIGNIFICANT TRANSFER OF SURGICAL SKILLS OBTAINED WITH AN ADVANCED LAPAROSCOPIC TRAINING CURRICULUM; FEASIBILITY OF LEARNING ADVANCED LAPAROSCOPY IN A GENERAL SURGERY RESIDENCY. Julian Varas, MD, Ricardo Mejía, MD, Oslando Padilla, PhDS, Felipe Maluenda, MS, Napoleon Salgado, MD, Arnoldo Riquelme, MD, Jorge Martinez, MD, Nicolas Jarufe, MD, Rajesh Aggarwal, MBBS MA PhD FRCS, Camilo Boza, MD Department of Digestive Surgery. Surgery Division. Pontificia Universidad Católica de Chile

INTRODUCTION: Currently, there is no valid competency based training programs to develop skills necessary to perform advanced laparoscopic procedures. Furthermore, there are no simulation programs proving that once advanced laparoscopic skills are obtained, they are transferred to more complex scenarios. **Aim:** To present an advanced simulation training program and to assess the transfer of skills to a live porcine model.

METHODS AND PROCEDURES: 23 first-year residents were assessed in a 14-session advanced laparoscopic training program, performing a laparoscopic hand-sewn Jejuno-jejunostomy on a modified validated bench model with ex-vivo bovine bowel. Procedures were recorded on video, and analyzed by 2 blinded experts using a validated global and specific rating scale (GRS, SRS); Operating time, anastomosis leakage and permeability, were assessed. In addition, a tracking motion system (ICSAD) was utilized in each evaluation. All results were then compared to those achieved by expert surgeons in the same model. Residents were then assessed performing a stapled Jejuno-jejunostomy in a live porcine model. Results were compared to those of 10 general-surgeons graduated from traditional residencies without any lab training program and 6 expert laparoscopic surgeons executing the same procedure. Mann-Whitney and Kruskal-Wallis tests were used to compare each specific non-parametrical variable within each group. Wilcoxon test was used for pre-post Assessment. P value was considered as statistically significant when <0,05.

RESULTS: Learning curves were achieved. Residents improved significantly their GRS and SRS score median (Q1-Q3) at the bench model. In addition, the total path lengths of both hands registered with ICSAD decreased more than a 65%. Results obtained at the bench model were comparable to those achieved by expert surgeons (Table1).

Table 1: Trainees Results obtained at the advanced laparoscopic training program (bench model).

	^Prior to Training (n=23)	(n=23)	(n=6)	^{AB} P value	^{BC} P value
GRS (min 5-max 25)	7(5-17)	23(21-25)	24(23-25)	< 0,0001	0,0129
SRS (min 4-max 20)	7(4-12)	18(16-20)	19(18-20)	< 0,0001	0,2252
% Permeable anastomosis with no Leak	25%	100%	100%	< 0,0001	
Operative Time(s) TPL(meters)	2609(1620-3808) 307(194-510)	1110(810-1410) 115(74-152)	720(685-800) 75(71-79)	< 0,001 0,0002	0,0032 0,0313

AB p value: P values obtained when comparing columns $^{\mathtt{A}}$ and $^{\mathtt{B}}$ with Wilcoxon matched-pairs test

 $^{\rm BC}$ p value: P values obtained when comparing columns $^{\rm B}$ and $^{\rm C}$ with Mann Whitney.

In the live porcine model, trainees obtained significantly better results compared to those of general surgeons with no lab training (p=0.0002), and comparable to those achieved by experts (p=0,364). Trainees, general surgeons and experts GRS scores were: 21(16-21), 12(8-21), 24(23-25) respectively. SRS scores were: 18(16-18), 9.5(7-17), 19(16-20) respectively, p=0.0004. Total path lengths registered for residents were significantly lower compared to general surgeons (p<0.0001) and with no statistical difference compared to experts (p=0,299); 111.5m (70-208), 505.6m (190-880), 62.46m (41-154) respectively. Trainees operative times (in seconds) were faster than general surgeons: 1105(720-1384), 1392(1069-2336) p=0,0133; but slower than experts: 512(397-676).

CONCLUSIONS: Trainees significantly improved their advanced laparoscopic skills to a level compared to expert surgeons. More important, these acquired skills were transferred to a more complex live model.

S030

THE EFFECTS OF VIEWING AXIS ON LAPAROSCOPIC PERFORMANCE: A COMPARISON OF NON-EXPERT AND EXPERT LAPAROSCOPIC SURGEONS. Rebecca J Rhee, MD, Gladys Fernandez, MD, Ron Bush, BS, Neal E Seymour, MD Baystate Medical Center-Western Campus Tufts University School of Medicine

Introduction: While the ideal relationship of telescope viewing axis and instrument working axis in laparoscopic surgery is co-axial, it is often necessary to deviate the view of the surgical field from the direction of the working instruments with potentially negative implications to performance. The objectives of this study are to 1) characterize the performance effects of working progressively further off telescope viewing axis and 2) compare the ability of expert laparoscopic surgeons and non-expert surgeons to compensate for the psychomotor problems imposed by off-axis viewing.

Methods and Procedures: Baystate Medical Center surgical residents between PGY 1 and PGY 5 clinical training years (N=9) and expert laparoscopic surgeons (>250 basic and >50 advanced laparoscopic cases, N=8) performed a standard laparoscopic task (FLS peg transfer) on the Szabo-Berci-Sackier Laparoscopic Trainer using a 0 degree Olympus laparoscope inserted at 0, 45, 90, 135, and 180 degree viewing angles relative to axis of the working instruments (and surgeon position). Scope angles were varied in random order for each participant. Two sequences of the task were completed by all participants at all viewing angles. Performance measures included: a) time to task completion (seconds), b) errors (# dropped objects), and c) task completion rate (% completed transfers). Task time was capped at 300 seconds. Time data were analyzed using a linear mixed model accounting for repeated measures (iterations nested within angle nested within subject). Percent completion data were modeled as a proportion using generalized linear models with a logit link and binomial family. Drops were modeled as counts using a generalized linear model with a log link and Poisson family. These two models clustered on subject (resulting robust standard errors) to account for repeated measures. For all models, trends were assessed using linear contrasts for trend. Differences between experts and non-experts were evaluated using an interaction term in the model. All data analysis was conducted using Stata version 12.0 (StataCorp, College Station TX).

Results: Overall there was a trend towards increased time to completion, increased number of dropped pegs, and decreased percentage of completion as the degree of working off axis of working instruments

increased from 0 to 180 degrees. Expert laparoscopic surgeons demonstrated significantly shorter time to completion (p<0.016) Figure 1, higher percentage of completed peg transfers (p<0.001) Figure 2, and fewer dropped pegs (p<0.001) Figure 3 at all angles compared to non-expert surgeons.

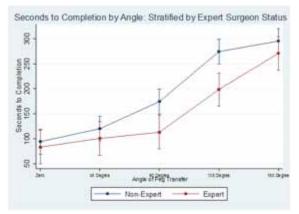


Figure 1.

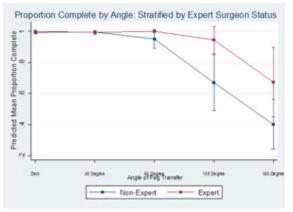


Figure 2.

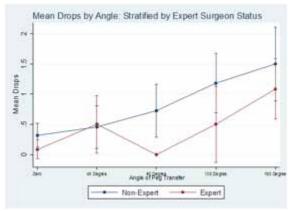


Figure 3.
Handedness, sex, and previous history of experience performing the FLS peg transfer task did not affect level of performance.

Conclusions: Ability to perform degrades as the viewing axis increases relative to working instruments, with the major decrement occurring beyond the 90 degree viewing angle. Expert laparoscopic surgeons have superior performance compared to non-expert surgeons working off the viewing axis.

S031

TRANS-ORAL VIDEO-ASSISTED NECK SURGERY (TOVANS) - A NEW TRANS-ORAL TECHNIQUE OF ENDOSCOPIC THYROIDECTOMY WITH GASLESS PRE-MANDIBLE APPROACH Akihiro Nakajo, PhD, Hideo Arima, PhD, Munetsugu Hirata, Tadao Mizoguchi, Yuko Kijima, PhD, Heiji Yoshinaka, PhD, Shoji Natsugoe, PhD Surgical Oncology of Kagoshima University Hospital

Background: Endoscopic thyroidectomy is a well-established surgical technique. We have been utilizing precordial video-assisted neck surgery (VANS) with a gasless anterior neck skin lifting method. Recently, natural orifice translumenal endoscopic surgery (NOTES) has generated excitement among surgeons as potentially scar-free surgery. We developed an innovative gasless transoral technique for endoscopic thyroidectomy that incorporated the concept of NOTES in a VANS-technique (TOVANS)

Methods: Incision was made at the vestibulum under the inferior lip. From the vestibulum to the anterior cervical region, a subcutaneous tunnel in front of the mandible was created and cervical skin was lifted by Kirschner wires and a mechanical retracting system. This method without CO2 insufflation created an effective working space and provided an excellent cranio-caudal view so that we could perform thyroidectomy and central node dissection safely.

Results: The amount of bleeding was slight in this surgical procedure. All patients began oral intake one day after surgery, and left the hospital on the 4th or 5th day after operation. The sensory disorder around the chin disappeared about 3 to 6 months after surgery. No infection developed with use of preventive anti-bacterial tablets for 3 days.

Conclusions: We developed a new method for gasless transoral endoscopic thyroidectomy with a pre-mandibular approach and anterior neck-skin lifting. TOVANS makes possible complete endoscopic radical lymphadenectomy for papillary thyroid cancer. We believe that this method is innovative and progressive and has not only a cosmetic advantage but also provides easy access to the central node compartment for dissection in endoscopic thyroid cancer surgery.

S032

TRANSANAL HYBRID SIGMOID RESECTION -INTRODUCTION INTO CLINICAL PRACTICE Karl H Fuchs, MD, Wolfram Breithaupt, MD, Gabor Varga, MD, Thomas Schulz, MD AGAPLESION Markus Krankenhaus

Introduction: Reducing access size and trauma is one of the important issues behind Natural orifice translumenal endoscopic surgery(NOTES). The combination of experience with Laparoscopic colorectal surgery(LCS) and Transanal endoscopic Microsurgery(TEM) has helped in using the transanal approach as a realistic option of NOTES-techniques to introduce transanal Hybrid laparoscopic assisted sigmoid resection into clinical practice.

Aim: The purpose of this study is the assessment of the clinical introduction of transanal hybrid sigmoid resection regarding feasibility and patient's safety.

Methods: The authors have clinical experience in LCS, TEM and extensive training in NOTES-techniques. Patients were recruited with pelvic floor disorders and prolaps, in whom a sigmoid resection was indicated. Patients were followed prospectively with a postoperative well-being score, a pain score as well as quality of life score. All complications were prospectively documented. Reducing number and sizes of ports by using the transanal route was the essential change. Camera and two 5mm ports for grasping forceps and ultrasonic dissection power remained the laparoscopic component. All tasks requiring a port diameter >5mm were allocated at the transanal route such as trananal positioning of the proximal stapler envil, trananal application of linear stapling for resection, transanal specimen retrieval, transanal stapler anastomosis and closing the bowel.

Results: Eighteen patients with rectal prolaps underwent transanal hybrid sigmoid resection and pexy (all female; age 61 years (28-86); BMI 25). Conversion: 1 to full laparoscopy; complications: 1 bleeding(no

reintervention); duration of procedure: 131 min(55-184). Gastrointestinal quality of Life index pre/post 96/117.

Conclusion: Transanal hybrid sigmoid resection seems from this initial experience a feasible and rather safe method of Hybrid-NOTES procedure to introduce into clinical practice.

S033

PROSPECTIVE RANDOMIZED CLINICAL TRIAL COMPARING LAPAROSCOPIC CHOLECYSTECTOMY AND HYBRID NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) (NCT00835250)

<u>José F Noguera, PhD MD</u>, Angel Cuadrado, PhD MD, Juan C García, MD, Rafael Morales, MD, José M Olea, MD Hospital Son Llàtzer, IUNICS, IDMQ

PURPOSE. The purpose of the study is to determine the feasibility of cholecystectomy made by a transvaginal approach with a NOTES procedure (natural orifice translumenal endoscopic surgery).

 ${\sf DESIGN.\,Study\,Type:}\, Interventional$

Study Design:

Allocation: Randomized

Endpoint Classification: Safety/Efficacy Study

Intervention Model: Parallel Assignment

Masking: Open Label

Primary Outcome Measures:

Parietal complications after surgery (infection and hernia) [Time Frame:

One year].

Secondary Outcome Measures:

Surgical pain. General complications. Patient's preferences. [Time Frame: One year]

METHODS. Prospective randomized clinical series of 60 female patients with gallstones that underwent endoscopic surgery, 20 of them operated with conventional laparoscopic approach, 20 by transumbilical endoscopic approach and 20 of them by transvaginal endoscopic approach. Variables as surgical wound infection, urinary tract infection, evisceration, hernia, mortality and other complications will be analyzed.

Eligibility

Ages Eligible for Study: 18 Years to 65 Years Genders Eligible for Study: Female Accepts Healthy Volunteers: No

Inclusion Criteria:age over 18 and under 65

symptomatic cholelithiasis with an indication for performing laparoscopic surgery absence of any gynecological condition that could complicate the procedure (pelvic inflammatory disease or endometriosis) perforated hymen agreement on the patient's part not to use the vagina for two weeks after the surgery signed specific informed consent upon providing specific information about the new surgical approach.

Exclusion Criteria:age under 18 or over 65 unperforated hymen presence of illness or condition with an increased risk of pelvic damage with transvaginal approach.

RESULTS. Surgical Complications. There were no significant differences.

Conversion to laparoscopic or open surgery. 1case in transumbilical group, converted to laparoscopy by difficulty in handling the endoscope. No significant differences.

Enlargement of the entry port. In laparoscopic group 66.7% needed an enlargement, 45% in transumbilical group, while in transvaginal group expansion was not required in any case. Enlargement has not been associated with wound complications.

Postoperative pain. There were no differences in postoperative pain quantified by VAS scores. (Treatment: Dipyrone 1 g ev \times 6h).

Dyspareunia. The incidence of dyspareunia was nil (one year follow-up) Hospital stay. There were no differences between groups. Hospital stay was 24 hours for 58 patients, two patients required two days. The protocol required one-day-stay.

Cost of the procedure. Cost was higher for groups that used the endoscope, because of the cost of the flexible endoscope. From case 30 onwards, the cost is the same for the procedures.

Surgical time. Significant differences between laparoscopy (47,04 minutes) and the other two techniques (transumbilical 59,80 and transvaginal 64,85). (Mann-Whitney test, p <0.001).

CONCLUSIONS. Transvaginal approach with flexible endoscope is not inferior in efficacy and safety to conventional laparoscopy. Transumbilical approach with the flexible endoscope is as effective and safe as transvaginal one and it's is promising for the future (Flexible Single Incision Surgery).

S034

NOTES TRANSANAL RECTOSIGMOID RESECTION WITH TOTAL MESORECTAL EXCISION IN A LARGE HUMAN CADAVER SERIES Dana A Telem, MD, K S Han, MD, M C Kim, MD, I Ajari, MD, D K Sohn, MD, Kevin

<u>A Telem, MD</u>, K S Han, MD, M C Kim, MD, I Ajari, MD, D K Sohn, MD, Kevin Woods, MD, V Kapur, MD, M A Sbeih, MD, S Perretta, MD, David W Rattner, MD, Patricia Sylla, MD Massachusetts General Hospital

Introduction: Our group has previously described successful natural orifice translumenal endoscopic surgery (NOTES) transanal endoscopic rectosigmoid resection in both a survival porcine model and a cadaveric feasibility study using the TEM platform (Transanal Endoscopic Microsurgery). We now present the largest cadaveric series to date as we continue to optimize this approach for clinical application.

Methods: Between December 2008 and September 2011, NOTES transanal endoscopic rectosigmoid resection was performed in 32 fresh human cadavers using transanal dissection alone(n=19), with transgastric endoscopic assistance (n=5) or with laparoscopic assistance(n=8). Of the 19 sole transanal dissections, 9 utilized a novel platform inserted through the TEM platform, 8 used a double channel gastroscope via the TEM platform and 2 used TEM alone. For laparoscopic assistance, 1-3 trocars were added to improve visualization or facilitate retraction. Variables including gender, body mass index(BMI), operative time, length of mobilized specimen, integrity of the mesorectum and specimen and complications were recorded. Statistical analysis was performed by unpaired t-test for quantitative and fisher exact test for categorical variables. P-values<0.05 were considered significant.

Results: Transanal rectosigmoid resection was successfully performed in all 32 cadavers. Of the 32 cadavers, 22 were male and 10 female with mean BMI of 24 kg/m². Mean operative time was 5.1 hours and mean specimen length 53cm. After the first 5 cadavers specimen length significantly improved and a trend towards decreased operative time was demonstrated(Table 1). The mesorectum was intact in 100% of specimens. A stapling device was used to divide the inferior mesenteric pedicle in 23 cadavers versus a bipolar cautery device in 9. In 9 cadavers dissection was complicated as follows: colon perforation(n=5), rectal perforation(n=2), vaginal perforation(n=1), small bowel enterotomy(n=1). Comparison of cadavers with and without complication demonstrated no significant difference by operative approach, operative time, specimen length, or BMI. Factors accompanying complication included: poor quality cadaver (n=3), prior pelvic operation (n=3), and redundant sigmoid (n=1). Comparison by operative approach demonstrated significantly increased length of specimen with laparoscopic assistance versus transgastric assistance or transanal dissection alone (67.7 vs. 45.4 vs. 48.6 cm, p=0.013), respectively. Comparison of inferior mesenteric pedicle division demonstrated both significantly decreased operative time (4.8 vs. 6 hours, p=0.024) and increased specimen length (57.7 vs. 39.6 cm, p=0.025) when a stapler was used in lieu of a bipolar cautery device. This difference persisted despite operative approach.

Conclusion: Transanal NOTES rectosigmoid resection is feasible with demonstrated improvement in specimen length and operative time with experience and newer platforms. Division of the inferior mesenteric pedicle by stapling rather then cautery device is recommended secondary to improved specimen length and operative times. Continued development of new endoscopic and flexible-tip instruments are imperative prior to pure NOTES clinical application.

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Scientific Session Oral Abstracts

Specimen length	All Cadavers (n=32)	Cadavers 1-5	Cadavers 6-32	P-value
Mean (cm)	53	28.2	57.8	0.001
Minimum (cm)	15	15	35	
Maximum (cm)	91.5	65	91.5	
Operative time				
Mean (hours)	5.1	5.9	4.8	0.13
Minimum (hours)	3	4	3	
Maximum (hours)	8	8	7	

S035

TRANSGASTRIC LARGE ORGAN EXTRACTION; THE INITIAL

EXPERIENCE <u>Takayuki Dotai, MD</u>, Alisa Coker, MD, Luciano Antozzi, MD, Geylor Acosta, MD, Masayasu Aikawa, MD, Nikolai Bildzukewicz, MD, Marcos Michelotti, MD, Bryan Sandler, MD, Garth Jacobsen, MD, Mark Talamini, MD, Santiago Horgan, MD Center for the Future of Surgery, Department of surgery, University of California, San Diego

Introduction: In laparoscopy, it is often the case that port sites are enlarged for specimen extraction. This leads to higher risk of trocar site complications such as infection or incisional hernia. Natural orifice surgery (NOTES) is beneficial for minimizing these complications, and this is emphasized when the extracted specimen is of large volume. We have been using transgastric technique for appendectomy, cholecystectomy, and laparoscopic sleeve gastrectomy (LSG). Of these transgastric operations, we focus on the one with relatively large organ extraction, i.e. LSG with TransOral Remnant Extraction (TORE). We describe the details and feasibility of this procedure and compare the outcomes to conventional LSG.

Methods and Procedures: All patients undergoing LSG were considered candidates for TORE, and were consented for this procedure if interested after an informed discussion. 18 LSGs with TORE (TORE group) and 10 conventional LSGs (non-TORE group) were performed from August 2010 to March 2011. We retrospectively compared these two groups for the age, sex, preoperative BMI, OR time, hospital stay, estimated weight loss (EWL), and trocar site complications.

Laparoscopic sleeve gastrectomy with TORE consists of conventional LSG and transgastric retrieval of the resected stomach. The procedure exceeds exactly the same manner as convenional LSG until the initial stapling of the stomach. For TORE, the gastrectomy is initiated 5cm proximal to the pylorus than usual LSG to save the space for the gastrotomy used for specimen retrieval. After the gastrectomy is completed, the full thickness of the distal most part of the staple line is incised open as wide as 2cm, using electric cautery or ultrasonic dissector. A flexible upper endoscope, which has been in the stomach already as a bougie for gastrectomy, is then guided into the peritoneal cavity through the gastrotomy. The specimen is grasped endoscopically with a snare and extracted transorally. Following this, the gastrotomy is closed laparoscopically. The final shape of the gastric sleeve is identical to the one of conventional LSG.

Results: There was no significant difference between the TORE and the non-TORE group for patients' profile, OR time, hospital stay, and EWL. Neither group has experienced peri-operative complications. All the specimens were extracted readily and safely in the TORE group. Out of the 10 cases in the non-TORE group, 4 required extension of the trocar site. No trocar site complications were found in the TORE group, whereas the extended trocar site developed panniculitis in 2 cases of the non-TORE group; one requiring panniculectomy for refractory induration.

Conclusion: TORE can be safely and easily performed by surgeons with laparoscopic and endoscopic skill, and with commonly available instruments. While producing identical outcomes, our initial experience with the TORE technique demonstrates an advantage over traditional LSG in that it minimizes trocar site complications. Transgastric organ extraction is potentially applicable to other large organ extractions in laparoscopic surgery without added risks or resources. Larger case volume and longer follow-up period is awaited.

S036

PROSPECTIVE COMPARISON OF SHORT-TERM OUTCOMES
BETWEEN HYBRID NOTES TRANSVAGINAL CHOLECYSTECTOMY
AND LAPAROSCOPIC CHOLECYSTECTOMY Byron F Santos, MD, Eric S
Hungness, MD, Ezra Teitelbaum, MD, Fahd O Arafat, MD, Magdy P Milad,
MD, Nathaniel J Soper Northwestern University

Introduction: A natural orifice transluminal endoscopic surgery (NOTES) approach has been recently applied to a number of intra-abdominal operations and offers the potential of reducing post-operative pain and convalescence. Here we present a single-institution series of hybrid NOTES transvaginal cholecystectomies (TVC) and compare short-term outcomes with patients undergoing traditional laparoscopic cholecystectomy (LC).

Methods: All patients had an indication for elective cholecystectomy and met the following IRB approved inclusion criteria: female gender, age > 18 years, BMI < 35, ASA classification I or II, and absence of acute cholecystitis. TVC was performed using one or two transabdominal ports to enable gallbladder retraction and clip application. Dissection was performed with a flexible endoscope through a posterior colpotomy using instrumentation from the Advanced Toolbox for Minimally Invasive Surgery from Ethicon Endo-Surgery (Cincinnati, OH). LC was performed using four trocars and standard instrumentation. Unpaired t-tests were used to compare results.

Results: 7 patients underwent TVC and 7 patients underwent LC. Preoperative demographics were similar between the two groups, including mean age (38 vs. 34; p = n.s.) and BMI (29 vs. 27; p = n.s.). Operative times were significantly longer for the TVC group (162 \pm 29 vs. 68 \pm 21 minutes; p < 0.001), whereas EBL was similar (39 vs. 8 ml; p = n.s.). All procedures were performed on an outpatient basis, except for one patient in each group who were discharged on POD #1. Three minor (Grade 1) complications occurred, two in the LC group and one in the TVC group. TVC patients required significantly less narcotics in the PACU (mean 1.3 ± 1.7 vs. 8.2 ± 5.9 mg IV morphine equivalents; p = .02). Mean VAS pain scores (scale 0-10) in the PACU were less in the TVC group at 30 minutes $(1.1 \pm 1.3 \text{ vs.} 5.1 \pm 3.1; p = .02)$ and 60 minutes $(1.7 \pm 1.6 \text{ vs.} 4.7 \pm 2.5; p =$.02). Pain scores were also lower in the TVC group on post-operative days 1, 4 and 7 (2.4, 1, 0.1 vs. 5.9, 2.5, 2), although only significantly on POD #1 (p = .01). SF-36 Health Survey and McGill Pain Questionnaire scores were similar between groups at one month post-operatively. There was no difference between Sexual Function Questionnaire scores before and three months after TVC.

Conclusions: This series adds to the existing evidence that hybrid NOTES transvaginal cholecystectomy using a flexible endoscope for dissection is technically feasible and a safe procedure in women requiring elective surgery. TVC requires a longer operative time than LC but may result in less pain with patients subsequently requiring fewer narcotics. Further evidence is needed to validate these findings and a multi-center randomized controlled trial is currently in progress.

S037

LAPAROSCOPIC VS. OPEN SPLENECTOMY: THE IMPACT OF SPLEEN SIZE ON OUTCOMES <u>Ali Ardestani, MD</u>, Ali Tavakkolizadeh, MD Brigham and Women's Hospital

Background: Although Laparoscopic Splenectomy (*LS*) has become the standard of care for small to moderate spleens, Open Splenectomy (*OS*) is still recommended by many in cases of splenomegaly. We set out to assess the impact of spleen size on LS and OS outcomes using a national database.

Methods: We reviewed NSQIP database to identify patients who had undergone non-emergency splenectomy during 2005-2009. To evaluate the impact of spleen size on outcomes we considered patients with diagnoses of splenomegaly and hypersplenism as those having large spleens (*Large-Sp group*) and patients with post-operative diagnoses of primary thrombocytopenia and immune thrombocytopenic purpura as

those having small spleens (Small-Sp group). Student's t-test, Chi-Square and Fisher exact test were used, and regression analysis performed to control for confounding variables.

Results: We identified 484 patients in the Large-Sp and 731 patients in the Small-Sp groups. During 2005-2009 laparoscopic approach was consistently used in over 80% of cases in Small-Sp group. Although the rate of LS increased in the Large-Sp group during the study period, it remained below 50% (Figure 1). In the Small-Sp group, LS led to less transfusion, shorter hospital stay, lower complications and mortality (Table 1). These advantages were gained at no increase in operative time. Patients in the Large-Sp group who underwent LS also had less transfusion, shorter length of stay, lower morbidity and mortality but longer operative time (Table 1). In regression analyses, surgical approach (laparoscopy vs. open) was a significant predictor of length of stay, controlling for age, gender, BMI and ASA in both Large-Sp and Small-Sp groups (p<0.001).

In patients who has undergone laparoscopic splenectomy, those with a large spleen had higher blood transfusion (0.4 vs. 0.2 units, p=0.001) and longer operative time (153 vs. 118 minutes, p<0.001) but similar length of stay (4.5 vs. 4.1 days, p=0.4), morbidity (12.8% vs. 9.0%, p=0.1) and mortality (0.5% vs. 1.4%, p=0.5).

Conclusions: LS leads to significant improvement in outcomes. These advantages have traditionally been believed to be limited to small sized spleens, but this study demonstrates that improved outcomes can be seen even in patients with a large spleen, at the expense of a modest increase in operative time. We hope such data encourages wider utilization of LS in the setting of splenomegaly, which is presently used in less than 50% of cases.

Figure 1. Rate of LS in different sized spieen groups during 2005-2009.
* indicates higher percentage in 2009 comparing to 2005.

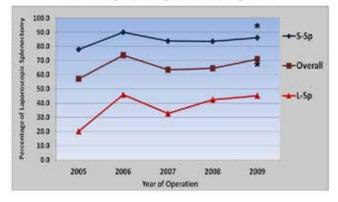


Table 1. Demographics and outcomes of LS and OS stratified by spleen size.

			Large-Sp			Small-Sp		
		Lap	Open	P-Value	Lap	Open	P-Value	
Age	(years)	55	57	0.06	48	55	< 0.001	
Gender	(% male)	53	52	0.9	36	43	0.2	
BMI		29	27	0.009	30	32	0.02	
ASA		61	66	0.2	54	69	0.003	
Blood Transfusion		0.4	1.0	< 0.001	0.2	0.6	0.001	
Operative Time	(minutes)	153	119	< 0.001	117	115	0.6	
Length of Stay	(days)	4.5	7.1	< 0.001	4.1	8.5	< 0.001	
Morbidity Rate	(%)	12.8	22.8	0.006	9.0	16.7	0.02	
Mortality Rate	(%)	0.5	3.1	0.055	1.4	5.6	0.005	

S038

LAPAROSCOPIC SPLENECTOMY AND AZYGOPORTAL DISCONNECTION WITH INTRAOPERATIVE SPLENIC BLOOD SALVAGE

<u>Yuedong Wang, MD PhD</u>, Yun Ji, MD, Yangwen Zhu, MD, Zhijie Xie, MD, Xiaoli Zhan, MD Department of General Surgery, Zhejiang Provincial People s Hospital, Zhejiang China

Background: Intraoperative blood salvage can reduce or avoid perioperative allogeneic blood transfusion. To salvage the blood in

the portal hypertension-induced enlarged spleen becomes an issue of concern during devascularization surgery because an enlarged spleen accommodates a large red cell pool. We report 20 cases of laparoscopic splenectomy and azygoportal disconnection and present the advantages of the use of intraoperative splenic blood salvage during the procedure. Methods: A total of 20 cirrhotic patients with esophagogastric variceal bleeding refractory to treatment with beta-blockers and endoscopic therapy were studied. Laparoscopic splenectomy and azygoportal disconnection was performed. During the procedure, an intraoperative autologous blood salvage device recovered the splenic blood. The perioperative data was recorded from various viewpoints. Results: The operative time was 3.1±0.3 h, and the blood loss was 70.5±32.5 ml. The excised and morcellated spleen weight was 826.0 \pm 155.1 g. The volume of blood autotransfused was 541.0 \pm 150.4mL. No patients received perioperative allogeneic blood transfusion. There were no significant complications either intraoperatively or postoperatively. The hemoglobin value increased from 9.3±0.8 g/dl to 11.5±1.1 g/dl at postoperative day 1 (P<0.01). During a postoperative follow-up period of 18.0± 9.0 months in 18 patients, neither esophagus variceal bleeding nor encephalopathy has recurred. Conclusion: Laparoscopic splenectomy and azygoportal disconnection is a feasible, effective, and safe surgical method for the treatment of

is a feasible, effective, and safe surgical method for the treatment of bleeding portal hypertension. Intraoperative splenic blood salvage can avoid the risk associated with allogeneic transfusion during the procedure, with an advantage of significantly increased postoperative hemoglobin levels.

Keywords Blood salvage . Devascularization . Laparoscopy . Liver cirrhosis . Portal hypertension

S039

LONG-TERM POST-OPERATIVE RESULTS OF LAPAROSCOPIC AND OPEN SPLENECTOMY DUE TO HYPERSPLENISM SECONDARY TO LIVER CIRRHOSIS Jin Zhou, PhD, Zhong Wu, MD, Bing Peng, PhD West China Hospital, Sichuan University

Background: Hypersplenism is a common clinical manifestation encountered in patients with liver cirrhosis. For treatment, surgeons can choose between an open or laparoscopic approach. Although splenectomies are gaining increasing importance in patients with hypersplenism secondary to liver cirrhosis, there are limited data with regards to their long-term outcomes, including hematological response and liver function. This study was performed to investigate the long-term effect of open and laparoscopic splenectomy for cirrhotic patients with hypersplenism.

Methods: Between September 2003 and June 2011, 63 consecutive patients with hypersplenism secondary to liver cirrhosis who were treated with laparoscopic splenectomy (n=34) or open splenectomy (n=29) were enrolled in the study. The hematological parameters and liver function in both groups were assessed before and after splenectomy during a long-term follow-up period.

Results: Post-operatively, 100% patients in both groups had a complete response in platelet and leukocyte counts. No changes in liver function were noted. The LS group benefitted from shorter operative time, less intraoperative blood loss, less scarring and a shorter post-operative hospital stay than the OS group. The median follow-up period was 25 months. All patients were still alive at the last follow-up visit. All patients showed complete or partial hematological response to splenectomy and had an improvement in liver function. None of the parameters were significantly different between the two groups. Portal or splenic vein thrombosis was detected in 3 patients, while esophageal variceal bleeding occurred in 2 patients.

Conclusion: In patients with hypersplenism secondary to liver cirrhosis, splenectomy is an effective and safe treatment that can improve hematological response and liver function. Thus, LS can be considered a favorable surgical procedure that has good surgical outcomes compared to OS.

S040

SUMMARY OF LIVING DONOR RETROPERITONEOSCOPIC NEPHRECTOMY IN KIDNEY TRANSPLANTATION AT A SINGLE

INSTITUTION Naotake Akutsu, MD, Michihiro Maruyama, MD, Chikara Iwashita, MD, Kazunori Otsuki, MD, Taihei Ito, MD, Ikuko Matsumoto, MD, Takehide Asano, MD, Takashi Kenmochi, MD Department of Surgery, Chiba-East National Hospital

[INTRODUCTION] It is seriously important for living donations to make safer and to reduce operating stress. Endoscopic surgery is thought to be a useful operating procedure for solving these problems. For living donor of kidney transplantation, we have performed retroperitoneoscopic nephrectomy, because of its less operation stress and less intraabdominal complications such as bleeding and intestinal injury than trans-abdominal approach. However, the procedure is seemed to be more difficult than trans-abdominal approach, so recently, we have tried some resources to make easier and safer with this technique. In this presentation, we report the summary of recent cases with of successfully completed living donor nephrectomy in our institution. It indicates that retroperitoneoscopic nephrectomy would be good procedure for donor benefits of living donor kidney transplantation.

[METHOD AND PROCEDURES] One hundred and ninety-six living donors were performed retroperitoneoscopic nephrectomy for kidney transplantation at Chiba-East National Hospital between April 2004 and August 2011. With last 30 cases (group 1), we performed 1) preoperative examinations (3D-CT and simulation by virtual laparoscopy reconstructed from 3D-CT for recognizing 3D images of vessels of renal pedicle, and intra-abdominal fat estimation with CT for preoperative evaluation of difficultness with the operation), 2) standardization of the operation procedure, and 3) standardization of postoperative care. Group 1 were compared operative time, blood loss, warm ischemic time, length of hospital stay, graft function, and complications to previous cases (group 2).

[RESULTS] Nephrectomy was performed successfully in all donors without any complications and all donors were discharged hospital at estimated day. Eight cases (4.1%) of them were converted to open approach with difficulties of kidney dissection from retroperitoneal tissue, however, there was no converted cases in group 1. Mean time for nephrectomy were 145.9 \pm 36.6 and 165.5 \pm 47.2 min, respectively (group 1 vs. group , P=0.014). Mean hospital stay was 5.7 \pm 0.5 and 6.5 \pm 1.4 days (group 1 vs. group 2, P \pm 0.01), respectively. Mean estimated blood loss (60.9 \pm 62.6mL), warm ischemic time (3.3 \pm 1.1min), postoperative graft function (serum creatinine level) and operative complications were indicated no significant differences.

[CONCLUSIONS] Retroperitoneoscopic nephrectomy would be good technique for living donor operation of kidney transplantation. We have carried out this operation more safely and less invasively with some resources. In this presentation, we demonstrated that retroperitoneoscopic nephrectomy would have advantages of safeness for donor, minimal invasion, and short stay in hospital in living donor kidney transplantation.

S041

GASLESS TRANSAXILLARY ROBOTIC VS ENDOSCOPIC
THYROIDECTOMY: EXPLORING THE FRONTIERS OF SCARLESS
THYROIDECTOMY THROUGH A PRELIMINARY COMPARISON STUDY

Andreas Kiriakopoulos, MD, <u>Dimitrios Linos, MD</u> Department of Surgery, Hygeia Hospital, Athens, Greece

Aim: Robotic – assisted thyroidectomy has been inadvertently associated with lengthy operative times mainly due to fussy robot preparation and docking maneuvers. We propose a purely endoscopic approach using a novel platform comparing its results with the former approach Patients and Methods: 8 patients (6 females and 2 males, mean age 38.8 yrs, range: 30-56) having favorable body habitus (mean BMI 23.4, range: 18-30) underwent robotic-assisted thyroidectomy through a gasless transaxillary approach using the da Vinci S surgical robot system. Another 4 female patients (mean age 31 yrs, range: 27-43) underwent a purely endoscopic method. Skin flap dissection and gasless thyroidectomy

comprised the common operative steps in both procedures. Robotic thyroidectomy necessitated an additional robot docking maneuver. Patient's demographic data, operative time, complications, conversions, hospital stay and postoperative pain VAPS are compared. Results: 3 lobectomies, 2 near-totals, 2 totals and one total thyroidectomy with lateral lymph node dissection have been performed in the robotic group. 2 lobectomies and 2 near total thyroidectomies were performed in the endoscopic group. Mean diameter of the largest nodule in the robotic series was 26.5 mm (range: 18-60) vs 42.5 mm (range: 35-55) in the endoscopic group. Mean total operative time was 211 min (range: 165-250) for the robot {consisting of a mean 32 min (range: 20-40) flap dissection time, a mean 13 min (range: 10-20) docking time and a 166 min (range: 130-210) console time} vs 160 min (range: 100-190) for the endoscopic series. We had no conversions in both procedures and a drain was left in place in all patients. We had one temporary recurrent laryngeal nerve paralysis in the robotic group. Two patients from the robotic group exhibited transient symptomatic hypocalcemia vs 1 from the other group. Hypoesthesia/disturbed sensation in the flap dissection area was referred by 3 patients of the robotic and two patients of the endoscopic groups. Mean hospital stay was 1.5 days (range: 1-3) for both groups. Postoperative pain was also similar in both groups. Conclusions: Our preliminary comparison shows that robotic-assisted and purely endoscopic transaxillary approaches are safe, feasible and are associated with similar results. Both applications give excellent view of the critical neck anatomy that allows precise tissue handling and dissection. However, the endoscopic approach results in a significantly faster and more convenient thyroidectomy

S042

LAPAROSCOPIC ADRENALECTOMY FOR MALIGNANT LESIONS SAFE AND EFFECTIVE! <u>Gideon Sroka, MD MSc</u>, Nadav Slijper, MD, Dan Shteinberg, MD, Husam Mady, MD, Ibrahim Mattar, MD Bnai-Zion Medical Center, Technion - Israel Institute of Technology, Haifa, Israel

Introduction: Laparoscopic Adrenalectomy (LA) is the treatment of choice for benign adrenal lesions. Size of the lesion and radiologic features define the risk for malignancy. In lesions with high risk of malignancy the experience with the laparoscopic approach is limited and therefore controversial. The purpose of this study is to determine the feasibility and oncological safety of LA for malignant disease. Methods: Retrospective analysis of prospectively collected database. All LA performed in our department between 2003-2011 were reviewed and demographic, perioperative and follow up data for those who had malignancy in the final histological report was analyzed. Data is presented as mean(range). Results: Out of 121 LA we identified 20 patients with 21 malignant adrenal pathologies: 11 primary tumors: 5 Adreno Cortical Carcinoma; 5 Large B cell Lymphoma; 1 Leomyosarcoma. 10 Metastatic lesions included 5 Malignanat Melanoma (1 Patient- both sides); 4 Adeno-Carcinoma and 1 Renal Cell Carcinoma. There was no conversion to laparotomy. Mean tumor size was 7 (5-9)cm, operative duration was 70(45-145)min, estimated blood loss was 80(20-500)cc. All patients resumed regular diet on POD 1 and mean length of stay was 2.4 days. 2 patients died 6 & 24 months post operatively. 2 patients were lost to follow up. All the rest of the patients are alive and well with mean follow up of 46(7-96) months. Conclusions: LA for primary or metastatic malignant lesions is feasible and oncologically safe. Surgical principles should be the same for all LA: Enbloc resection of all epinephric fat, minimal touch technique and low threshold for conversion. Size alone should not be an indication for open surgery.

S043

IMPACT OF SURGICAL TECHNIQUE AND SPLENIC SIZE ON POST-OPERATIVE MESENTERIC VEIN THROMBOSIS Ivanesa Pardo, MD, Rahul Reddy, MD, Eric Wiebke, MD, Don Selzer, MD Indiana University School of Medicine

Introduction: Portal vein thrombosis (PVT) is a well documented complication after splenectomy. The incidence of PVT in symptomatic patients has been reported to be up to 15 % and up to 50% in asymptomatic patients through postoperative radiographic surveillance.

Ikeda demonstrated PVT to be more common in the laparoscopic approach when compared to the open approach (55% vs. 19% respectively). Risk factors for PVT include splenomegaly, malignancy and hypercoagulable disorders. Hand assisted laparoscopic splenectomy (HALS) is a newer technique that allows the removal of large spleens while maintaining the advantages of laparoscopic surgery. The aim of this study is to compare the incidence of PVT in small vs. large spleens between the different surgical techniques (open, laparoscopic and HALS).

Methods: A retrospective review of 119 patients who underwent splenectomy for hematological disorders in a period of 9 years was performed. Seventy two patients underwent open splenectomy (OS), 30 underwent HALS and 17 underwent laparoscopic splenectomy (LS). Six patients were converted from LS to OS; no conversions from HALS were encountered. Large spleens were defined to be > 1000 gm. PVT was diagnosed by postoperative contrasted helical CT scan. Statistical analysis was performed using the SPSS 19.0 software.

Results: PVT was diagnosed in 6 patients (OS: 2, LS: 1, HALS: 3). There were no differences in age, gender, platelet counts, estimated blood loss, and type of procedure. Statistical differences were encountered for both spleen size groups in length of stay between HALS and OS (p: 0.001) but not between LS and OS (p: 0.055); also time to oral intake was statistically different between HALS and OS (p: 0.001) but not between LS and OS (p: 0.447). Multivariate logistic regression confirmed PVT was dependent on splenic size rather than surgical technique.

Conclusions: There is no difference in the incidence of PVT between laparoscopic, HALS and open splenectomy. The incidence of PVT is higher in large spleens. HALS allows the removal of large spleens and maintains the benefits of laparoscopic surgery such as shorter length of stay and shorter time to oral intake.

S044

LAPAROSCOPIC APPROACH FOR INCISIONAL HERNIAS IN PATIENTS AFTER ORGAN TRANSPLANTATION OR WITH LIVER INSUFFICIENCY

<u>Marty Zdichavsky, MD</u>, Dörte Wichmann, MD, Maria Witte, MD, Maximillian Von Feilitzsch, MD, Tobias Meile, MD, Alfred Königsrainer, MD Department of General, Visceral and Transplant Surgery

Objective: Incisional hernia in patients with liver insufficiency or after organ transplantation has to be regarded a frequent complication. Immunosuppressive regimen, ascites and decrease of protein synthesis are causal for appearance of incisional hernias. Limited experience exist for this patient population, especially for the laparoscopic approach (= IPOM, intraperitoneal onlay mesh). To address this issue the aim of this study was to compare the recurrence and complication rate of open and laparoscopic incisional hernia techniques.

Methods: Data were retrospectively analyzed. Inclusion criteria were patients that underwent incisional hernia repair electively after organ transplantation, with liver insufficiency (Child B or C), or chronic inflammatory bowl disease. Patient's characteristics, operative data, recurrence rate and complications were evaluated.

Results: 79 patients (f:32, m:47) with a mean age of 62.4 years were included: 57 patients after organ transplantation, 16 with liver cirrhosis and 6 with inflammatory bowl disease. 25 patients were treated laparoscopically with the IPOM technique, 54 with conventional hernia repair. In 11.9% no mesh prosthesis was used. Size of hernia defect was significant larger in the IPOM group (>8cm). Complications were 3 postoperative hemorrhages, 1 early recurrence with incarceration, 1 infected seroma and 1 unspecific infection. All complications occurred within the open group. Overall recurrence rate was 19%, however one patient with chronic inflammatory bowl disease developed 3 recurrences. 12 recurrences occurred after open hernia repair (22.2%) and 3 after IPOM procedure (12.0%). Recurrence rate was increased in patients with ascites and hernia repair without mesh prosthesis. **Conclusions**: IPOM technique for laparoscopic hernia repair seems encouraging concerning a very low complication rate. Recurrence rate was moderate regarding the significant larger diameter of hernias that

S045

STANDARDIZATION OF HYBRID-VANS (TORI METHOD) FOR THYROID DIFFERENTIATED CANCER INCLUDING INVASION TO THE TRACHEA

<u>Masayuki Tori, MD</u>, Hiroki Akamatsu, MD, Takeshi Omori, MD, Katsuhide Yoshidome, MD, Toshirou Nishida, MD Endocrine Surgery, Osaka Police Hospital

Background and Aim: Video-assisted neck surgery (VANS) has not been established, because it cannot be applied to invasive cases and to radical lymph nodes dissection which needs enough view and liftup of the trachea. And moreover, when trachea is invaded by thyroid cancer, proper instruments are not usually available in VANS. On the other hand, small-incision surgery has a problem of operative window and isolation of back side of the thyroid bed with incomplete view. Therefore, we newly developed sophisticated Hybrid-VANS (HVANS: Tori method) which is a reasonable mixture of endoscopic surgery and smallincision procedure. We would present a novel HVANS thyroidectomy as a standard procedure for thyroid cancer which can be applied to all cases of thyroid cancer (<4cm) including LN metastasis and/or tracheal invasion. Patients and methods: Since April, 2011, HVANS was performed with 46 malignant cases. As to the operative indication, tumor size is <4cm and in trachea invasion cases, invasion is preoperatively thought to be treated by shaving. They consist of 44 papillary ca and 2 follicular ca. (group A). These cases were clinically compared with the former conventional cases for three years (n=148, April, 2008 - Mar, 2011) (groupB). Evaluation of cosmetics and pain scale were added to the results. Op procedures: Single small color incision (1.5-2.0cm) is made just above the clavicle of the tumor side followed by insertion of one port (5mm) for scope 3cm below the clavicula. To obtain enough working space, anterior neck muscles are isolated after dissection of subcutaneous space, taped and pulled toward the head supported by L-shaped steel lift fixed to the operating table, and at the same time, thyroid lobe is pulled upward using thread support. Then mini-mini wound retractor is installed. That is how recurrent nerve and parathyroid are clearly visible. Lymph nodes dissection and anterior approach for the thyroid (ligation and cut of the isthmus, etc.) is performed directly through the incision, followed by isolation of inferior laryngeal nerve and ligation and cut of superior thyroid vessels with monitor of endoscope. Result: (groupA) Average operation time: lobectomy+CLND (central); 113min (n=33), lobectomy+MRND; 137min (n=5), total thyroidectomy+CLND; 216min (n=8, shaving of the trachea 3). Average blood loss <50ml (all cases). Postoperative course was all uneventful. Namely, Blood loss was very little. No complications including recurrent nerve palsy were encounterd. Average hospital stay was 4.6days. Those results were not significantly different from the data of groupB in each. In terms of cosmetics and pain, group A was superior to group B. Conclusion: Our findings support the idea that HVANS is a feasible, practical and safe procedure, with excellent cosmetic benefits. HVANS has come to be a standard operative procedure for thyroid differentiated cancer including invasion to the trachea.

S046

LAPARO-ENDOSCOPIC SINGLE SITE SURGERY (LESS) FOR INTRA-ABDOMINAL SOLID ORGANS: A CASE CONTROL STUDY. Iris J Parraoalcantara, UNDERGRADUATED MEDICAL DOCTOR, Xeily Zarate, MD, Juan Pablo Pantoja, MD, Mauricio Sierra, MD, David Velazquez-fernandez, MD PHD, <u>Miguel F Herrera, MD PHD</u> Instituto Nacional de la Nutrición Salvador Zubirán

BACKGROUND: One of the most promising uses of LESS are surgical procedures requiring organ retrieval such as splenectomy, adrenalectomy and pancreatic resections. The aim of the present study was to analyze our initial results with LESS in these 3 surgical procedures, using a case control design.

PATIENTS AND METHODS: All patients who underwent LESS at our institution between 2010 and 2011 were reviewed. Exclusively three surgical techniques were considered for the study: splenectomy, adrenalectomy, and pancreatic resection. These were considered the case group, while controls were patients who underwent conventional

were treated laparoscopically.

laparoscopy for the same diagnosis. Case and controls were matched according to their preoperative diagnosis. Main outcome variables were: surgical time, conversion rate, cure of the disease, and operative complications. Preliminary statistical analysis was performed according to the variable scaling using SPSS v. 13.0. Statistical significance was considered with a p value was lesser than 0.05.

RESULTS: Nineteen cases were included (10 splenectomies, 4 adrenalectomies, and 5 pancreatic resections). All splenectomies were performed for Idiopathic thrombocitopenic purpura. Adrenalectomies were indicated for the treatment of benign hyperfunctioning or non-functional adrenocortical tumors. Insulinoma was the surgical indication for all pancreatic resections. Surgical approach for splenectomy and adrenalectomy was lateral subcostal, and anterior for all pancreatic resections. There were no conversions. A group of 16 matched controls (11 splenectomies and 5 adrenalectomies) met inclusion criteria. Patients with pancreatic resections were all females. Three distal pancreatectomies and 2 enucleations were performed. Mean operative time was 240.4±62.67 min. Two patients developed a pancreatic fistula (1 "A" and 1 "B"). Comparative results for splenectomies and adrenalectomies are shown below. Although the statistical power is limited, there were no statistical differences among cases and controls.

SPLENECTOMY	LESS (10)	Laparoscopic (11)
Female, n (%)	8 (80%)	8 (72.7%)
Surgical time, min	155.9 ± 47.22	125.9 ± 47.94
Complete/Parcial/No response, n	8/2/0	9/1/1
Complications, n	1 Incisional hernia	0
ADRENALECTOMY	LESS (4)	Laparoscopic (5)
Female, n (%)	4 (100%)	5 (100%)
Surgical time, min	166.6 ± 41.63	144.4 ± 65.32
Cushing/Conn/Non-functioning, n	1/1/2	0/0/5
Complications, n	0	0

CONCLUSIONS: LESS in splenectomy, adrenalectomy, and pancreatic resection for insulinoma offers the well-known cosmetic advantages of the technique without deleterious effects on clinical outcomes when compared with conventional laparoscopy. Moreover, LESS did not involve a longer surgical time in this series. Therefore we believe that LESS is an optimal alternative to conventional laparoscopic surgery, with improved cosmetic results and similar outcomes.

S047

TRUE BENEFIT OR SELECTION BIAS. AN ANALYSIS OF LAPAROSCOPIC VERSUS OPEN SPLENECTOMY FROM THE ACS-NSQIP <u>C Gonczy, MD</u>, V Advani, MD, S Markwell, MA, S Ahad, MD, I Hassan, MD Southern Illinois University School of Medicine

Introduction: By virtue of the benefits associated with minimally invasive approaches, laparoscopic splenectomy (LS) is believed to have better patient-related outcomes compared to open splenectomy (OS). However there is limited data directly comparing the two techniques. Methods: Patients undergoing elective LS and OS between 2005-2009, were identified from the public use file of the ACS-NSQIP database using the Current Procedural Terminology codes 38120 and 38100. Patients undergoing concomitant procedures were excluded. Because of the non-random assignment of surgical techniques a selection bias could have been responsible for the differences in patient outcomes. Therefore patient characteristics and co-morbidities that were available and could have been potential confounders were compared and regression analysis was performed to determine independent risk factors associated with serious and overall morbidity as well as mortality.

Results: During the study period 1304 and 693 patients underwent LS and OS respectively. Compared to patients undergoing LS, patients whom had OS had a longer mean length of stay (5 vs. 10 days, P<0.0001) higher incidence of serious (6% vs. 12%, P<0.0001) and overall morbidity (11% vs. 20%, P<0.0001) and mortality (2% vs. 3%, P=0.02). However there were certain significant differences in the characteristics and co-morbidities of the patients that could have confounded outcomes (Table) On regression analysis, OS was not associated with higher mortality (OR 1.43, 95% CI 0.7-2.7, P=0.28) but higher serious morbidity (OR 1.8, 95% CI 1.4-2.3, P=0.001) and overall morbidity (OR 2.0, 95% CI 1.6-2.4, P=0.0001).

Conclusion: After adjusting for available confounders' patients undergoing LS had lower morbidity and similar mortality. Although certain confounders such as previous surgical history and underlying pathology could still have potentially influenced outcomes the data suggests that when technically possible a minimally invasive technique should be the preferred approach for splenectomy.

Patient Characteristics And Demographics						
	LS	OŠ	P-value			
Age	51	57	0.0001			
Male Gender	42%	50%	0.0005			
BMI	29	27	0.0001			
Steroid use	44%	19%	0.0001			
Current smoker	16%	21%	0.007			
Bleeding disorder	44%	35%	0.0001			
OR time (median, in min.)	120	104	0.0001			
Diabetes	13%	13%	0.72			
Independent functional status	97%	97%	0.3			
Severe COPD	3%	5%	0.07			
Coronary Artery Disease	12%	12%	0.86			

S048

THE MICROBIOLOGY OF LAPAROSCOPIC KIDNEY DONATION A BASELINE STUDY FOR TRANSVAGINAL DONOR NEPHRECTOMY

<u>Calvin D Lyons, MD</u>, Richard Link, MD, Osama Gaber, MD FACS, Vid Fikfak, MD, Barbara L Bass, MD FACS, Brian J Dunkin, MD FACS The Methodist Institute for Technology Innovation and Education

Introduction: Kidney transplantation from a living donor is the treatment of choice for patients with end stage renal disease. Laparoscopic donor nephrectomy has become popular due to its decreased morbidity compared to the open technique. However, even a laparoscopic approach requires an extraction incision which causes pain and risks incisional hernia and wound infection. These unwanted complications have led surgeons to seek an alternative method of kidney extraction using the transvaginal route. Although promising, transvaginal extraction of the kidney raises concerns for bacterial contamination and the possibility of infection in the recipient. This study investigated the baseline contamination of living donor kidneys as part of a two arm study to determine the feasibility of transvaginal extraction of grafts for transplantation.

Methods: Eleven patients (9 female) at a single institution undergoing laparoscopic donor nephrectomy were enrolled. All laparoscopic donor nephrectomies were performed by one of two surgeons. Six were done using a periumbilical single port technique, and five with four 5mm ports and a Pfannenstiel extraction incision. Each incision was approximately 6cm in length and a specimen bag was used for all extractions. After the kidney was removed from the donor, the extraction bag was opened and a 2 x 2cm template used to obtain surface cultures prior to immersion in ice. The kidneys were then transferred to the transplant surgeons for flushing and immediate transplantation. Gram stain, culture, and sensitivity results were obtained.

Results: The average donor age was 41.7 years old. Procedure lengths were comparable in all cases as were the warm ischemia times for the graft, averaging 4 minutes 38 seconds. Four of 11 (36%) kidneys were colonized with aerobic or anaerobic bacteria. No kidney had more than one isolate. The isolated bacteria included non-hemolytic streptococcus, coagulase negative staphylococcus, enterococcus faecalis, and clostridium perfringens. Three positive cultures arose from the Pfannenstiel extraction and one from the single port technique. No recipient patient developed any infectious complications.

Conclusion: Conventional laparoscopic donor nephrectomies can result in surface contamination of the donated graft in over 1/3 of cases even without evidence of a break in sterile technique. This finding, combined with the low rate of graft infections, suggests that the presence of bacteria alone on the surface of a transplanted kidney does not lead to post transplant infections. This data establishes a microbiology baseline for the standard of care in laparoscopic donor nephrectomy that will be used in future feasibility studies for transvaginal donor nephrectomy.

S049

MANAGEMENT OF STAPLE LINE LEAKS AFTER SLEEVE GASTRECTOMY IN A CONSECUTIVE SERIES OF 378 PATIENTS. Michel

<u>Vix, MD</u>, Ludovic Marx, MD, Michele Diana, MD, Silvana Perretta, MD, Gianfranco Donatelli, MD, Cosimo Callari, MD, Valérie Podelski, MD, Jacques Marescaux, MD Hon FRCS FACS Hon JSES IRCAD, University of Strasbourg, France

Introduction: Laparoscopic Sleeve Gastrectomy (LSG) is gaining acceptance as a definitive bariatric procedure with proven efficacy on weight loss and obesity-related comorbidities. A specific and potentially severe complication of LSG is the staple line leakage (SLL) that may occur in up to 7% of cases. Technical errors, stapling line crossing, poor vascularization, and gastric inflammation are the potential underlying mechanisms of this feared complication. No preventive measures were clearly identified at this point.

Aims: The aim of this study is to analyze the rate and management of SLL in a prospective cohort of LSG.

Patients and Methods: Between July 2005 and July 2011, 378 patients (319 women/59 men) underwent LSG performed by chief residents (n=287) and a senior consultant in bariatric surgery (n=91). A five trocar technique was used. After mobilization of the greater curvature of the stomach the gastric resection was performed by successive firings of 4.5 mm-high staples (Endo GIA™ 60 mm) at the antrum and 3.5 or 4.5 mm-high staples at the gastric body and fundus towards the left diaphragmatic crus, depending on the thickness of the stomach. A 36F bougie was used to calibrate the gastric tube. The staple line was systematically reinforced with a running suture. All patients received a standardized post-operative care protocol including Proton-Pump Inhibitors and Thromboprophylaxis. Patients were on liquid diet from Postoperative day (POD) 1 to POD15.

Results: Staple line leakage occurred in 9 patients (2.38%), at the level of the cardia in all cases. The first leak occurred after 131 consecutive uneventful procedures. Rate of fistula was 6/287 and 3/91 after procedures performed by chief residents and senior respectively (p: 0.25). No demographic data were found as potential predictors of SLL. Mean Charlson Comorbidity Score was higher in patients presenting a leak (1.84 vs. 1.37) but score classes were equally distributed in both groups. Patients were managed by combined laparoscopic (n=2) or open (n=1) exploration, drainage and endoscopic self-expandable covered stent (SECS), CT-guided percutaneous drainage alone (n=2) or a SECS alone (n=4). Medical support including total parenteral nutrition and adapted antibiotics was started in all the patients. Patients with SLL had a longer mean length of hospital stay (LOS) (19 days; range 3-56 vs. 3 days 3-5); and required multiple re-admissions (mean 2.85, range 1-6), which represents a mean of 29.28 additional hospital days. Median LOS according to the treatment modality was 41 days (range 26-56) vs. 18 (range 3-33) vs. 7 (range 5-16) in the surgical drainage + stent vs. percutaneous drainage vs. stenting alone groups respectively. The combined treatment modalities were successful in all the cases and patients were totally asymptomatic at the follow up. Conclusions: Staple line leakage, which occurred in 9/378 (2.38%) of our patients, is a severe and unpredictable complication of LSG. Experience has demonstrated that endoscopic stenting is a key-point of the management of SLL, combined eventually with other treatment

S050

modalities.

MARGINAL ULCER AFTER ROUX-EN-Y GASTRIC BYPASS: WHAT HAVE WE REALLY LEARNED? Kevin M El-hayek, MD, Poochong Timratana, MD, Hideharu Shimizu, MD, Bipan Chand, MD FACS Cleveland Clinic

INTRODUCTION: The definition of marginal ulcer (MU) following Rouxen-Y gastric bypass is widely debated. A significant variation of incidence is reported with ulcers being categorized as early or late based on timing from operation. The objective of our study was to review the results of upper endoscopy in symptomatic patients. We further investigated potential etiologies including patient characteristics and operative details.

METHODS AND PROCEDURES: Patients who presented with symptoms underwent upper GI endoscopy following Roux-en-Y gastric bypass. An IRB approved database was queried over the preceding 15 months (6/01/2010-8/31/2011). Collected details included patient demographics, operative conduct, presenting symptoms, and upper endoscopy findings. Statistical analysis was performed using SPSS version 18. RESULTS: A total of 455 upper GI endoscopies were performed on 328 symptomatic patients. MU was found in 112 patients (34%). Diagnosis of MU occurred in 59 patients (53%) within 12 months of surgery, and in 53 patients (47%) greater than 12 months after surgery. The method of construction of the gastrojejunostomy was determined in 191 patients. A circular stapled technique was used in 68 patients and a linear stapled technique was used in 123 patients, of whom 22 (32%) and 49 (40%) developed MU respectively (p=0.31). In the remaining 137 patients, whose operations were done outside our institution, the type of anastomosis was unknown. Twenty-one patients used tobacco, 92 used alcohol, and 10 used NSAIDs. The incidence of MU in these patients was 9/21 (43%), 32/92 (35%), and 6/10 (60%) respectively (p>0.05). The most common presenting symptoms included pain, dysphagia, nausea, and vomiting. MU was identified in 48/113 (43%) and 20/56 (36%) of patients presenting with pain and dysphagia respectively. Suture material or staples were identified in 40 patients; however, only 14 (35%) had MU. All patients with MU were started on acid suppression and cytoprotective therapy. Forty-seven patients with MU underwent repeat endoscopy due to persistent symptoms. Of these patients, 23 (49%) had resolution of the ulcer, 18 (38%) persisted, and 6 (12%) recurred after healing on third endoscopy. Given the poor correlation of known etiologic factors (smoking, alcohol, and NSAIDs) with healing, we began random pouch biopsy for the presence of parietal cells, regardless of endoscopic findings. Biopsy was performed in 55 patients, 28 (51%) of whom had MU. Parietal cells were identified in 11/28 (39%) with MU and 7/27 (26%) without MU (p=0.29). Using univariate and multivariate analysis among healing, non-healing, and healing with recurrence, tobacco was the solitary significant risk factor for recurrence (p=0.01). Five patients underwent revisional surgery for persistent MU, and 4/5 (80%) had recurrent MU.

CONCLUSION: Patients with pain or dysphagia after gastric bypass warrant upper endoscopy given the high yield for abnormalities. While the risk factors remain unclear, a thorough investigation including tobacco, alcohol, and NSAID usage should be determined and eliminated. The presence of multiple risk factors may pose a higher challenge in ulcer resolution, leading to increased recurrence. History of tobacco use remains the sole independent risk factor for ulcer persistence.

S051

LAPAROSCOPIC FUNDOPLICATION TAKEDOWN WITH ROUX-EN-Y GASTRIC BYPASS LEADS TO EXCELLENT REFLUX CONTROL AND QUALITY OF LIFE IN PATIENTS AFTER ONE OR MORE FAILED FUNDOPLICATIONS Fernando A Navarro, MD, Brant T Heniford, Keith Gersin, Dimitrios Stefanidis Carolinas Medical Center, Division of Gastrointestinal and Minimally Invasive Surgery, Charlotte, NC

Introduction: Recent data suggest that redo fundoplication after prior failed fundoplication (FP) is associated with a high failure rate to control reflux in the long term. In this patient population, a laparoscopic Roux-en-Y gastric bypass (LRYGB) may be a better option for long term reflux control, especially in the obese, but outcome and quality of life data are sparse. Our aim was to assess outcomes and quality of life data after fundoplication takedown and LRYGB for patients with failed fundoplications.

Methods: The records of 25 patients who underwent fundoplication takedown and LRYGB between March 2007 and July 2011 were reviewed. Patient demographics, body mass index (BMI), preoperative symptoms, operative duration and findings, length of stay (LOS), Estimated Blood loss (EBL), length of follow up (FU) and postoperative outcomes were recorded. The Gastrointestinal Quality of Life Index (GIQLI) and the Gastrointestinal Symptoms Rating Scale (GSRS) were used at the latest follow up to assess symptom severity and quality of life.

Results: Patient age was 55 (36-72) years, BMI 34.4 (22-50) kg/m², and 22 were women (88%). Heartburn (100%), dysphagia (40 %), regurgitation (32 %), and chest pain (15 %) were the most common preoperative symptoms. Comorbidities included; Diabetes, hypertension, sleep apnea, osteoarthritis, coronary artery disease, arthritis. Symptom free interval since last surgery was 5.2 (1-25) years. Patients had undergone a total of 40 prior antireflux surgeries, 41 % via an open approach. Operative duration was 345 (180-600) minutes, LOS 7 (2-30) days, and EBL 181 (50-500) ml. A slipped FP was found in 10 patients (40%), wrap disruption in 9 patients (36%), 3 patients had a combination of these, and one had a herniation of an intact wrap. Twenty three (92%) patients had an associated hiatal hernia. There was no mortality but 11 patients (44%) had complications and five required a reoperation. At 14 (1-48) months FU excess weight loss was 60% and comorbidity resolution 68 %. 24 (96%) patients were free of reflux with a mean postoperative GIQLI score of 114 (80-135) and a GSRS score of 25 (17-45). Twenty four patients (96%) reported being much happier with their physical appearance, more energetic and more able to take part in recreational and leisure activities. Fifteen patients (62%) believed that their personal relations and sexual life were better than before their LRYGBP. Twenty four patients (96%) were satisfied with their outcome and would undergo the surgery again. There were no quality of life differences between obese and nonobese patients.

Conclusions: Patients who undergo LRYGBP after failed fundoplication(s) have excellent control of their reflux and excellent quality of life and high satisfaction rates with their outcome. Nevertheless, the procedure is challenging and associated with considerable morbidity and should be undertaken by surgeons experienced in antireflux and bariatric surgery. Longer term outcomes of this procedure and comparison to outcomes of redo fundoplication are needed to better document its value for this challenging and high risk patient population.

S052

COMPARISON STUDY OF GASTRIC EMPTYING AFTER PERFORMING SLEEVE GASTRECTOMY WITH TWO DIFFIERENT TECHNIQUES Saed A labor MD Basma M Fallatah MD Abdal Aria Shahm MD Mahmaud

A Jaber, MD, <u>Basma M Fallatah, MD</u>, Abdel- Aziz Shehry, MD, Mahmoud Abdelmoeti, MD King Fahd Medical Military complex

BACKGROUND: Sleeve gastrectomy (SG) has been became a primary surgical treatment for obesity. This operation could be associated with motor gastric dysfunction and abnormal gastric emptying. The purpose of this prospective study is to present a comparison study of gastric emptying to solids after performing sleeve gastrectomy with two different techniques using scintigraphy. METHODS: Prospectively; twenty morbidly obese patients were submitted for laparoscopic SG. After excluding patients with gastro-esophageal reflux disease and diabetes mellitus for the sake of avoiding having a preoperative gastric emptying, patients were divided into two groups. One group (3 males, 7 females) had sleeve gastrectomy started 7 cm from the pylorus and then vertical gastrectomy a long a 40 french size tube and the other group (3 males, 7 females) has the sleeve started at 4 cm from the pylorus and then vertical gastrectomy a long a 40 french size gastric tube . Gastric emptying of solids was measured by scintigraphic technique. RESULTS: At 4 cm from the pylorus: Nine of ten patients had delayed gastric emptying with t1/2 >50 min (55-133 min). Mean BMI decreased from 42.1Kg/m2 to 36Kg/m2. All female patients were complaining from significant nausea and vomiting postoperatively that persisted for 6 months. At 7 cm from pylorus: Ten patients had rapid gastric emptying with t1/2<30 min(17-29 min). BMI decreased from 42.1Kg\m2 to 37.1Kg/ m2. From these cases one female patient developed nausea in a chronic manner. Conclusion: Gastric emptying after SG is variable according to point of starting sleeve gastrectomy from the pylorus. At 4 cm it is associated with delayed emptying and at 7 cm it is associated with accelerated emptying for solids in the majority of patients. These results could be in consideration to select the appropriate technique according to gender and preoperative foregut condition.

S053

PERI-OPERATIVE RISK FACTORS FOR 30-DAY MORTALITY AFTER BARIATRIC SURGERY: IS FUNCTIONAL STATUS IMPORTANT?

Muhammad Asad Khan, MD, Roman Grinberg, MD, Stelin Johnson, RPAC, John N Afthinos, MD, Karen E Gibbs, MD Staten Island University Hospital

OBJECTIVE: Although mortality from bariatric surgery is low, perioperative determinants of morbidity and mortality in this population have yet to be fully defined. Our aim was to evaluate the factors capable of predicting perioperative mortality based on preoperative characteristics with a national patient sample.

METHODS: Using the ACS-NSQIP database, we identified all primary bariatric procedures performed between 2007 and 2009. Using univariate analysis, factors associated with increased perioperative (30-day) mortality were identified. Logistic regression and the jackknife procedure were used to select correlates of 30-day mortality that were subsequently weighted and integrated into an integer scoring system based on the number of co-morbid risk factors.

RESULTS: We identified 44,408 patients (79% female and 21% male) with mean age of 45 ± 11 years. Cumulative 30 day peri-operative mortality was 0.14%. The majority of procedures performed included laparoscopic gastric bypass (54%) followed by laparoscopic gastric banding (33%) and open gastric bypass (7%). Independent predictors associated with significantly increased mortality included age > 45 (Adjusted odds ratio, AOR=2.45), male gender (AOR=1.77), BMI ≥50 kg/m2 (AOR=2.48), open bariatric procedures (AOR=2.34), diabetes (AOR=2.88), totally dependent functional status prior to surgery (AOR=27.6), prior coronary intervention (AOR=2.66), dyspnea on preoperative evaluation (AOR=4.64), > 10% weight loss in 6 months (AOR=13.5) and bleeding disorder (AOR=2.63). Ethnicity, hypertension, alcohol abuse, liver disease and smoking had no significant association with mortality in this study. Risk stratification based on number of preoperative co-morbid factors revealed an exponential increase in mortality: 0.03% (0-1 comorbidities), 0.16% (2-3 comorbidities) and 7.4% (4 or greater comorbidities). This system provides excellent prognostic accuracy in the study population (c-statistics = 0.74).

CONCLUSION: This model provides a straightforward, precise and easily applicable tool to identify bariatric patients at low, intermediate and high risk for in-hospital mortality. Of note, baseline functional status prior to surgery is the single most powerful predictor of peri-operative survival and should be incorporated into risk stratification models.

S054

TRENDS IN ADOLESCENT BARIATRIC SURGERY EVALUATED BY UHC DATABASE COLLECTION Pradeep Pallati, MD, Anton Simorov, MD, Avishai Meyer, MD, Vishal Kothari, MD, Corrigan Mcbride, MD, Dmitry Oleynikov, MD University of Nebraska Medical Center

Background: Adolescent bariatric surgery has been increasing the last few years, as a result of increasing childhood obesity. Many institutions have reported their individual experiences with adolescent bariatric surgery, but, so far, there are no nationwide reports of outcomes of adolescent bariatric surgery. Our goal is to present the trends of laparoscopic bariatric surgery and the short term outcomes by analyzing the nationwide database.

Methods: Discharge data from the University HealthSystem Consortium (UHC) database was accessed using International Classification of Disease (ICD-9) codes during a 45-month period from October 2007 to June 2011. UHC is an alliance of more than 100 academic medical centers and nearly 200 affiliate hospitals. UHC's Clinical Data Base / Resource Manager (CDB/RM) allows member hospitals to compare patient-level risk-adjusted outcomes for performance improvement purposes. All adolescent patients between 13 and 18 years of age, with the assorted diagnosis of obesity, undergoing laparoscopic adjustable gastric banding (LAGB), sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (GB) were evaluated. Data was obtained on a yearly basis, except the last year, which included only 9 months. The main outcome measures analyzed

were morbidity, mortality, overall length of hospital stay (LOS), overall cost, intensive care unit (ICU) admission rate and 30-day readmission rate. These outcomes were compared to those of adult bariatric surgery. Results: Adolescent laparoscopic bariatric surgery was performed on 416 patients during this time period. At the same time, 59,490 adult bariatric surgeries were performed. Of the adolescent procedures, 182 patients underwent LAGB, 46 had SG while 188 patients underwent GB. LAGB has shown a decreasing trend (51, 68, 35 & 28), while SG has shown an increasing trend (3, 8, 15 & 20) over the years. GB remained stable (52, 44, 60 & 32) throughout the study period. Among UHCidentified comorbidities in adolescents, hypertension (25.7%), chronic pulmonary disease (21.8%), depression (16.1%), diabetes (15.4%), liver disease (11.3%), and hypothyroidism (6%) were the most common comorbidities. The individual and summative morbidity and mortality rates for these procedures were zero. Comparing to adult bariatric surgery, the length of stay (1.95+/-1.30 vs. 2.36 +/- 3.13, p= 0.008) and overall cost (8,795+/-5162 vs. 10179 +/-8685, p<0.0001) are significantly better while ICU admission rate (8.68% vs. 6.91%, p=0.19) and 30-day readmission rate (1.23% vs. 1.98%, p= 0.34) are comparable in adolescent bariatric surgery.

Conclusions: Trends in adolescent laparoscopic bariatric surgery reveal the increasing use of sleeve gastrectomy with falling favor of adjustable gastric banding. Morbidity and mortality in these procedures is low. Further studies are needed to evaluate the long term data regarding long-term weight loss, late complications and mortality.

S055

OMENTAL PATCH REPAIR EFFECTIVELY TREATS PERFORATED MARGINAL ULCERS FOLLOWING ROUX-EN-Y GASTRIC BYPASS Mark

<u>R Wendling, MD</u>, John G Linn, MD, Kara Keplinger, MD, Vimal K Narula, MD, Jeffrey W Hazey, MD, Dean J Mikami, MD, Kyle A Perry, MD, W. Scott Melvin, MD, Bradley J Needleman, MD Center for Minimally Invasive Surgery, The Ohio State University, Columbus, OH

INTRODUCTION: Roux-en-Y gastric bypass (RYGB) is the most commonly performed bariatric operation in the United States. Marginal ulcer formation remains a significant complication with an incidence as high as 16%, and up to 1% of all RYGB patients will develop free perforation of a marginal ulcer. Smoking, NSAID, and steroid use have been associated with increased risk of marginal ulcer formation. Classically, this complication has required anastomotic revision, however, this approach is associated with significant morbidity. Several small series have suggested that abdominal washout with omental patch repair may be utilized in select cases. The aim of this study was to examine the management of perforated marginal ulcers following RYGB in a large academic medical center.

METHODS: All patients undergoing operative intervention for perforated ulcers between 2003 and 2011 were reviewed. Those with a history of RYGB with perforation of a marginal ulcer at the gastrojejunostomy were included in the analysis. Data collected included operative approach, operative time, blood loss, length of hospital stay, complications, smoking history, and steroid or NSAID use. Data are presented as median (range) or mean (standard deviation). Data was analyzed using an unpaired t-test.

RESULTS: Between 2003 and 2011, 16 patients required operative intervention for a perforated marginal ulcer after RYGB, 13 of whom underwent laparoscopic RYGB at our institution. Median time to presentation was 27 (2-72) months. Five patients (31%) had one risk factor and 13% (n=2) had two risk factors present. Three patients (43%) with one or more risk factors were taking PPIs at the time of perforation. Fourteen patients (88%) underwent abdominal washout with omental patch repair (5 laparoscopic, 9 open) and two required revision of their gastrojejunostomy. Compared to anastomotic revision, abdominal washout with omental patch repair was associated with shorter operative times (93±54 min vs 138±2 min, p=0.0041), decreased blood loss (77±76 mL vs 250±71 mL, p=0.0663) and reduced length of stay (6.0±1.6 days vs 11±5.7 days, p=0.2139). One patient in the anastomotic revision group developed a pulmonary embolism and subdiaphramatic

abscess requiring CT guided drainage. There was one death following abdominal washout with omental patch repair in a patient who was critically ill prior to the perforation.

CONCLUSIONS: Perforated marginal ulcer represents a significant and not uncommon complication of RYGB. RYGB patients should be educated to reduce risk factors for perforation, as prolonged PPI therapy may not prevent this complication in the presence of even one risk factor. Laparoscopic or open abdominal washout with omental patch repair is a safe and effective treatment for this condition that is associated with decreased operative time; it may also decrease blood loss and hospital stay compared to anastomotic revision.

S056

PRE-OP ALCOHOL ABUSE PREVALENCE AMONG WEIGHT LOSS SURGERY PATIENTS Omar Y Kudsi, MD, Karen Huskey, MPH, Shannon Grove, BA, George L Blackburn, MD PhD, Daniel B Jones, MD, Christina C Wee, MD MPH Beth Israel Deaconess Medical Center, Harvard Medical School

Background: It has been hypothesized that alcohol metabolism is altered after weight loss surgery (WLS) with few studies suggesting a high prevalence of problem drinking post-op. However, these studies were methodologically limited by lack of pre-operative alcohol use, high loss to follow-up and/or nonsystematic ascertainment of alcohol (ETOH) intake. We sought to systematically characterize ETOH use among WLS patients before and after surgery.

Methods: Patients who underwent WLS from May 2008 through November 2010 from two bariatric centers in Boston were recruited for inclusion in the study. With a response rate of 75%, Alcohol intake and high risk drinking behavior was systematically assessed via phone interview using an adapted version of the AUDIT instrument among 653 obese patients before and after WLS. Data were kept confidential and not reported back to the Bariatric program. We used descriptive statistics to characterize drinking patterns by age and sex at baseline and plan interim analysis to examine change in ETOH use after WLS. Results: The study cohort was mostly female (75%), the mean age was 44 years, the mean body mass index of the cohort was 46.5 km/m², and 34% of the patients were non-white. At baseline, 71% were current drinkers, 5% were heavy regular drinkers, 16% were high-risk drinkers, and 4% abused alcohol. Men were significantly more likely to be high-risk drinkers and to abuse alcohol (see table 1). High-risk drinking and abuse also significantly varied by age group (see table 1).

Conclusion: This is the first large representative study to evaluate drinking patterns among WLS patients. The prevalence of disordered drinking appears to be comparable to that reported in the general population. Ongoing analysis will present data on any change in alcohol use after WLS and examine if this affects weight loss.

	Current drinkers	Heavy regular drinkers	High risk drinkers	Alcohol abusers
N= 653	71%	5%	16%	4%
Men (=162)	70%	6%	22%	9%
Women (n=491)	71%	4%	14%	2%
, ,	P=0.67	P=0.32	P=0.03	P=0.0001
Age 18-29 yrs (n=100)	72%	7%	27%	9%
Age 30-44 yrs (n=223)		6%	20%	4%
Age 45+ yrs (n=330)		3%	10%	2%
3 , 1 , 1 , 1 , 1	P=0.02	P=0.21	P<0.0001	P<0.004

Table 1. Pattern of Alcohol use among WLS patients at baseline.

S057

SHOULD INSURANCE COMPANIES REQUIRE STRUCTURED ATTEMPTS AT WEIGHT LOSS AS A CONDITION FOR APPROVAL OF WEIGHT LOSS

SURGERY? <u>Abraham J Frech, MD</u>, Arpan Goel, MD, Tovy H Kamine, MD, Robert A Andrews, MD, Daniel B Jones, MD, Benjamin E Schneider, MD Beth Israel Deaconess Medical Center/Harvard Medical School

Introduction: Insurance companies frequently require patients to have participated in structured attempts at weight loss as a prerequisite for weight loss surgery approval. This begs the questions whether such interventions affect surgical weight loss outcomes; and/or does the number of attempts at non-operative weight loss have any effect on

outcomes? The aim of our study was to determine if the number of preoperative attempts at weight loss correlated with postoperative success after WLS.

Methods and Procedures: Between September and December 2010, 108 surveys were collected from postoperative patients weight loss surgery patients at an academic medical center. Patients included in the survey underwent either Roux-en-Y gastric bypass or adjustable gastric band. Of the 108 collected surveys, 14 were excluded as incomplete. The remaining 94 surveys that were complete were analyzed. The patients reported their type of diet and the number of preoperative attempts at weight loss. We divided patients into three groups based upon the number of attempts at weight loss in advance of surgery (Table 1).

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Groups	Preoperative attempts	Patients
Low	0-3 Attempts	N = 52
Moderate	4-6 Attempts	N = 32
High	7⊥ Attempts	N - 10

Results:

Time	Patients	Correlation Coefficient	P value
1 month post op	N = 94	0.22	0.03
1 year post op	N = 61	0.11	0.40
2 years post op	N = 40	0.16	0.34

Table 2: Number of patients at each time point and correlation coefficient and p value between increasing attempts and weight loss (where a correlation coefficient of 1 is a perfect correlation).

At one month following surgery, there was a significant correlation between the number of previous attempts and actual weight loss (correlation coefficient of 0.22, p 0.03). Beyond one month (1 and 2 years), there was no correlation between actual weight loss and the number of prior attempts at dieting.

Conclusion: While multiple attempts at dieting predicted better weight loss at one month, these differences were not durable. Patients who had dieted once or twice were just as likely to do well at 1 and 2 years as those who dieted more frequently. There is little outcome based justification that an arbitrary number of diets should be required for insurance preauthorization prior to weight loss surgery.

S058

PORTO-MESENTERIC VEIN THROMBOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: REPORT OF 12 CASES José Salinas, MD, Julio Cerda, MS, Napoleón Salgado, MD, Fernando Pimentel, MD, Andrea Vega, RN, Gustavo Pérez, MD, Alex Escalona, MD, Ricardo Funke, MD, Camilo Boza, MD Digestive Surgery Department, Hospital Clínico P. Universidad Católica de Chile

INTRODUCTION: Laparoscopic Sleeve Gastrectomy (LSG) has gained popularity because it seems to be simpler and safer than Roux-en-Y gastric bypass. Non-cirrhotic non-malignant portal vein thrombosis is a rare disease. However, in our series it has become the most frecuent early complication. The aim of our study is to describe the preoperative patient's characteristics and clinical presentation of porto-mesenteric thrombosis (PMVT) after LSG.

METHODS AND PROCEDURES: Non concurrent-cohort of patients who underwent LSG at our institution between June 2005 to June 2011 and who had a PMVT.

RESULTS: A total of 1713 LSG cases were performed during that period. Seventeen (1%) patients had a PMVT as a complication. Sixteen (94%) patients were female, with a preoperative age and BMI of 38.1±9.4 years and 35.4±2.04 kg/m2 respectively. Operative time was a median of 75 (40-130) minutes, hospital stay was a median of 3 (2-5) days. All this variables did not differ to the rest of the series. Fifty six percent of the patients were on oral contraceptive, 44% were smokers and 35% had a familiar history of any thrombotic event. All patients received prophylactic low molecular weight heparin during the post-operative hospitalization. Epigastric abdominal pain was the initial symptom in all patients, which occurred between post-operative day 6 and 21 (median 14). CT scan showed thrombosis of the portal vein or one

brach in all cases, superior mesenteric vein in 59% and splenic vein in 65%. Thrombophilia screen test was positive in 37.5% of the cases. Postoperative CT scan showed 6 patients with collateral venous flow and 2 patients with portal cavernomatosis.

CONCLUSIONS: PMVT is the main cause of morbidity in our LSG series. Thrombophilia may play an etiologic rol in some cases, however the exact cause is still unknown. We are running several studies to identify the cause and mechanism of this rare complication.

S059

A PROSPECTIVE COMPARISON OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND GASTRIC BYPASS Francesco Stipa, MD PhD FACS, Valentina Giaccaglia, MD, Alessio Pigazzi, MD FACS, Antonio Burza, MD, Ettore Santini, MD Department of Surgery, San Giovanni Hospital, Rome, Italy

Background. The aim of this study was to compare the effect on comorbidities and failure rates of two common bariatric surgical procedures performed laparoscopically: sleeve gastrectomy (SG) and gastric bypass (GBP), to define whether one operation is superior.

Methods. Between 2006 and 2011 we operated on 120 morbidly obese patients, performing SG (n=60) and GBP (n=60). The choice of the operation was based on patient/surgeon discussion. The analyses included the following variables: age, sex, body mass index (BMI), dietary history, the presence of eating disorder and comorbidities (depression, diabetes, gastroesophageal reflux, hypertension, obstructive sleep apnoea, hyperlipidemia, joint disease). The percentage of estimated weight loss (EWL) was assessed. The mean follow up was 30 months.

Results. In the two groups the mean preoperative and postoperative BMI were the following: SG group (mean age = 40) 44.5 and 32.8; GBP group (mean age = 43): 45.3 and 32.5. The %EWL for SG was 57.5% and for GBP 57.1% (p =0.65, NS). Men responded slightly better than women with %EWL of 55.5% vs 53.7% respectively (p =0.048). Failure rates were 0% for SG and 5% for GBP (p =0.014). Resolution of comorbidities were 75% for SG and 85% for GBP (p = 0.044).

Conclusions. In our experience SG and GBP have similar short term effects. A longer follow up is necessary to confirm these results over a longer period of time. SG is technically simpler than GBP and may become the most common bariatric operation.

S060

SAFETY AND FEASIBILITY OF SLEEVE GASTRECTOMY IN MORBIDLY OBESE PATIENTS FOLLOWING LIVER TRANSPLANTATION Matthew Y Lin, MD, Ankit Sarin, MD MPH, M. Mehdi Tavakol, MD, Shadee M Amirkiai, BS, Stanley J Rogers, MD, Jonathan T Carter, MD, Andrew M Posselt, MD PhD Department of Surgery, University of California, San Francisco, School of Medicine, San Francisco, California

Background: Obesity, steroid-induced diabetes, hypercholesterolemia, and steatohepatitis can occur after liver transplantation and may respond to bariatric surgery. The safety and feasibility of bariatric surgery after liver transplantation is unknown.

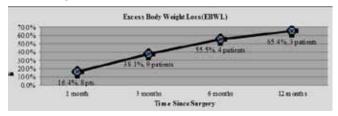
Methods: Nine morbidly obese patients with prior liver transplants underwent sleeve gastrectomies in a pilot program. Sleeve gastrectomy was chosen over gastric banding to avoid foreign body implantation, and over gastric bypass to maintain endoscopic access to the biliary system and reduce surgical complexity. We reviewed patient demographics, operative details, 30-day complications, weight loss, postoperative hepatic and renal function, and resolution of co-morbidities.

Results: Patient and procedural characteristics are listed in Table 1. The operation was performed laparoscopically in 8 patients and open in one patient. Follow-up ranged 3-36 months. Excess weight loss averaged 55.5% at 6 months (table 2). Calcineurin inhibitor levels, hepatic, and renal functions remained stable. There were no episodes of acute rejection. In the first 30 days, there were 3 complications: mesh dehiscence after a synchronous incisional hernia repair, bile leak from the liver surface that resolved with conservative management, and postoperative dysphagia with readmission.

Table 1. Demographics and Laboratory Values

Characteristic	Mean +/- Standard Deviation (SD)			
Age (years)	56.8 +	-6.6		
Female	69 (6	7%)		
Non-White	49 (4	4%)		
Time since Liver transplant (months)	90.3 +/	- 50.7		
Operative Time (micutes)	172.1 +1	- 67.6		
Length of Stay (LOS)	5.6 days	+6.3.8		
Pre-operative Body Mass Index (BMI)	40.6 kg/m	t +/- 3.3		
Laboratory Data	Before	3 Months Post-op		
Total Bilirabia	0.76 +/- 0.40	0.63 +/- 0.3		
AST/ALT	29+/- 8.4 / 33 +/- 17.7	22+/-22 / 22+/-12		
International Normalization Ratio (INR)	1.08 +/- 0.05	1.15 +/- 0.09		
Creatinine (mg/dL)	1.35 = (-0.58	1.15 +(- 0.40		
Fasting Glucose (mg/dL)	136 +/- 50.5	97 +/- 15**		
Hemoglobia Alc (%)	8.1 +/- 1.2	5,4 +/, 0,88* 176 +/-25 141 +/-49 2,75 +/-3,2		
Cholesterol (mg/dL)	190 +/- 36			
Fasting Triglycerides (mg/dL)	231 +/- 112.6			
Tacrolimus Dosage (mg/day)	2.31 +/- 1.9			
Tacrolinus Serun (pg L)	4.36 +/- 2.0	5.7 + (-3.6		

Table 2. Weight Loss



Conclusion: Sleeve gastrectomy is technically feasible after liver transplantation and results in weight loss and improvement in metabolic diseases. Graft function and immunosuppression are not adversely affected. Complications might be more frequent given the patient's underlying disease and prior surgeries.

S061

MONOPOLAR RADIOFREQUENCY ENERGY S EFFECT ON PACEMAKER FUNCTION: PRACTICAL IMPLICATIONS Henry R Govekar, MD, Thomas N Robinson, MD FACS, Guillaume Girard, MS, Greg V Stiegmann, MD FACS, Paul D Varosy, MD University of Colorado School of Medicine

Introduction: Recommended use of monopolar "bovie" energy in patients with pacemakers is based on expert opinion and small case series. Current guidelines recommend to use low monopolar power settings in short/intermittent bursts, to avoid proximity of the active electrode to the pacemaker, to position the dispersive electrode ("grounding pad") so the current vector avoids the pacemaker and to use bipolar instead of monopolar energy. The PURPOSE of this study was to challenge current guidelines regarding the use of monopolar electrosurgery in the setting of a pacemaker in an in vivo animal model. The SPECIFIC AIMS were to quantify pacer inhibition resulting from monopolar energy by altering: (1) generator power setting; (2) generator mode (cut versus coagulation); (3) distance between active electrode and pacemaker; (4) location of dispersive electrode; (5) activation technique (intermittent bursts versus continuous); (6) energy modality (monopolar versus bipolar).

Methods: The effect of monopolar radiofrequency energy on a transvenous ventricular lead pacemaker was tested in vivo (porcine model). The native heart rate (85 beats/minute) was overdrive paced with the pacemaker (110 beats/minute). The primary outcome variable was pacer inhibition (quantified as the number of beats dropped by the pacemaker during a 5 second monopolar energy activation).

Results: (1) Lowering generator power setting from 60 to 30 Watts decreased the number of dropped paced events $(2.3\pm1.2 \text{ versus } 1.6\pm0.8; p=0.045.$ (2) On 30 Watts, the cut mode decreased the number of dropped paced beats in comparison to coagulation mode $(0.6\pm0.5 \text{ versus } 1.6\pm0.8; p=0.015)$. (3) On 30 Watts coagulation, firing the active electrode at different distances from the pacemaker generator (3.75 cm, 7.5 cm, and 15 cm) did not change the number of dropped paced beats $(1.8\pm1.3, 1.6\pm0.8 \text{ and } 2.2\pm1.3; \text{ANOVA p=0.612})$. (4) When placing the dispersive electrode in four locations (right/left gluteus, right/left shoulder), more paced beats were dropped when the current vector travelled through the pacemaker/leads (e.g., the current crossed through the pacemaker

and/or leads as it travelled from the active to dispersive electrode) than when the current vector did not travel through the pacemaker/ leads $(1.5\pm1.0 \text{ versus } 0.2\pm0.4; p<0.001)$. (5) Intermittent "bovie" use (1 second on and 1 second off for a total of 10 seconds) versus continuous activation (one continuous 5 second activation) decreased the number of dropped paced beats $(0.9\pm0.6 \text{ versus } 1.6\pm0.8; p=0.001)$. (6) On 30 and 60 Watts power, bipolar energy dropped no paced beats (p<0.001 versus monopolar energy at both power settings).

Conclusions: Placement location of the dispersive electrode to avoid current vector traversing the generator/leads is critical to minimizing monopolar energy's disruptive effect on pacemaker function. Varying distance of the active electrode from the pacemaker generator was not a significant factor in pacemaker disruption when the variable of whether or not the current vector was traversing the generator/leads was held constant (a finding that contradicts current guidelines). Cut mode causes less pacemaker disruption than coagulation mode (a finding not included in current guidelines). Current recommendations to use a lower power settings, short/intermittent monopolar energy activations and bipolar energy were confirmed.

S062

THE EFFICACY OF FLUORESCENT CHOLANGIOGRAPHY USING THE SPY SCOPE SYSTEM, A RANDOMIZED CONTROL TRIAL Danny A

Sherwinter, MD Maimonides Medical Center

BACKGROUND: Intraoperative cholangiogram (IOC) has been shown to be helpful in delineating biliary anatomy and may prevent main duct injury during laparoscopic cholecystectomy. Despite these benefits, the need for ionizing radiation and injection of contrast directly into the biliary system has prevented IOC from becoming routine. Fluorescent cholangiography using an intravenously injected fluorophore and near infrared (NIR) imaging provides similar anatomical detail without the drawbacks of radiographic cholangiography.

To date, NIR imaging systems have been cumbersome, requiring the surgeon to halt dissection and switch modes, or even switch cameras to obtain the fluorescent cholangiographic views. The laparoscopic image, and therefore the context necessary to accurately interpret the cholangiographic images is lost and the operative flow interrupted. The Spy system (Novadaq, Ontario) is a NIR fluorescence based laparoscopic system that has the novel capability of acquiring both NIR and white light images simultaneously. It can then superimpose the fluorescent cholangiogram on the standard white light laparoscopic image in real-time.

METHODS: The Spy scope consists of a high definition (HD) 10mm endoscopic camera and light source designed to concurrently acquire high resolution visible and NIR fluorescence images. Furthermore, it is equipped with a combined display mode that merges the NIR image as an overlay on the HD image. Indocyanine green (ICG) was used as the fluorophore.

38 patients undergoing laparoscopic cholecystectomy were enrolled in this study, 19 were randomized to receive 1cc of ICG injected intravenously 30-60 min prior to beginning the procedure and 19 were randomized to the control group. The Spy system was used as the sole imaging system in all cases. At the completion of the cases, the operative surgeons were asked to assess visualization, safety, operative technique, resident autonomy and teaching value on a five-point Likert Scale. Objective parameters such as operative time and time to identification of the major structures were also evaluated.

RESULTS: No difference in mean operative times was noted between the ICG and control groups (52.4 and 46.1 minutes respectively) but mean time to identification of the key anatomical structures (14.2 and 19.7 minutes respectively) was significantly reduced. Based on surgeon questionnaire responses, the Spy scope did not significantly improve the safety of the procedure or the ability of the surgeon to identify important structures but did provide the surgeon with the confidence to allow trainees greater operative autonomy.

CONCLUSION: The results of this study are encouraging and indicate that although the Spy system doesn't supplant the critical view technique it speeds recognition of key structures by providing real-time

contextualized cholangiographic images without being obtrusive or interrupting the operative flow. It may be especially helpful for surgeons early in the learning curve to help in identifying anatomy and preventing injury.

S063

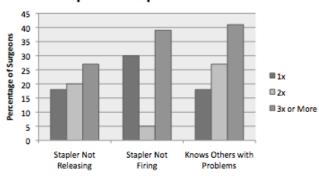
THE UNACKNOWLEDGED INCIDENCE OF LAPAROSCOPIC STAPLER MALFUNCTION DR Kwazneski, MD, CK Six, MD, KR Stahlfeld, MD UPMC Mercy. Pittsburgh. PA. USA

Introduction: Laparoscopic instruments are being used with increasing frequency. Our surgeons recently experienced several independent adverse events involving the laparoscopic linear stapler. Although the Food and Drug Administration maintains a Manufacturer and User Facility Device Experience (MAUDE) database to track such voluntary reports, many events are not reported and the true incidence is unknown. We attempted to determine how frequently minimally invasive surgeons have experienced technical problems with a laparoscopic stapler.

Methods: Following IRB approval, we electronically distributed an anonymous, ten question survey to the 124 minimally invasive program directors listed in the fellowship council database. Questions focused on personal or peer experience with laparoscopic stapler malfunction, frequency and type of malfunction, device manufacturer, whether or not the operation was altered, and root cause analysis of the event.

Results: Forty-four of the 124 program directors (35%) completed the survey. The majority reported personal or peer experience (86%) with a linear stapler not releasing (66%) or not firing (73%) after application, with 27% of the respondents noting this occurred three or more times.

Reported Stapler Malfunction



The malfunction was not related to type of load, straight (23%) or reticulating (32%) model, or manufacturer (Ethicon 30%, Covidien 36%). One quarter of the respondents noted that the malfunction caused them to significantly alter their operative procedure, and 30% reported that they received no helpful feedback from the manufacturer despite contacting them.

Conclusions: Most minimally invasive surgeons have experienced laparoscopic linear stapler malfunction and 25% have had to significantly alter the planned operative procedure due to the malfunction. Because these events are sporadic, investigation is not standardized. No current reporting system exists to accurately document the true incidence.

S064

AEROSOLISED INTRAPERITONEAL LOCAL ANESTHETIC (AILA): A NOVEL METHOD OF ANESTHETIC ADMINISTRATION IN LAPAROSCOPIC SURGERY, ASSESSMENT OF SAFETY AND

FEASIBILITY A M Mcdermott, MD, K Mieske, MD, K H Chang, MD, A Abeidi, MD, B H Harte, MD, M J Kerin, MD MCh, O J Mcanena, MD Discipline of Surgery, School of Medicine, National University of Ireland, Galway, Ireland and the Galway Clinic, Doughiska, Galway, Ireland

Introduction: Laparoscopic surgery has revolutionised the management of many common general surgical and gynaecological procedures. However it is not pain free. Post-operative and shoulder tip pain,

prolongs inpatient stay and frequently negates the principles of laparoscopic day surgery. Amelioration of postoperative pain is a key end-point to drive novel minimally invasive approaches such as single port surgery and NOTES. Intraperitoneal (IP) delivery of local anesthetic is a recognised technique to reduce this post-operative pain. A novel device which delivers aerosolised ropivacaine along with carbon dioxide insufflation has been devised (Aerosurgical *). That device has been evaluated in animal models but its feasibility and safety has yet to be assessed in humans. This study evaluates the feasibility and safety profile of this device. Systemic ropivacaine levels were measured over time.

Methods

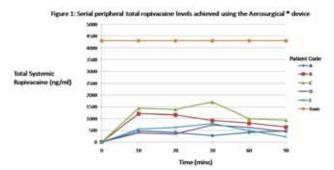
Ethical approval was obtained. Five patients were evaluated. Five millilitres of 1% ropivacaine was delivered using the aerosurgical device. Serial venous blood samples were measured at 6 timepoints, from 0 to 90 minutes. Serum total ropivacaine levels were then determined using liquid chromatography and mass spectrometry.

Results

The device successfully delivered five millilitres of ropivacaine insufflating one litre per minute of carbon dioxide over five minutes. The aerosolised solution is visable as a homogenous gas within the peritoneal cavity. Total systemic ropivacaine levels achieved at each timepoint were well below (max. 1705ng/ml) the toxic level (4300ng/ml). Peak systemic ropivacaine concentration was reached between 10 and 20 minutes (see Figure 1). Levels tapered to insignificant levels at 90 minutes (540.7ng/ml \pm 260.5 ng/ml). There were no complications of drug administration.

Conclusion

This device delivers aerosolised intraperitoneal local anesthetic safety. Systemic ropivacaine levels at this dose are well below toxic levels and allow for flexibility in increasing the dose to improve efficacy. This preliminary study confirms AILA is feasible and safe. It has major potential in the practical application of "true" day case laparoscopic surgery.



S065

TRANS NASAL ENDOSCOPY AS AN OFFICE PROCEDURE FOR BARIATRIC SURGERY EVALUATION Helmuth T Billy, MD Ventura Advanced Surgical Associates

Introduction: Preoperative and postoperative evaluation of bariatric surgery patients often requires the use of fiberoptic endoscopy to preoperatively screen patients or evauate for possible complications. Trans nasal endoscopy offers the potential to streamline evaluation of patients and decrease the costs associated with evaluating these patients.

Methods and Procedure: 15 bariatric surgery patients were evaluated for preoperative pathology and postoperative complications in an office setting using trans nasal endoscopy. No sedation was required. Preparation of the nasal passage was accomplished using Afrin nasal decongestant and 4% lidocaine spray. The endoscope was advanced into either the right or left nasal passage and advanced along the floor of the nares until the soft palate was visualized. The endoscope was advanced to the pharynx and then each subject swallowed a small sip of water and the scope was easily passed into the esophagus. Endoscopic evaluation of the proximal, mid and distal

esophagus was accomplished. The GE junction was evaluated for any evidence of Barretts esophagus. In all patients the stomach or the gastric pouch was examined, retroflexed visualization of the GE junction was perfromed and if indicated biopsies to rule out H. Pylori was performed.

The average procedure length was 11minutes 45 seconds. All patients were discharged within a few minutes of their procedure. All patients were able to drive themselves following the procedure.

No complications occurred. Patient satisfaction surveys were completed. Each patient felt the technology was superior to having to undergo sedation or a prolonged investment in time which would have occurred with traditional filberoptic endoscopy. All patients studied would reccomend the procedure to a friend. All the procedures were completed without early termination.

Results: 15 patients were studied. Two hiatal hernias were identified. One eroded lap band was discovered. One marginal ulcer was discovered. Seven patients were biopsied for H.Pylori. No complications were reported.

Conclusion: Trans nasal endoscopy appears to be easily integrated into a bariatric office setting as a practical procedure for ensocopic screening of potential bariatric surgery patients. Evaluation of postoperative patients allowed successful visualization of Lap band anatomy and gastric bypass pouch and anastomosis.

S066

THE LINX REFLUX MANAGEMENT SYSTEM CONFIRMED SAFETY AND EFFICACY NOW AT FOUR YEARS. J.Lipham, MD, R Ganz, MD, Tr Demeester, MD, D Dunn, MD, W Bemelman, MD, G Saino, MD, D Bona, MD, P Fockens, MD, L Bonavina, MD University Of Southern California, Abbott Northerwestern Hospital, Policlinico San Donato Milan Italy, Academic Medical Center Amsterdam

Introduction: The LINX device is intended for chronic reflux patients who have incomplete symptom relief from acid suppression therapy, confirmed pathologic reflux defined by standard pH testing and chose not to elect a Nissen fundoplication.

We have previously shown that the laparoscopic placement of the LINX device to augment the lower esophageal sphincter provides safe and effective GERD therapy on a short-term basis (Bonavina, 2008). We now extend those observations up to 4 years follow-up.

Methods: 44 patients were enrolled in a feasibility trial between February 2007 and October 2008. All patients had typical GERD symptoms of heartburn and regurgitation; confirmed pathologic reflux defined by standard pH testing, and were at least partially PPI responsive. All patients had laparoscopic implantation of the LINX™ device.

Results: There were no peri-operative complications, and no observed erosion or migration of the device. Follow-up data was available for 32 patients at a median of 3.2 years post-implant (range 2.6-4.0). The median % total time pH < 4 improved from 9.6% to 3.1%; the median GERD-HRQL total score improved from 26.5 to 2; and 88% were free of daily PPI use. No subjects reported the inability to belch and vomit and 87% were not bothered by bloating or gassy feelings.

Three patients had the device laparoscopically removed without complication; one patient received a Nissen fundoplication at the time of removal.

Conclusions: The treatment of chronic GERD with augmentation of the lower esophageal sphincter by the LINX device appears to be safe, effective and durable with a low side effect profile. The LINX procedure also appears to be safely reversible without preclusion of other treatment options.

S067

ROBOTIC VERSUS LAPAROSCOPIC-ASSISTED INTERSPHINCTERIC RESECTION FOR LOW RECTAL CANCER: A COMPARATIVE STUDY OF SHORT-TERM OUTCOMES Soo Yeun Park, MD, Gyu-seog Choi, MD, Jun Seok Park, MD, Hye Jin Kim, MD, Jong-pil Ryuk, MD, Whon-ho Choi, MD Kyungpook National University Medical Center

Introduction The present study aimed to compare the short-term outcomes between robotic-assisted intersphincteric resection (ISR) and laparoscopic ISR for distal rectal cancer

Methods Between March 2008 to July 2011, patients treated by robotic and laparoscopic-assisted ISR for rectal cancer were included in a retrospective comparative study. Preoperative, perioperative, and postoperative data, including complication and early functional outcomes, were analyzed between the two groups. Functional outcomes were evaluated using the Wexner Scoring, the International Prostate Symptom Score (IPSS), and the 5-item version of the International Index of Erectile Function (IEF-5).

Results 40 patients were treated by robotic and 40 by laparoscopic-assisted ISR. The mean operative time was significantly longer in the robotic group (235.5 vs. 185.4 min; P < 0.001). Trans-abdominal ISR, in which ISR is completed in the pelvic cavity, was performed more often using robotic-assistance than laparoscopic surgery (8 vs. 2 cases; p = 0.043). No difference was observed between groups regarding postoperative morbidity and pathologic outcomes. There was a trend towards fewer postoperative losses and early recovery of functional outcomes in the robotic-assisted group.

Conclusion Robotic-assisted surgery was safe and effective for ISR of distal rectal cancer and resulted in similar surgical outcomes with the latest laparoscopic ISR. The results favored robotic-assisted ISR with respect to functional outcomes and the time required for the surgeon to adapt to the technique.

S068

LAPAROSCOPIC VERSUS OPEN GASTRECTOMY FOR GASTRIC ADENOCARCINOMA: LONG-TERM OUTCOMES FROM A LARGE SCALE MULTICENTER STUDY. Hyung-ho Kim, MD PhD, Hyuk-joon Lee, MD, Gyu Seok Cho, MD, Sang-uk Han, MD, Min-chan Kim, MD, Seung Wan Ryu, MD, Wook Kim, MD, Kyo Young Song, MD, Woo Jin Hyung, MD, Seong Yeob Ryu, MD Department of Surgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital, Gyeonggi-do, Korea; Department of Surgery, Seoul National University, Seoul, Korea

INTRODUCTION: Although laparoscopic assisted gastrectomy (LAG) is widely used for the treatment of gastric cancer, large scale study showing the long-term outcome is rare. The aim of this study is to compare laparoscopic versus open surgery for gastric cancer in terms of long-term prognosis and recurrence from multicenter data.

METHODS AND PROCEDURES: A retrospective multicenter data from nine institutions in Korea was used. A total of 3047 patients (laparoscopy: 1483, open: 1562) who underwent curative resection for gastric adenocarcinoma between 1998 and 2005 were included in this study. Patients with T4b disease (n= 40) or stage IV (n=19) were excluded because none or few these patients had received laparoscopic surgery.

RESULTS: According to the AJCC/UICC 7th staging system, the tumor stages in the open group were as follows: stage IA (n= 381, 24.4%); stage IB (n=167, 11.0%); stage IIA (n=156, 10.2%); stage IIB (n=189, 12.4%); stage IIIA (n= 169, 11.1%); stage IIIB (n= 176, 11.6%); and stage IIIC (n=265, 17.4%). Tumor stages in the LAG group were: stage IA (n=1140, 76.9%); stage IB (n=157, 10.6%); stage IIA (n=76, 5.1%); stage IIB (n=53, 3.6%); stage IIIA (n= 23, 1.6%); stage IIIB (n= 24, 1.6%); and stage IIIC (n=9, 0.6%). There were no significant differences in 5-year cancer free survival rates between the LAG and the open gastrectomy groups at any tumor stage except for stage IA(stage IA: 98.9% vs. 97.4%, P= 0.031; stage IB: 96.7% vs. 95.6%, P=0.352; stage IIA: 94.4% vs. 88.7%, P=0.150; stage IIB: 77.0% vs. 79.2%, p=0.928; stage IIIA: 71.1% vs. 74.7%, P=0.902; stage IIIB: 39.7% vs. 46.4%, P=0.204; stage IIIC: 22.2% vs. 36.5%, P=0.561). No difference in the 5 year overall survival was also observed when the groups were compared according to tumor stages except for stage IA (stage IA: LAG 95.6% vs. open gastrectomy 91.5%, P= 0.007; stage IB: 91.6% vs. 93.3%, P=0.496; stage IIA: 86.7% vs. 85.6%, P=0.559; stage IIB: 75.2% vs. 77.3%, p=0.789; stage IIIA: 63.3% vs. 69.9%, P=0.711; stage IIIB: 45.8% vs. 49.8%, P=0.512; stage IIIC: 33.3% vs. 30.5%, P=0.607).

CONCLUSIONS: LAG for gastric cancer is a safe oncological procedure with comparable long-term outcomes when compared with open gastrectomy. We are expecting the result of prospective KLASS study.



S069

THIRTY DAY OUTCOMES OF LAPAROSCOPIC VERSUS OPEN
APPENDECTOMY IN ELDERLY USING ACS/NSQIP DATABASE Ashkan
Moazzez, MD FACS, Rodney J Mason, MD PhD FACS, Namir Katkhouda,
MD FACS H. Claude Hudson Comprehensive Health Center, University of
Southern California

INTRODUCTION: Although laparoscopic appendectomy (LA) is becoming the procedure of choice rather than open appendectomy (OA) in treatment of appendicitis in general population, its role has not been widely studied in the elderly. The objective of this study is to compare the 30-day outcomes after LA versus OA for appendicitis in elderly patients in ACS/NSQIP hospitals.

METHODS AND PROCEDURES: Using the ACS/NSQIP database for years 2005 through 2009, 3674 patients (age>65) who underwent an appendectomy for appendicitis were identified. Seventy two percent of the procedures were performed laparoscopic. The association between surgical approach and overall morbidity, serious morbidity and mortality were analyzed.

RESULTS: Patients who underwent an open appendectomy had a longer length of stay (4.7 vs 2.9 days, p<0.001), and a not clinically, but statistically significant longer operative time (54.3 vs. 51.7 min, p=0.02). This group of patients also had a higher rate of overall morbidity (13.4% vs 8.2%, p<0.001) and mortality (2% vs. 0.9%, p=0.003), but same rate of serious morbidity (6.7% vs. 5.2%, p=0.08). In a subgroup analysis, while patients with ASA class of 1 and 2 had the same overall morbidity and mortality rate in LA and OA, patients with ASA class of 3 or 4 had a higher overall morbidity (19.4% vs. 11.9%, p<0.001) and mortality (3.9% vs. 1.8%, p=0.009).

CONCLUSION: Within ACS NSQIP hospitals, elderly patients benefited from laparoscopic approach to appendicitis in regards to length of stay and had a lower overall morbidity and mortality. This was also the case in patients with higher ASA classes.

S070

COST EFFECTIVENESS ANALYSIS AND COMPARISON OF SINGLE STAGE VS TWO STAGE MANAGEMENT OF PATIENTS WITH CONCOMITANT GALL STONE DISEASE AND COMMON BILE DUCT STONES - A RANDOMIZED CONTROLLED TRIAL Virinder K Bansal, MBBS MS FACS, Pramod Garg, MD DM, M C Misra, MS FACS FRCS, Ragini Kilambi, MS, S Rajeshwari, MD All India Institute of Medical Sciences, New Delhi-110029, India

Background: The ideal modality of treatment for patients with concommitant gall stones with common bile duct stones is a matter of debate. This prospective randomized trial was undertaken to compare the outcome of patients undergoing a single stage management vs a two stage management.

Materials and Methods: The study was conducted from June 2009 to July 2011. One hundred twenty five patients were randomized, 63 to single stage laparoscopic common bile duct exploration with cholecystectomy (Group I) and 62 to endoscopic retrograde cholangio-pancreatography (ERCP) followed by laparoscopic cholecystectomy (Group II). Diagnosis was confirmed preoperatively using magnetic resonance cholangio-pancreatography (MRCP) and/or endoscopic ultrasound (EUS). Data was collected according to CONSORT guidelines. Outcome measures included were the success of intended modality, complications, hospital stay, cost of the procedure, pain scores, number of procedures and patient satisfaction scores.

Results: The demographic and clinical profiles were well matched in both the groups. MRCP and trans-abdominal ultrasonogram (USG) had a positive predictive value of 97.6% and 96.8% respectively. Success rate with the intended treatment option was 90.5% (57 out of 63 patients) in Group I as compared to 72.6% in Group II (10 failures of ERCP, 2 conversions to open cholecystectomy and 5 patients did not follow up for a cholecystectomy). Group I was found to have a higher success rate

as compared to Group II which was also statistically significant (p = 0.01, OR 3.59, 95% CI 1.31 to 9.84).

The overall surgical difficulty was greater in Group II, though it was not statistically significantly. However, significantly greater adhesions (p = 0.01) and a difficult Calot's triangle dissection (p = 0.02) were found in the post ERCP cholecystectomy. There were two deaths in Group II that were due to severe acute pancreatitis and multi organ dysfunction syndrome, duodenal perforation with sepsis after ERCP in 2 patients. There was no statistically significant difference in post operative wound infection rates or major complications. Group II patients had a significantly higher number of procedures per patient (p < 0.001) and the cost incurred in Group II was also significantly higher (p = 0.0015). The hospital stay was shorter in Group I, though statistically insignificant. The patients had a better satisfaction score at the end of a single stage procedure as opposed to a two - stage procedure (p = 0.006).

Conclusions

Single stage management of patients with gall stones and common bile duct stones is a better option in terms of cost effectiveness, significantly higher success rate, fewer complications, lesser number of procedures, and better patient satisfaction score. The lesser number of visits and procedures leading to better patient compliance is one of the major advantages of this approach. In centers where expertise in laparoscopic surgery is available the single stage option should be the preferred option in these patients.

S071

DOES THE INCORPORATION OF MOTION METRICS INTO THE EXISTING FLS METRICS LEAD TO IMPROVED SKILL ACQUISITION ON SIMULATORS? Dimitrios Stefanidis, MD PhD, Thomas C Yonce, Ryan C Phillips, Aikaterini Coker Carolinas Simulation Center, Carolinas Healthcare System

Introduction: Motion tracking has been suggested to be a more sensitive performance metric compared with time and errors during simulator training. It is unknown, however, whether the incorporation of such metrics into the training goals of a proficiency-based simulator curriculum such as the FLS translates to improved operative performance of learners. We hypothesized that training to expert-derived levels of speed and motion will lead to improved learning and will translate to better operating room performance of novices compared to training to goals of speed or motion alone.

Methods and Procedures: An IRB-approved, blinded, randomized controlled trial was conducted at our level-I ACS-accredited education institute. 45 novices were stratified according to their baseline performance on the FLS suture model and randomized into three groups: The first group (Speed Group, n=15) trained in laparoscopic suturing until the expert level of speed was achieved. The second group (Motion Group, n=14) trained until expert levels of motion (pathlength and smoothness) were achieved. The third group (Speed and Motion, n=13) trained until expert levels of speed and motion were achieved. The ProMIS simulator that allows motion tracking and task 5 of the FLS curriculum were used for training. Besides the speed and motion metrics, to achieve proficiency participant performance had to also be error free. After training completion all groups were tested on a live porcine Nissen fundoplication model (Post-test) and retested 3 months later in the absence of practice (Retention-test). OR performance was assessed by a blinded expert rater using GOALS, task time, knot security and accuracy errors, and inadvertent injuries to adjacent structures. ANOVA was used for group comparisons. Data are presented as mean±s.d.

Results: Participant age was 23±3 years. 35% were women, and 95% right handed without differences among the groups. 30 (71%) participants achieved proficiency and participated in the Transfer-test and 26 in the Retention-test. The Speed group achieved proficiency significantly faster. With the exception of a higher injury rate during the post-test for the Speed group (that reversed during the retention test) there were no significant performance differences among the groups (see table)

	Speed Group	Motion Group	Speed/ Motion Group	p-value
# Reps to Proficiency	66±16	160±42	196±72	<0.001
#Training Sessions Post-test	15±3	25±5	23±5	<0.001
GOALS Ratings	18±4	17.3±3	16.5±3	0.32
Task Time (sec)	252±116	310±115	242±82	0.08
# Knot Errors	0.7±0.7	1±0.7	1.5±1.4	0.24
# Inadvertent	1.8±2.2	0.8±1.3	0.4±1.1	0.02
Iniuries				
Rétention-test				
GOALS Ratings	18.9±3	17.5±3	18.8±2	0.25
Task Time (sec)	229±76	260±78	226±71	0.37
# Knot Errors	0.9±0.9	1±0.8	1±1	0.96
# Inadvertent	0.2±0.4	0.8±1.1	1.2±1.6	0.06
Injuries				

Conclusions: The incorporation of motion metrics into the time/ accuracy goals of the FLS laparoscopic suturing curriculum led to fewer injuries in the operating room by novice learners but this effect dissipated 3 months later. Given the increased training requirements for such a curriculum and its limited effectiveness on trainee performance the addition of motion metrics to the current FLS metrics cannot be recommended based on the results of this study.

S072

SURGEONS DON'T KNOW WHAT THEY DON'T KNOW ABOUT THE SAFE USE OF ENERGY IN SURGERY Liane S Feldman, MD, Pascal Fuchshuber, MD PhD, Daniel B Jones, MS MD, Jessica Mischna, Steven D Schwaitzberg, MD, Fuse Task Force McGill University, The Permanente Medical Group, Harvard Medical School, SAGES, Cambridge Heath Alliance

Introduction: Surgeons have not been required to train on the energy-based devices they use in the operating room or document their knowledge of device safety issues. Although many surgeons feel they understand how to use devices properly and therefore safely, this has never been formally tested. The aim of our study was to assess the knowledge of a cohort of gastrointestinal surgeons, and determine if key facts could be learned in a one-day course.

Methods: SAGES piloted a postgraduate CME course on the Fundamental Use of Surgical Energy™ (FUSE) at the 2011 SAGES meeting. An 11-item multiple-choice examination (pretest) was prepared from questions submitted by the course faculty and thought to be critical knowledge. The pretest was administered to members of the SAGES board, Quality, Outcomes and Safety Committee and FUSE Task Force. It was later administered to the PG course participants, who also completed a 10-item posttest covering the same content at the end of the course. Data expressed as median[IQR].

Results: Forty-eight SAGES leaders completed the test. The median number of correct answers out of 11 was 6.5 [IQR 6-8] (range 0 to 11), or 59%. 31% of SAGES leaders did not know how to correctly handle a fire on the patient, 31% could not identify the device least likely to interfere with a pacemaker, 13% did not know that thermal injury can extend beyond the jaws of a bipolar instrument and 10% thought you should cut a dispersive pad to fit a child. Results on the pretest for 27 participants in the postgraduate course were similar, with median 6 [IQR 5-9] correct. Participants were not told the correct answers. At the end of the course, 25 participants completed a different 10-item posttest, with median 9 [IQR 7-9] correct.

<u>Conclusion:</u> When tested, many surgeons have gaps in knowledge related to the safe use of widely employed energy-based devices. A formal curriculum in the safe use of energy devices has the potential to address this knowledge gap and contribute to a safer operating room environment.

S073

DEVELOPMENT AND EVALUATION OF A LAPAROSCOPIC COMMON BILE DUCT EXPLORATION SIMULATOR AND PROCEDURAL RATING

SCALE Byron F Santos, MD, <u>Eric S Hungness, MD</u>, Taylor J Reif, BS, Alexander P Nagle, MD, Deborah M Rooney, PhD, Nathaniel J Soper, MD Northwestern University Department of Surgery

Introduction: Laparoscopic common bile duct exploration (LCBDE) is an effective, single-stage treatment for choledocholithiasis. However, LCBDE

requires specific cognitive and technical skills, is infrequently performed by residents, and currently lacks suitable training and assessment modalities outside of the operating room. To address this gap in training, a simulator model for transcystic and transcholedochal LCBDE was developed and evaluated.

Methods: A procedure algorithm incorporating essential cognitive and technical steps of LCBDE was developed. A physical model was then built which allowed performance of a simulated LCBDE. To assess performance on the model, modified Objective Structured Assessment of Technical Skills (OSATS) rating scales were developed. Construct validity was assessed by comparing the performance of novices (residents and surgeons without LCBDE experience) versus experienced subjects (surgeons with previous LCBDE experience). Concurrent validity was assessed by comparing scores from the LCBDE scales to those from the standard OSATS scale. Internal consistency and inter-rater reliability were assessed by comparing performance scores assigned by three independent raters.

Results: Sixteen novices and five experienced subjects performed simulated procedures on the model. Novices scored lower than experienced subjects on both the transcystic (20 \pm 3 v. 33 \pm 2, [possible score range 0-45] p < .001) and transcholedochal (25 \pm 8 v. 42 \pm 3, [possible score range 0-53], p < .001) rating scales. Scores on the LCBDE rating scales showed significant correlation with scores from the standard OSATS scale. Internal consistency and inter-rater reliability of the transcystic and transcholedochal rating scales were favorable.

Conclusions: The LCBDE simulator described herein is a low-cost yet realistic physical model allowing performance and evaluation of technical skills required to perform LCBDE. The LCBDE rating scales show evidence of construct validity, concurrent validity, internal consistency, and inter-rater reliability when used to rate performance on the LCBDE simulator. Use of the LCBDE model and associated rating scales allows procedure-specific feedback for trainees and could be used to improve current training in LCBDE.

S074

ANALYSIS OF EYE GAZE: DO NOVICE SURGEONS LOOK AT THE SAME LOCATION AS EXPERT SURGEONS DURING A LAPAROSCOPIC OPERATION? Rana Khan, MD, Geoffrey Tien, Stella Atkins, Bin Zheng, MD,

Ormond N Panton, MD, Adam T Meneghetti, MD MHSc UNIVERSITY OF BRITISH COLUMBIA, SIMON FRASER UNIVERSITY

Introduction: The purpose of this study is to see if eye-tracking technology can be used to detect differences in the eye gaze pattern between expert and novice surgeons.

Eye-tracking technology is currently being evaluated as a potential educational and assessment tool in surgical training. It can be used to track where a surgeon is looking during a procedure both in the lab and in the real operating room environment.

Methods: Data collection required three phases. Phase 1 involved recording the real time eye-gaze of three expert surgeons while they performed laparoscopic procedures in the operating room. The video from these operations was saved and used for Phase 2.

Phase 2 involved showing the recorded video after a few months to the same expert surgeons while they were sitting in a controlled lab environment, and their eye gaze patterns were recorded.

In Phase 3, junior residents (PGY 1-3) were shown the recorded video operations and their eye-gaze was recorded.

The eye gaze patterns from Phase 1 and Phase 2 were compared after superimposing on each other. The Phase 2 and Phase 3 recordings were also compared to each other.

Eye gaze patterns were considered "overlapped" when the distance between two gaze points was less than 90 pixels. Percentage of overlap time was based on the entire procedure time.

Results

There were sixteen Phase 1 recordings from three expert surgeons. Phase 2 recordings were obtained after a mean of 138 days. Twenty eye-tracking recordings were obtained from junior residents. Expert surgeons showed a 55% overlap of eye gaze pattern from Phase 1 to Phase 2

(doing vs. watching only). Junior residents showed only a 43.8% overlap when compared to the eye gaze pattern of the expert surgeons (p 0.001).

onclusions

These findings show that there is a significant difference in eye gaze pattern between novice and expert surgeons while watching a laparoscopic operation. In addition, eye gaze patterns differ when a surgeon is performing an operation versus watching the operation in a controlled environment. This technology can potentially expedite the learning curve for various laparoscopic procedures by teaching surgeons-in-training to follow the eye gaze location of expert surgeons.

S075

DOES FELLOW PARTICIPATION IN LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AFFECT PERI-OPERATIVE OUTCOMES? Aditya Gupta, MBBS, Neil H Bhayani, MD MHS, Valerie J Halpin, MD Legacy Weight Management Institute, The Oregon Clinic

Introduction: Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is an advanced laparoscopic procedure, which requires specialized training most often gained during a fellowship. The learning curve is estimated between 50 and 100 cases. We hypothesized that the presence of fellows affects post-operative patient outcomes and this effect varies over the academic year.

Methods: The 2005-2009 American College of Surgeons-National Surgical Quality Improvement Program (ACS-NSQIP) database was queried for all LRYGB. Cases without any trainee (ATTENDING) were compared to cases including a trainee at or beyond their 6th year (FELLOW). The outcomes were post-operative pulmonary, infectious, wound, and venous thromboembolic (VTE) complications. Multivariable analysis controlled for age, body mass index (BMI), diabetes, pre-existing cardiac disease, and American Society of Anesthesiology (ASA) class.

Results: There were 18,333 LRYGB; 4,349 (24%) of these were FELLOW cases. The overall population was 80% female with a median age of 45 years and median BMI of 45.8 kg/m2. FELLOW cases had a statistically significantly higher BMI (46.1 v. 45.7, p<0.001) and lower proportion of patients with an ASA class ≥3. The unadjusted rates of mortality were 0.2% and 0.1%, and overall morbidity of 4.8% and 6.0% for ATTENDING and FELLOW groups, respectively. On adjusted analysis, there was no difference in mortality, but morbidity was 30% increased in FELLOW cases (95% Confidence Interval 1.1 - 1.5, p=0.001). This was due to an increased odds of superficial surgical site infections (SSIs) (OR 1.4, p=0.01), urinary tract infections (UTIs) (OR 1.7, p=0.002) and sepsis (OR 1.5, p=0.05). On subset analysis of the first six months, there was an increased morbidity associated with FELLOW cases. This derived from an increased risk of deep venous thrombosis (DVT) during the first quarter (OR 4.7, p=0.01) and SSIs (OR 1.5, P=0.001), UTIs (OR 1.8, p=0.004), and sepsis (OR 1.9, p=0.008) during the second quarter. By the 2nd half of the academic year, FELLOW cases carried morbidity no different than those of an attending alone.

Conclusions: The involvement of surgical fellows during LRYGB was associated with increased odds of DVTs, SSIs, UTIs, and sepsis, primarily in the first half of the academic year. By the second half of their training, cases involving fellows showed no overall increase in risk of complications compared to attending surgeons operating alone. Our study supports both the need for fellowship training in bariatric surgery to optimize outcomes, as well as the success of training programs in producing surgeons with appropriate results.

5076

ENSURING COMPETENCY: IS FLS CERTIFICATION NECESSARY FOR PRACTICING SURGEONS? Daniel J Scott, MD, <u>Melanie Hafford, MD</u>, Ross E Willis, PhD, Kristine Gugliuzza, MD, Todd D Wilson, MD, Kimberly M Brown, MD, Kent R Vansickle, MD UT Southwestern Medical Center at Dallas, UT Health Science Center at San Antonio , UT Medical Branch at Galveston, UT Houston Medical Center

Background: Certification in the Fundamentals of Laparoscopic Surgery (FLS) is required by the American Board of Surgery for graduating residents. The purpose of this study was to evaluate the feasibility and

potential need for certifying practicing surgeons.

Methods: Through a patient safety and healthcare delivery effectiveness grant, investigators at 4 state medical schools received funding to cover expenses associated with FLS certification of all attending general surgeons (n=89, GS) credentialed in laparoscopy, as mandated by each chairman of surgery; extra vouchers were used for gynecologists (n=8, GYN) and urologists (n=3). Data were voluntarily collected under an IRB-approved protocol at each institution. Each participant performed a single repetition of all 5 FLS tasks scored (time and errors) by FLS test center proctors, followed by review of their score, orientation to the FLS proficiency-based curriculum, and encouragement of further skills practice at their own discretion. Participants were also oriented to the online cognitive FLS materials and encouraged to self-study. Two months later, the certification exam (skills and cognitive) was administered under standard testing conditions. Baseline and completion questionnaires were administered. Comparison of baseline and final skills performance were compared using signed-rank tests.

Results: Only one surgeon refused data collection. Of 99 enrolled participants (13.7 \pm 10.6 years in practice), 76 completed all portions of the curriculum (77% compliance), including certification; institutionspecific compliance was 35%, 77%, 79%, and 100% and varied according to the extent of chairman enforcement. Of 87 participants who completed the baseline skills assessment, 22 (25.3%) failed to achieve a passing score; institution-specific baseline skills failure rates were 0%, 21%, 24%, and 46%. After an overall self-reported practice time of 2.5 \pm 2.3 hours, 76 participants completed certification. Skills performance improved for all 5 tasks (p<0.0001) and according to the overall score $(310 \pm 95 \text{ vs. } 428 \pm 93, p < 0.0001)$; self-rated comfort (5-point scale) performing basic laparoscopic operations increased from 4.0 ± 1.0 to 4.6 ± 0.6 (p<0.002). At certification, 1 (1.3%, GS) failed the skills exam and 8 (10.5%, 7 GS, 1 GYN) failed the cognitive exam; remediation was completed by 6 of these 9 individuals with subsequent successful certification.

Conclusions: This study demonstrates that FLS certification for practicing surgeons is feasible given appropriate financial and institutional support. Moreover, a baseline skills failure rate of 25.3% and a certification failure rate of 11.8% suggest that FLS certification may be necessary for ensuring competency according to objective metrics. Fortunately, with only moderate practice, significant improvement can be achieved.

S077

INTRAOPERATIVE ASSESSMENT OF ESOPHAGOGASTRIC JUNCTION DISTENSIBILITY DURING PER ORAL ENDOSCOPIC MYOTOMY Erwin

<u>Rieder, MD</u>, Silvana Perretta, MD, Christy M Dunst, MD, Lee L Swanstrom, MD Gastrointestinal and Minimally Invasive Surgery, The Orgeon Clinic, Portland, Oregon; Institute de Recherche contra les Cancers de l'Appareil Digestif (IRCAD), Strasbourg Cedex, France

Introduction: Per oral endoscopic myotomy (POEM) is a new treatment for esophageal motility disorders. Using endoscopic techniques derived from NOTES and ESD, this targeted therapy aims to only divide the inner muscular layers at the esophagogastric junction (EGJ), while leaving the outer longitudinal layer intact. The extent of this selective myotomy has been determined intraoperatively purely based on the subjective assessment of the endoscopist and the endoscopic image, making more accurate analyses difficult. We hypothesized that the real-time measurement of EGJ-distensibility would be a better method to objectively evaluate the completeness of this novel approach as well as being a useful tool for long-term follow-up.

Methods and procedures: Patients diagnosed with achalasia were enrolled in an institutional review board approved study and electively underwent POEM under general anesthesia. A sub-mucosal tunnel from the mid-esophagus onto the gastric cardia was created with subsequent selective division of the circular and sling fibers at the lower esophageal sphincter using endoscopic needle-knife cautery.

Using impedance planimetry with a transorally inserted functional lumen-imaging probe (EndoFLIP®), cross sectional areas (CSA) as well as

distensiblities at the EGJ were intraoperatively measured immediately before and immediately after the selective myotomy (n=4). Measurement profiles of the EGJ were obtained with a 40ml-fill mode and recorded when a plateau of the cross sectional area was reached. Two patients had completed their with EndoFlip measurements, as well as EGD, manometry and pH testing at the 6-month postoperative follow-up. Results: POEM was successfully performed in all patients (4/4). Premyotomy distensibility measurements (40ml) showed a median diameter of only 6.6 mm (range: 5.9 to 7.9 mm) at the narrowest location of the EGJ. Intraoperative post-myotomy assessment observed an increased median diameter of 10.1 mm (7.3 to 13.4 mm). CSA increased from 41.5 mm2 (28 to 49 mmHg) to a median of 86 mm2 (41 to 140 mm2, p=0.07) at a similar median intra-balloon pressure (pre: 36.6 mmHg vs. post: 38.6 mmHg), which also indicates increased EGJ distensibility/compliance. Two achalasia patients have had EndoFLIP measurements repeated after 6 months. Using the same balloon distension (40 ml) the observed median EGJ diameters was 12.7 mm (13.7 mm and 11.7 mm). CSA was found to be 128 mm2 (147 mm2 and 108 mm2) with a median balloon pressure of 35 mmHg, indicating persistence in EGJ compliance. Both patients indicated no dysphagia (symptom score: 0) and had normal LES resting pressures, and their DeMeester scores were found to be 3.4 and

Discussion: Early results indicate that POEM provides an immediate correction of the non-relaxing LES and that this result appears to persist at long-term follow-up. Intraoperative EGJ profiling, performed with a functional lumen-imaging probe, may be an important tool to objectively evaluate the needed extent and completeness of myotomy during POEM. Additionally, it may also be an effective way to follow myotomized patients long-term.

S078

BIODEGRADABLE ESOPHAGEAL STENT PLACEMENT DOES NOT PREVENT STRICTURE FORMATION FOLLOWING CIRCUMFERENTIAL MUCOSECTOMY IN A PORCINE MODEL. Eric M Pauli, MD, Steve J Schomisch, PhD, Joseph P Furlan, BS, Amitabh Chak, MD, Jeffrey L Ponsky, MD, Jeffrey M Marks, MD University Hospitals Case Medical Center, Cleveland, OH

Introduction: Advanced esophageal dysplasia and early cancers have traditionally been treated with esophagectomy. Recently developed tissue ablation techniques are less invasive, but may undertreat and do not permit histological analysis for staging. Endoscopic esophageal mucosectomy (EEM) offers a less-invasive therapy and provides an intact specimen for histo-pathologic assessment. However, high rates and high degrees of stricture formation following EEM limit its applicability. We hypothesized that placement of a self-expanding biodegradable stent (BD-stent; 12 week disintegration time) immediately following circumferential EEM would prevent stricture formation.

Methods: Ten pigs (5 unstented controls, 5 BD-stent) were utilized in the study. Sample size calculations indicated that 5 per group would detect a 25% stricture reduction with a p=0.05 and power of 0.80 using t-test. Following sedation and mechanical ventilation, a flexible endoscope with a band ligator and snare was used to circumferentially incise the mucosal layer approximately 20 cm proximal to the lower esophageal sphincter. A 7-10 cm circumferential segment of tissue was dissected free from the underlying muscle and excised using electrocautery and snare. In the stented group, a 18x120 mm uncovered, self-expanding, woven polydioxanone stent (ELLA-CS, Hradec-Kralove, Czech Republic) was deployed over a 0.035" guidewire. Stents were bridled using a nonabsorbable suture passed through the stent interstices and suture to the cheek. Barium sulfate esophagograms were performed weekly to evaluate for percent reduction in diameter, stricture length and proximal dilation. Animals were followed clinically and were euthanized when the stricture exceeded 80% and were unable to gain weight (despite highcalorie liquid diet supplementation) or at 14 weeks.

Results: The control group rapidly developed esophageal strictures; no animal survived beyond the third week of evaluation. At two weeks post-EEM, the BD-stent group had a significant reduction in stricture diameter (77.6% vs 26.6%, p<0.001) and degree of proximal dilation

(175% vs 131%, p=0.04) compared to controls. There was no difference in % stricture length between the groups. Survival in the BD-stent group was significantly longer than in the control group (9.2 weeks vs 2.4, p=0.01). However, all BD-stent animals ultimately developed clinically significant strictures (range 4-14 weeks). Comparison between the maximum reduction in diameter and stricture length (immediately prior to euthanasia) demonstrated no differences between the groups. There were no stent related obstructions or migrations.

Conclusions: Circumferential EEM quickly results in a high degree of stricture formation in a porcine model. These strictures result in clinical deterioration (regurgitation, failure to gain weight) within three weeks. The placement of a BD-stent significantly delays the time of clinical deterioration from 2.4 to 9.2 weeks, but does not minimize the maximum degree of luminal narrowing or proximal esophageal dilatation. The timing of stricture formation in the polydioxanone BD-stent group correlated with the known loss of integrity and radial force (6-8 weeks) and the stent disintegration (11-12 weeks). Future areas of investigation will need to focus on the use of fully-covered BD-stents and on the use of BD-stents with a longer in vivo half-life.

S079

A NEW PROCEDURE OF ESOPHAGOSTOMY FOR ENDOSCOPIC SURGEONS <u>Hideto Oishi, MD PhD</u>, Mina Miyashita, MD PhD, Takayuki lino, MD, Takao Yamane, MD, Eiichi Hirai, MD PhD, Shingo Kameoka, MD PhD Division of Gastroenterological Surgery, Yachiyo Medical Center, Tokyo Women's Medical University

Introduction and objective: This is the first case report of a new remodeling procedure of percutaneous trans-esophageal gastro-tubing (PTEG) for endoscopic surgeons using a vein visualization device, a noncontact type infrared rays. In 1994, PTEG was invented for cases with difficulty to create a percutaneous endoscopic gastrostomy (PEG). A rupture-free balloon (RFB) was invented for it in 1997. Its standard procedure using RFB had two technical parts. One was an esophagostomy under ultrasonic control, and the other was a tube placement under fluoroscopic control. These were new non vascular interventional radiological techniques with non surgical technique and with no endoscopic technique, too. We already performed this standard procedure for total of 185 cases, which included 97 cases of enteral nutrition and 88 cases of gastrointestinal decompression. Our achievement was admired as one of minimally invasive surgery, and now in Japan, there are already over 16,000 PTEG cases. However there was still a problem which should be improved. Basically PTEG was invented as one of alternative method for PEG, however the standard PTEG procedure needed no endoscopist. From 2003, we started to improve the PTEG procedure for endoscopic surgeons. Our aim was development of an endoscopic PTEG procedure without ultrasonogram nor fluoroscope. Material and Method: Using endoscope, we performed PTEG procedure to total of 68 cases without any complications, which included 51 cases of enteral nutrition and 17 cases of gastrointestinal decompression. We improved PTEG procedure for endoscopic surgeons, and we invented two items for this procedure. One of items was called needle holder pusher, NHP for short, and the other was called double balloon equiped overtube type RFB, DBOt-RFB for short. First, insert the endoscope covered with DBOt-RFB into cervical esophagus, and inflate its balloons. Push a puncture site of patient's cervical surface with a penlight, and adjust balloons toward transmitted light by the endoscopic view. Push the puncture site by a NHP again, and check the transmitted light of endoscope. Keep pushing by the NHP, and illuminate the puncture site by the noncontact vein visualization device, and check a jugular vein. Keep a puncture site away from the jugular vein, and aim to transmitted light of endoscope, and puncture it by a needle. Check a tip of the needle by endoscopic view, and insert a guide wire through the needle into the esophagus. Dilate the puncture site by a dilator, and insert an indwelling tube, and check the tube placement by endoscopic view.

Using an endoscope, the DBOt-RFB, the HNP and the vein visualization device, a noncontact type infrared rays, an esophagostomy could be performed with no ultrasonogram. Using an endoscope, a tube

Results:

placement could be performed with no fluoroscope, too. By the endoscopic view, we were able to maintain endoluminal informations of dilation and tube placement throughout the process. There were no complications, for example bleeding, mucosal injury, etc. Expectations; It can be performed at bed side without X-ray exposure, and moreover endoscopic view gives more safety.

S080

SURGICAL MANAGEMENT OF DUODENAL PERFORATIONS AFTER ERCP: THE CRUCIAL ROLE OF A RETROPERITONEAL APPROACH.

<u>Sergio Alfieri, MD</u>, Fausto Rosa, MD, Caterina Cina, MD, Antonio P Tortorelli, MD, Vincenzo Perri, MD, Guido Costamagna, MD, Giovanni B Doglietto, MD Department of Digestive Surgery, Catholic University, "A. Gemelli Hospital

Introduction: Endoscopic retrograde cholangio-pancreatography (ERCP) combined with endoscopic sphincterotomy (ES) has become a common procedure worldwide in the era of minimally invasive management of biliary and pancreatic disorders. Although regarded widely as a safe procedure, ES carries a small but significant number of serious complications. Common complications include pancreatitis, bleeding, cholangitis, and perforation.

ERCP-related perforation occurs in 0.3% to 1% of patients, and the injury carries a mortality rate of 16% to 18%.

Evidence-based strategies are lacking regarding the appropriate management of duodenal perforations complicating endoscopic retrograde cholangiopancreatography (ERCP) combined with endoscopic sphincterotomy (ES). Some investigators advocate conservative management based on a clinical course, whereas others advocate operative repair in all cases because of the complications associated with delayed operative intervention.

The aim of this study was to investigate clinicoradiologic findings and treatment outcomes in patients with ERCP-related perforation and to suggest useful treatment modalities for the perforations.

Methods and procedures: A retrospective review of ERCP-related perforations to the duodenum observed at the Digestive Surgery Department of the Catholic University of Rome was conducted to identify their optimal management and clinical outcome. Charts were reviewed for the following data: ERCP indication, clinical presentation, diagnostic methods, time to diagnosis and treatment, type of injury, management, length of hospital stay, and clinical outcome.

Results: From January 1999 to December 2010, 18 duodenal perforations after ERCP were observed. Seven patients underwent ERCP/ES at another institution and eleven patients underwent an endoscopic procedure at the Digestive Endoscopy Unit of Gemelli Hospital, Catholic University of

Only one patient was treated conservatively just with aspirative naso-duodenal and naso-biliary tubes, two other patients received percutaneous drainages of retroperitoneal abscesses. Fifteen patients underwent surgery: ten received a posterior approach, three both an anterior and posterior approach and two an anterior approach. The overall mortality rate was 22.2% (4 of 18 patients).

Conclusion: Clinical and radiographic features can be used to determine which type of surgical or conservative treatment of ERCP-related duodenal perforations, whereas intraoperative findings can determine the final outcome and morbidity or mortality. The interval between the perforation and the operation is of great significance. The mortality rate increases dramatically with late surgical management.

Moreover, our data confirm that the technique of posterior laparostomy offers the advantage of creating a wide and open cavity, permitting continuous gravitational drainage and avoiding septic contamination of the peritoneal cavity. The direct access to the retroperitoneal spaces permits easier removal of infected collections in the operating theatre and repeated necrosectomy and washing during cleaning of the wound in the recovery unit. The good control of both retroperitoneal sepsis and duodenal secretions favours the spontaneous closure of duodenal leak, thus avoiding the need for more complex intraabdominal procedures. The possible risk of overtreatment is acceptable when the prospects of recovery are high and when delay in treatment may result in death.

In conclusion, this technique should always be considered as the first surgical step to drain retroperitoneal infections after endoscopic sphincterotomy.

S081

PARTIALLY COVERED ESOPHAGEAL STENTS CAUSE BOWEL INJURY
WHEN USED TO TREAT COMPLICATIONS OF BARIATRIC SURGERY
Wai Wei MD Archana Ramaswamy MD Roger Da la Torre MD Brent

<u>Wei Wei, MD</u>, Archana Ramaswamy, MD, Roger De La Torre, MD, Brent W Miedema, MD Division of General Surgery, University of Missouri-Columbia

INTRODUCTION: The hypothesis was that a stent that is mainly silicone covered but has a portion uncovered may allow tissue ingrowth and decrease the migration rate seen with fully covered stents and still allow safe stent removal. The aim of this study was to evaluate the results of using partially covered stents for anastamotic complications of bariatric surgery.

METHODS AND PROCEDURES: This was a retrospective evaluation of a case series of patients with staple line complications after bariatric surgery that received a Boston Scientific partially covered stent at a single tertiary care bariatric center. The stents vary in length from 10-15 cm and in diameter from 18 to 23 mm.

RESULTS: From April 2009 to April 2010, 8 patients received uncovered stents on 14 separate occasions. The indications were stricture in four, acute leak followed by a later stricture in two, one with an acute leak only, and one with a perforated ulcer at the gastrojejunostomy. Single stents were placed in 12 sessions and two overlapping stents in two sessions. One patient had the uncovered proximal end of the stent in the stomach, with all others in the esophagus. Stents were removed at 25 \pm 10 days. Immediate symptom improvement occurred in 12/14 stent placements. Oral nutrition was initiated in 10/14 patients within 48 hours. However, 9/13 patients had minor stent migration with the proximal end of the stent moving into the proximal stomach, though the site of pathology remained covered. The stents were difficult to removal when tissue ingrowth was present. One patient required laparoscopic removal and one required two endoscopy sessions for removal. In the 10 stents where the proximal end was in the stomach, three had gastric ulceration, three had gastric mucosa replaced by granulation tissue, and four had normal gastric mucosa. When the proximal portion of the stent (4 stents) stayed in the esophagus, the esophageal deployment zone had abnormalities: three with granulation tissue and one with denuding of the esophageal mucosa. The distal uncovered portion of the stent in the Roux limb never became embedded in the mucosa and caused minimal

CONCLUSIONS: A partially covered stent was successful in keeping the site of the pathology covered and provided rapid symptom improvement and oral nutrition. The proximal end of the stent generally moved from the esophagus to the stomach probably due to esophageal peristalsis. The proximal bare area becomes embedded in the esophagus and sometimes in the stomach making removal difficult and hazardous. Partially covered stents are not safe and we no longer use them.

S082

ENDOSCOPIC SUBMUCOSAL DISSECTION USING A NEWLY DEVELOPED ENDOSCOPIC HOOD FOR GASTRIC TUMORS Takeuchi

<u>Hirohisa</u>, Abe Nobutsugu, Ohki Atsuko, Yanagida Osamu, Masaki Tadahiko, Mori Toshiyuki, Sugiyama Masanori, Atomi Yutaka Department of Surgery, Kyorin University School of Medicine

Background and Aims: Endoscopic submucosal dissection (ESD) of gastric tumors has improved the success rate of en bloc resection but is still technically difficult for large, ulcerated, or intramuscle lesions. To make ESD of such lesions easier, we developed a new technique using a newly designed endoscopic hood. The hood has a structure in which an outer sheath can easily be attached and detached. The outer sheath can allow a grasping forceps to pass; therefore, the grasping forceps can be safely introduced into the stomach and the lesion can be resected with traction applied with this forceps. We report here on a new technique of ESD using the new hood.

Patients: Eight patients underwent ESD using the new hood and the external grasping forceps. The patients were six men and two women with a mean age of 77 years. The pathological diagnoses were early-stage gastric cancer (n = 6) and gastrointestinal stromal tumor (n = 2). Technique: After submucosal injection followed by circumcision of the lesion with a needle knife and/or insulation-tipped knife, an external grasping forceps was introduced via the outer sheath into the stomach and anchored at the distal or proximal margin of the lesion. After detaching the external grasping forceps from the hood by moving the endoscope tip, the lesion was endoscopically dissected with gentle traction using this forceps.

Results: By the technique described, we were able to resect all the lesions en bloc with tumor-free margins. The traction using the external grasping forceps provided a good view of the dissection plane in each patient and thus made the dissection easier. The mean lesion size and procedure time were 29 (range 15 to 70) mm and 145 (range 76 to 300) minutes, respectively. Although a perforation occurred in one patient, the patient was treated conservatively. The mean duration of the postoperative hospital stay was 8 (range 6 to 15) days. Conclusions: This technical modification can make the gastric ESD procedure easier.

S083

LAPAROSCOPIC VENTRAL HERNIA REPAIR - LONG-TERM PROGNOSIS AND THE ANALYSIS OF MESH SHRINKAGE BY COMPUTED

TOMOGRAPHY Kanyu Nakano, MD, Hitoshi Idani, MD, Shinya Asami, MD, Sathoshi Koumoto, MD, Tetsushi Kubota, MD, Yohei Kurose, MD, Katsuyoshi Hioki, MD, Shinichiro Kubo, MD, Hiroki Nojima, MD, Yasushi Ohmura, MD, Takashi Yoshioka, MD, Hiroshi Sasaki, MD, Masahiko Muro, MD, Hitoshi Kin, MD, Norihisa Takakura, MD Department of Surgery, Fukuyama City Hospital

Background: Laparoscopic incisional and ventral hernia repair (LIVR) has been introduced expecting lower recurrence rate as well as lower morbidity compared to open repair. However, Long term prognosis of LIVR and the shrinkage rate of mesh have not been precisely evaluated. Objective: The aim of this study was to evaluate the outcome of the LIVR and to analyze the shrinkage rate of mesh after surgery. Surgical technique: The initial port was inserted at the left upper abdomen by minilaparotomy followed by the insertion of two trocars at the left lateral abdomen. The size of the hernia defect was measured laparoscopically after the adhesiolysis. Composix E/X mesh (n=20), Dual mesh (n=35), C-QUR edge (n=3) or Ventralex (n=1) was fashioned so that the defect was overlapped in all dimensions by 3-5 cm. The mesh was fixed intracorporealy on the anterior abdomen by O nonabsorbable monofilament suture materials and tucks.

Patients and Methods: A total of 60 patients undergoing LIVR in our hospital between April 2002 and July 2011 were enrolled in this study. The degree of mesh shrinkage after LIVR were evaluated on eighteen patients who were performed CT scanning after surgery. The outline of the mesh was traced under CT image and its area was calculated. Shrinkage rate was defined as the relative loss of surface as compared with the original size of the mesh (%).

Results: The patients consisted of 16 men and 44 women with a mean age of 71.9 years. There were 44 midline incisional, 8 umbilical, 5 right lower quadrant, and three others.

Conversion to an open repair was required in two patients because of massive adhesion into the hernia sac. The mean operation time was 111.2 \pm 41.9 min (range, 44-208 min) and the mean duration of postoperative hospital stay was 8.0 \pm 2.8 days. There was no mortality and the morbidity was 10%. During a median follow up period of 54 months, recurrence was noted on one patient (1.7%). The mean period to CT scanning from surgery was 50.6 ± 29.2 (range 8-77) months in Composix mesh cases (n=5), and 12.7 ± 11.2 months (range 3-41) in Dual mesh cases (n=13). The shrinkage rate of Composix mesh and Dual mesh was $30.3 \pm 13.6\%$ (range 15-46.4) and $17.6 \pm 14.0\%$ (range 0-38.5%), respectively. In the patient with recurrence 21 months after the repair with Dual mesh, the shrinkage rate of the mesh was 28.8%. Conclusion: LIVR has an excellent long term prognosis. Our results clearly

supported that an overlap of 3-5cm is necessary in the treatment of LIVR using mesh.

S084

COMPARISON OF LONG-TERM OUTCOME AND QUALITY OF LIFE FOLLOWING LAPAROSCOPIC REPAIR OF INCISIONAL AND VENTRAL HERNIAS WITH TACKER OR SUTURE MESH FIXATION: A PROSPECTIVE RANDOMIZED CONTROLLED STUDY Virinder K Bansal, MBBS MS FACS, M C Misra, MS FACS FRCS, P Singal, MBBS, K Rao, MS, S Kumar, MS, S Rajeshwari, MD, R Sagar, MD All India Institute of Medical Sciences, New Delhi-110029, India

Background: Method of mesh fixation after laparoscopic repair of incisional and ventral hernias is still an area of debate. Patient related outcomes like chronic pain and quality of life are important determinants of the efficacy of one technique over the other. This randomized study was aimed at comparing, fixation of mesh with trans-fascial suture alone versus tacker in double crown with four corner sutures.

Materials and methods: 96 patients with non-recurrent hernias with defect size ranging from 2 to 5 cm only were randomized to either Group I (tacker mesh fixation) or Group II (suture mesh fixation). Demographic profile, pre-operative and intra-operative variables, post-operative complications, hospital stay, cost and pain were compared between the two groups. Preoperative and postoperative quality of life analysis was done using SF-36v2 health survey. Patients were followed up at regular intervals and return to activity and satisfaction scores were recorded. Statistical analysis was done using SPSS 14 and p value < 0.05 was considered significant.

Results: Of 96 patients, 92 received the intended treatment. The demographic profile and pre-operative SF-36v2 scores were comparable except for gender distribution with female to male ratio significantly higher in group I. The duration, type, location, defect size and location, mesh size and type were comparable between the two groups. There were 2 conversions- one in each group. Mesh fixation time and operation time were found to be significantly higher in group II (p<0.001 for both). Early post-operative pain was found to be significantly lower in group II at 1 hour (p<0.001), 6 hours (p=0.04) and at 1 month (p=0.01). There was no significant difference in the incidence of chronic pain over a mean follow up of 22.2 months. Cost of procedure was significantly higher in group I (p<0.001). Post-operative quality of life outcomes were similar in the two groups. Patient satisfaction scores were higher in group II but this was not significant. Time to resumption of daily activities and climbing stairs was significantly shorter in group II.

Conclusion: Laparoscopic mesh repair of incisional and ventral hernias with medium sized defects using only trans-fascial sutures is better than using tacks in terms of cost-effectiveness, early post-operative pain and time to resumption of routine activities although it is associated with significantly increased operative time.

S085

CLOSURE VERSUS NON-CLOSURE OF HERNIA DEFECT DURING LAPAROSCOPIC VENTRAL HERNIA REPAIR WITH MESH Marianna Zeichen, MD, Wilmer Mata, MD, Henry J Lujan, MD, Irving Jorge, MD, Victor Maciel, MD, Dustin Lee, DO, Eddie Gomez, MD, Alejandro M

Hernandez, MD, Gustavo Plasencia, MD Jackson South Community Hospital

Introduction: There are few published data regarding the benefits of closing the hernia fascial defect during laparoscopic ventral hernia repair with mesh. We compared outcomes of patients who underwent laparoscopic ventral hernia repair with mesh (LVHRwM) alone to laparoscopic ventral hernia defect closure with mesh reinforcement (LVHDCwM).

Methods: A retrospective review of 128 patients who underwent laparoscopic ventral hernia repair of defects less than 20 cm between July 2000 and September 2011. These patients were divided into two groups: (1) Repair with mesh alone and (2) those with hernia defect closure and mesh reinforcement. Group 2 was further divided by technique: extracorporeal versus intracorporeal closure of the defect. **Results:** 93 patients underwent LVHRwM and 35 patients underwent

LVHDCwM. Follow-up was available in 105 of 128 patients (82.03%) at a mean of 25.60 months (Range 1 – 110 months). Mean operative times and hospital stay were: 75.05 ± 42.53 minutes (range 18 - 215) and 1.38 ± 1.12 days (range 1 - 6) in Group 1 and 88.96 ± 30.23 minutes (range 45 - 143) and 1.26 days ± 0.54 (range 1 - 3) in Group 2. In Group 1 there were a total of 13 patients with postoperative complications (13.98%) and in Group 2 there were a total of 8 patients with postoperative complications (22.86%). Fourteen patients (19.18%) developed recurrent hernias in Group 1. Two patients (6.25%) developed recurrent hernias in Group 2. In Group 1 the average time to develop recurrence was 23.17 months (range 5.3 - 75.3) and 25.9 months (range 9.57 - 16.33) in Group 2. Finally, in Group 2, there have been no recurrences in patients whose defect was closed intracorporeally versus 2 patients when the defect was closed extracorporeally.

Conclusion: The overall complication rate was higher in Group 2, but half of these complications were seroma formation. Closing the primary defect decreased the recurrence rate without significantly increasing operative times. The difference in recurrence rates (19.18% vs 6.25%) did not reach statistical significance (P value 0.0914). However, we believe that with a larger series and longer follow-up, statistically significant advantages for closing the defect will be demonstrated.

S086

OUTCOMES OF SIMULTANEOUS LAPAROSCOPIC CHOLECYSTECTOMY AND VENTRAL HERNIA REPAIR COMPARED TO LAPAROSCOPIC CHOLECYSTECTOMY ALONE Nathan T Orr, MD, Daniel L Davenport, PhD, John S Roth, MD University of Kentucky School of Medicine

Objective: An original article to compare the short-term outcomes of simultaneous laparoscopic cholecystectomy and ventral hernia repair with laparoscopic cholecystectomy alone.

Methods: We queried the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database (2005-2009) using primary procedure and secondary CPT codes for laparoscopic cholecystectomy (LC) and laparoscopic ventral hernia repairs (LVHR). We analyzed outcomes for isolated LC and LVHR and simultaneous laparoscopic cholecystectomy and ventral hernia repair (LC/LVHR). The 30-day clinical outcomes along with post-operative LOS were assessed using chi-square and analysis of variance tests with p values < 0.01 set as significant. We also performed forward stepwise multivariable regression considering over 50 ACS NSQIP risk factors to adjust for patient risk.

Results: 82,837 patients underwent LC and/or LVHR of which 357 (0.4%) underwent simultaneous LC/LVHR. Patients undergoing LC/LVHR were more likely to have surgical site infections, suffer sepsis or septic shock, and have pulmonary complications including pneumonia, re-intubation or prolonged ventilator requirements than either LC or LVHR alone. No difference was noted in 30 day mortality, rates of DVT/PE, renal insufficiency, or stroke. After multivariable adjustment for over 50 ACS NSQIP risk factors, concurrent procedures continued to pose higher risk for these outcomes relative to LC only procedures.

30-d Outcome	LC Only	LVHR Only	LC/LVHR simultaneously	Chi-square P-value
No. Cases	74,019	8,818	357	
Wound complications, %	1.2	1.2	3.1	0.005
Multivariate Odds Ratio	1 reference	1.46 (0.81-2.63)	2.60** (1.42-4.78)	
Sepsis or shock, %	0.6	0.9	2.0	<0.001
Multivariate Odds Ratio	1 reference	1.82 (0.84-3.92)	3.18** (1.44-7.01)	
Pulmonary complications,%	0.6	1.3	2.0	<0.001
Multivariate Odds Ratio	1 reference	2.44** (1.24-4.80)	2.68* (1.19-6.05)	
Postoperative LOS > 1d, %	17.7	32.2	26.6	<0.001
Multivariate Odds Ratio	1 reference	6.96** (5.85-8.27)	2.12** (1.62-2.77)	

^{*} p <0.05; ** p <0.01

Conclusions: Simultaneous laparoscopic cholecystectomy and ventral hernia repair results in greater postoperative morbidity in terms of surgical site infections, sepsis, and pulmonary complications. In light of this increased short-term morbidity, consideration should be given toward performing laparoscopic cholecystectomy and laparoscopic ventral hernia repairs independently in patients requiring both procedures. Prospective studies with long-term follow up are required to better understand the implications of simultaneous laparoscopic cholecystectomy and ventral hernia repair.

S087

PARASTOMAL HERNIA REPAIR: LAPAROSCOPIC MODIFIED SUGARBAKER TECHNIQUE RESULTS IN SUPERIOR RECURRENCE RATE Asma Asif, BS, Melissa Ruiz, MD, Amy Yetasook, BS, Joann Carbray, BA, Woody Denham, MD, John Linn, MD, Michael B Ujiki, MD NorthShore University Health System

Background: Parastomal hernia (PH) is a frequent complication of stoma formation, occurring in 35%-50% of patients. Recurrence after repair is common, ranging from 24% to 54% of cases. We hypothesized that repair using a laparoscopic modified Sugarbaker technique (SB) would result in a superior recurrence rate when compared to other repairs.

Methods: An IRB approved retrospective review of all patients who underwent PH repair between 2004-2011 was performed. We collected demographics, factors related to ostomy formation, risk factors for hernia, intra-operative, and post-operative information as well as the absence or presence of PH on their last physical exam or imaging study.

Results: Forty-nine PH repairs were performed: 33 (67%) paraileostomy and 16 (33%) paracolostomy. Repairs included 14 laparoscopic modified SB, 18 laparoscopic keyhole, 11 ostomy re-sitings, 3 open repairs without mesh, and 3 open repairs with mesh. There was no statistically significant difference between groups when comparing mean age, BMI, smoking status, steroid use, ostomy type, location, primary diagnoses, or complication rate. Recurrence rates were SB 0%, keyhole 61.1%, resiting 63.6%, and open repair +/- mesh 16.6%. When SB was compared to all groups, the incidence of recurrence was significantly lower (p< 0.001) but follow-up was as well (7.2 vs 32.7 months). When the analysis was restricted to the 28 repairs performed between 2009-2011, there was no significant difference between the groups in terms of the abovementioned characteristics or the follow-up period (7.2 months for SB group versus 11.8 months for all others), but again there was a significant difference in PH recurrence (0 of 14 for the SB group versus 8 of 14, p<0.01). In addition, there were no differences in post-op complication rates among all of the techniques.

Conclusion: The modified SB technique may offer patients a significant decrease in the risk of recurrence compared to other PH repair techniques with no significant increase in post-op complications.

S088 - Withdrawn

S089

AN ANALYSIS OF PERI-OPERATIVE FACTORS AND A COST-COMPARISON OF SINGLE-INCISION VERSUS TRADITIONAL MULTI-INCISION LAPAROSCOPIC CHOLECYSTECTOMY Catherine E Beck, MD, Jeffrey L Eakin, MD, Rebecca Detorre, David E Renton, MD The Ohio State University Medical Center

Introduction: Recent technological advances in single-incision platforms has allowed many General Surgeons to add single-incision laparoscopic cholecystectomies (SILC) to their armamentarium. Nonetheless, typically, adopting new surgical technologies comes at a cost both in and outside of the operating room to the patient and the surgeon. We performed a retrospective case-matched comparison of single-incision and traditional multi-incision laparoscopic cholecystectomies (MILC) to evaluate the effects of SILC on peri-operative outcomes and patient cost.

Methods: This study was completed following approval by the Institutional Review Board at The Ohio State University. All statistical analysis were performed utilizing Microsoft® Excel® 2008 for Macintosh while using a p-value ≤ .05 for stastical significance. Sixty-five patients

who underwent single-incision laparoscopic cholecystectomy were compared to a case matched population of individuals who underwent traditional MILC. We performed SILC using one of three commercially available single-incision platforms currently used for SILS choleycystectomies. All of the SILS platforms were places in a 2-centimeter supraumbilical incision.

Results: The average operative time for the SILC and MILC groups were 42 and 45 minutes respectively with no statistically significant difference between the two. Similarly, the average blood loss for the SILC and MILC groups were 14 and 11 milliliters respectively with no statistically significant difference. Moreover, there was no statistical difference between patient size for the average body mass index for those patients undergoing SILC and MILC were 28.4 kg/m2 and 32.2 kg/m2 respectively. The average peri-operative cost for SILC and MILC was \$18,447 and \$17,701 respectively and yielding a cost difference of \$746. This cost difference was not stastically significant.

Conclusion: SILS cholecystectomy can be performed efficiently with respect to EBL and operative time. While there was no statistical difference in cost at our institution the there was a noticeable difference in average price. Further research should be performed to assess the economic feasibility and trade-ff of increased cost versus the improved cosmesis and improved quality provided to the patient as well as a possibly a reduced post-operative analgesic requirements.

S090

COMPARISON OF SINGLE PORT AND CONVENTIONAL LAPAROSCOPIC COLECTOMY: A RANDOMIZED CONTROLLED TRIAL

<u>Jensen T Poon, MBBS MS</u>, Chi-wai Cheung, MBBS, Wai-lun Law, MBBS MS, Joe K Fan, MBBS MS, Siu-hung Lo, MBBS, Miu Y Chan, MBBS Department of Surgery & Department of Anesthesia, The University of Hong Kong, Queen Mary Hospital, Hong Kong

Introduction: This randomized controlled study compared the operative outcome of single port laparoscopic colectomy (SPLC) and conventional laparoscopic colectomy (CLC). The primary outcome measure was the post-operative pain.

Methods: Patients who had small cancer (<4cm) or adenomatous polyp requiring colectomy were randomized to have SPLC or CLC. All patients had patient controlled analgesia after operation and their visual analogue score of pain (pain score) on day 1-3 and 14 were recorded by research staff. Both the patients and research staff were blinded to the type of procedure. Other operative outcomes and the characteristics of the two groups of patients were also recorded prospectively and compared. Categorical variables were compared by Chi-square test or Fisher's exact test as appropriate. Continuous variables were presented as their median (interquartile range) and were compared by Mann-Whitney U test. P value of <0.05 was regarded as statistically significant.

Results: The SPLC group had 23 patients (8 right colectomy, 3 left colectomy, 12 anterior resection) and complication occurred in one patient who had wound infection. The CLC groups had also 23 patients (9 right colectomy, 3 left colectomy, 12 anterior resection) and complication occurred in three patients (wound infection x2 & ileus x1). There was no operative mortality in both groups. The comparison of patient characteristics and operative outcomes was presented in Table 1. The patient demographics, operating time, blood loss were similar between the 2 groups. When compared to the CLC group, the SPLC group had significantly lower pain score at rest on day 1 [3 (1-5) vs. 0 (0-2); p <0.01], day 2 [2 (0-4) vs. 0 (0-2); p=0.02] after operation and shorter hospital stay [5 (4-6) vs. 4 (3-4) days; p<0.01]. There was no difference in the margins of resection.

Conclusions: Single port laparoscopic colectomy is a safe procedure with low complication rate. Compared with conventional laparoscopic colectomy, single port procedure is associated with reduced wound pain in early post-operative period and shorter hospital stay.

	SPLC (n=23)	CLC(n=23)	P value
Aae	69 (60-78)	67 (57-74)	0.48
Bődv mass index	22.6 (19.4-25.5)	23.6 (20.5-26.2)	0.59
Malé	52.2%	69.6%	0.23
ASA class 1 - 2 - 3	3 - 17 - 3	3 - 16 - 3	0.92
Previous operation	26%	34.7%	0.52
Operating time	152 (111-175)	124 (124-170)	0.32
(minutes)			
Blood loss (ml)	62.3 (30-90)	80 (45-97.5)	0.28
Hospital stay (days)	4 (3-4)	5 (4-6)	<0.01
Malignant lésion	19	19	1
Complication rate	4.3%	13%	0.35
Tumor size (cm)	3 (2.5-4)	4 (3-4)	0.38
Proximal margin (cm)	8 (6-23.5)	9 (6-10.5)	0.80
Distal margin (cm)	5.5 (5-8.5)	6 (5-9)	0.84
Morphine usage (mg)	11 (5-24)	19 (8-41)	0.12
Pain score at rest	` ′	, ,	
Day 1	0 (0-2)	3 (1-5)	<0.01
Dav 2	0 (0-2)	2 (0-4)	0.02
Daý 3	0 (0-2)	2 (0-3)	0.14
Daý 14	0 (0-1)	0 (0-1)	0.93
Pain score at cough			
Day 1	5 (3-6)	5 (4-8)	0.06
Daý 2	4 (2-5)	5 (3-7)	0.05
Daý 3	3 (1-5)	4 (2-5)	0.12
Day 14	0 (0-3)	1 (0-3)	0.34
*			

S091

FEASIBILITY OF SINGLE SITE LAPAROSCOPIC SURGERY FOR COLORECTAL CANCER <u>Ichiro Takemasa, MD PhD</u>, Junichi Nishimura, MD PhD, Tsunekazu Mizushima, MD PhD, Masataka Ikeda, MD PhD, Hirofumi Yamamoto, MD PhD, Mitsugu Sekimoto, MD PhD, Yuichiro Doki, MD PhD, Masaki Mori, MD PhD Department of Gastroenterological Surgery, Graduate School of Medicine, Osaka University

Introduction: Single site laparoscopic surgery through the umbilicus is an emerging concept that could provide a lesser postoperative pain and offer an excellent cosmetic result. In contrast, there are some technical limitations such as instruments crowding, in-line viewing and difficulties in appropriate counter traction. The authors had reported an index case of curatively intended resection of sigmoid colon cancer with radical lymphadenectomy in this procedure. It should be careful for both safe and radical treatment to indicate for the malignant disease, however, there were few reports of its feasibility with large samples. The aim of this study is to valuate the feasibility of this procedure compared with the standard laparoscopic procedure.

Materials and Methods: We have performed this procedure for 150 colorectal cancers since June 2009 that consist 69 right-sided colon cancers (SIR group) and 81 left-sided colon or rectal cancers (SIL group). The same cases with the standard laparoscopic procedure were adjusted in the same period. There was no difference in the patient backgrounds between two groups. Cases with clinical stage 0-II were indicated with exception for the case with lower rectal cancer, invasion to other organs or ileus. The entire laparoscopic procedures were performed using usual laparoscopic instruments through the umbilical incision. Double stapling technique was employed for the anastomosis in SIL group and extracorporeal functional end-to-end anastomosis was employed in SIR group.

Results: The procedures were performed successfully except for the five following cases. Seven rectal cancers needed an additional port because of proper transection of the rectum and one right sided-colon cancer needed small incision of open surgery because of bleeding. There were no other intraoperative complications. Three cases with ileus and two cases with anastomotic leakage were observed postoperatively. All of these cases were recovered with conservative treatment. The median operative time and bleeding amount of SIL and SIR group were 170 min, 50 g and 180 min 30 g, respectively. The median harvested lymph nodes and length of resected specimen of SIL and SIR group were 21, 22 cm and 19, 20cm, respectively. No differences in all these results were observed between this procedure and the standard laparoscopic procedure. The scars within the umbilicus were almost invisible three months later, and almost of all patients are very satisfied with their excellent aesthetics. Conclusion: Single site laparoscopic surgery through the umbilicus for colorectal cancer can provide excellent cosmetic results with similar safety and oncological clearance compared with usual laparoscopic procedures. This procedure is feasible and may be promising in the future.



S092

REDUCED PORT VERSUS CONVENTIONAL LAPAROSCOPIC TOTAL PROCTOCOLECTOMY AND ILEAL J POUCH-ANAL ANASTOMOSIS: A CASE MATCHED STUDY Meagan Costedio, Erman Aytac, Emre Gorgun, Ravi P Kiran, Feza Remzi Department of Colorectal Surgery, Digestive Disease Institute, The Cleveland Clinic Foundation, OH, USA

Introduction: Our institution first reported the feasibility and safety of single-incision (SILS) laparoscopic total proctocolectomy and ileal pouch anal anastomosis (TPC/IPAA). In order to improve efficiency while maintaining the cosmetic advantages of SILS even for such technically complex procedures as TPC/IPAA, we have since modified the technique to include the use of a 5mm instrument for retraction placed through the eventual drain site, making this a reduced port technique. The aim of this study was to compare our reduced port laparoscopic (RPL) IPAA with conventional laparoscopic IPAA with respect to short-term outcomes.

Methods: RPL cases were computer-matched to conventional laparocopy cases for patient age (± 5 years), body mass index, gender, diagnosis, type and number of stages of surgical procedure, American Society of Anesthesiologists (ASA) classification, and year of surgery (± 3 years). Groups were compared with chi-square or Fisher exact tests for categorical and Wilcoxon rank sum test for quantitative data.

Results: 24 RPL patients were case-matched to an equal number of patients who underwent conventional laparoscopic IPAA. The two groups were well-matched for the chosen characteristics (Table 1). Short term outcomes including postoperative complications, length of hospital stay and time to bowel movement were similar between groups. Despite similar diagnosis, previous surgery and comorbidity, operative blood loss (p=0.0001) and operating time (p=0.0215) were significantly lower for the RPL group (Table 1).

Conclusion: RPL IPAA can be performed with comparative short term outcomes as conventional laparoscopy. Further, when performed by surgeons well trained in the laparoscopic technique, RPL IPAA may potentially be associated with intraoperative advantages such as shorter operating time and lower blood loss.

Table 1

	Reduced port laparoscopy (n=24)	Conventional laparoscopy (n=24)	P value
Age (year)	43.2±12.5	42.3±12.7	0.8527
BMI (kg/m2)	24.8±4.8	25.3±4.3	0.3223
Gender (F/M)	15/9	14/10	1.000
Completion Proctectomy(n)	11	11	1.000
TPC IPAA(n)	13	13	1.000
Ulcerative colitis(n)	23	22	1.000
FAP(n)	1	2	1.000
OBL (cc)	95.8±65	241.7±135.5	0.0001
OR time (min)	125.9±39.3	230±117.4	0.0215
LoH (day)	6.08±4.2	6.3±3.1	0.5989
BM (day)	1.9±1.06	2.04±1.7	0.8467
Readmission (n)	3	3	1.000
Conversion to open(n)	0	2	0.4894
Reoperation (n)	0	2	0.4894
Wound infection (n)	1	4	0.3475
Leak (n)	1	1	1.000

OBL: Operative blood loss; LoH: Length of hospital stay; BM: bowel movement; OR time: operating time; FAP: Familial adenomatous polyposis; TPC IPAA: Total proctocolectomy with ileal pouch anal anastomosis

S093

SINGLE INCISCION LAPARASCOPIC SURGERY INCISIONAL HERNIA

STUDY <u>Harvey C Rainville, MD</u>, Diego Camacho, MD, Jenny Choi, MD, Emmanuel Agaba, MD, Pratibha Vemulapali, MD Montefiore Medical Center

Introduction

Over the past several years SILS has become increasingly popular. Single incision laparoscopic surgery includes incorporation of multiple abdominal trocars into one fascial defect, often at the umbilicus. The potential for incisional hernias after insertion of trocars is a well known postoperative complication. However, the hernia rates after single

incision laparoscopic surgery procedures is largely unknown. We were interested in evaluating the incidence of postoperative incisional hernias after a single incision laparoscopic surgery operation.

Methods: We conducted a single institution retrospective study of over 200 patients who underwent any type of general surgery single incision laparoscopic surgery procedure over two years. These primarily included appendectomies, cholecystectomies, partial gastrectomies, and partial colectomies. Some of these operations included insertion of multiple trocars into one skin incision, while the majority consisted of a single 2 cm fascial defect at the umbilicus repaired primarily. A history and physical exam was performed on all patients at a mean follow up of six months to 24 months to evaluate for the presence of an incisional hernia at the single incision laparoscopic surgery port site.

Results: 6 patients had umbilical hernias that need to be operatively repaired, 2 patients had small defects that refused repair and 4 others complained of pain without a fascial defect palpated on exam.

Conclusion: Post-operative hernias after single incision laparoscopic surgery procedures did occur, but the incidence is no greater than other laparoscopic procedures.

S094

SINGLE INCISION CHOLECYSTECTOMY UTILIZING SPIDER SURGICAL SYSTEM: CASE SERIES OF 40 PATIENTS Shyam L Dahiya, MD Tri-City Regional Medical Center, Hawaiian Gardens, CA

Introduction: Single incision laparoscopic surgery has garnered wide interest in a number of specialties. A common limitation cited for many single incision methods is the lack of instrument triangulation and the need to cross instruments. The SPIDER® Surgical System (TransEnterix, Durham, NC) is a technology for single incision surgery that provides instrument triangulation and eliminates instrument crossing. This is a report of a single surgeon case series of 40 laparoscopic, single incision cholecystectomies utilizing the SPIDER® Surgical system to assess feasibility and safety.

Methods and Procedures: A Hasson cut down method is used to gain access to the peritoneal cavity, and the SPIDER device is inserted into the umbilicus under visualization. Pneumoperitoneum is established through the SPIDER device, and the device is fully inserted and docked in place. The outer diameter of the SPIDER device is 18mm. A 5mm bariatric length scope is used through the SPIDER device for visualization. A rigid, bariatric length grasper is utilized through the SPIDER device to grasp the gallbladder and elevate the fundus throughout the case. Flexible instruments are then introduced through the flexible channels of the SPIDER device to complete the Cholecystectomy. A flexible grasper provides lateral retraction from the left instrument channel, while flexible maryland dissector, hook cautery, clip applier and scissors are used through the right instrument channel. The cystic duct and cystic artery are clipped using a flexible clip applier which utilizes Hem-o-lok® ML clips (Teleflex, Limerick, PA). The gallbladder is removed from the liver bed utilizing flexible monopolar hook cautery. The specimen is grasped and removed when the SPIDER device is removed from the abdomen.

Results: A total of 40 cholecystectomies were done by a single surgeon utilizing the SPIDER Surgical System through a 18mm incision at the umbilicus. The mean age of patients was 43 years old (+/- 18 standard deviation, 19 min, 82 max). The mean total operative time was 71 minutes (+/- 29 standard deviation, 33 min, 145 max). The mean total operative time of the first 20 cases was 85 minutes (includes learning curve), and the mean total operative time of the second 20 cases was 58 minutes. The mean follow up period was 138 days (+/- 107 standard deviation, 10 min, 349 max). No interoperative or post-op complications were observed. No cases were converted to open, and in 3 cases an additional 5mm port was added to aide in the completion of the case.

Conclusions: The SPIDER® Surgical System appears feasible as a single incision system to reliably perform cholecystectomies. Further study of this novel technology is recommended.

S095

ELECTRICAL STIMULATION THERAPY (EST) OF THE LOWER ESOPHAGEAL SPHINCTER (LES) IS SUCCESSFUL IN TREATING GERD FINAL RESULTS OF OPEN-LABEL PROSPECTIVE TRIAL Leonardo

Rodríguez, MD, Patricia Rodríguez, RN, Beatriz Gómez, BSc, Juan C Ayala, MD, Jorge Saba, MD, Alberto Perez-castilla, MD, Manoel. G Neto, MD Surgery, CCO OBESIDAD Y DIABETES, Santiago, Chile

Background: Improvement in LES pressures using EST was previously demonstrated in animals and GERD patients using temporary endoscopic and laparoscopic leads.

Aims: The aim of this prospective open-label human trial was to study the safety and efficacy of long-term LES-EST using a laparoscopically implanted neurostimulator in GERD patients.

Methods: GERD patients at least partially responsive to proton pump inhibitors (PPI) and had off-PPI GERD HRQL>20, basal LES end-expiratory pressures (EEP) of 5-15 mmHg, % 24 hour esophageal pH<4.0 for >5%, hiatal hernia < 3cm and esophagitis < LA Grade C were included in the trial. Bipolar stitch electrodes were laparoscopically placed in the LES and an implantable pulse generator (EndoStim Inc., St. Louis, MO, USA) was placed subcutaneously in the anterior abdominal wall. EST at 20 Hz, 200usec, 3-8mAmp in 30 minutes sessions was delivered starting on day 1 post-implant. The sessions were delivered pre-meal and at night. Patients were evaluated using GERD-HRQL, symptom diaries and SF-12 at baseline and every month for six months thereafter and underwent esophageal pH at 0, 1, 3 and months and high resolution manometry testing at 0, 1, 3 months. Stimulation sessions were optimized based on residual symptoms and lead impedance at follow-up.

Results: Twenty-four patients [mean age (sd) = 53 (12) years; men=14] were successfully implanted and have completed their 6 month evaluation.

Effect of LES-EST on Patient symptoms, Esophageal pH and LES pressure

	Baseline	Month 3	Month 6
Mean GERD-HRQL off-PPI	23.7 (3.5)	4.2 (3.3)	2.5 (3.1)
Median % 24-hour Esophageal pH<4.0	11.1 (6.5)	7.5 (4.5)	4.9 (5.3)
Mean LES End Expiratory Pressure	8.6 (0.5)	15.4 (1.4)	No HRM

(p<0.001 for all comparisons vs. baseline)

There was a significant reduction in number of days patient reported heartburn (45% vs. 91%, p<0.001) and regurgitation (17% vs. 69%; p<0.001) on EST compared to off-PPI. At their last follow-up all patients were off their daily PPI and had significantly better GERD-HRQL on LES-EST compared to on-PPI [2.5 (3.1) vs. 9.8 (6.3); p<0.001]. There was a significant improvement in both physical and mental scores on SF-12 quality of life measurement at follow-up compared to both on and off PPI scores (p<0.01). There were no implantation- or stimulation-related unanticipated adverse events, or untoward sensation due to stimulation. The swallowing function was also unaffected by EST.

Conclusion: During the long term follow-up of 6 months, LES-EST was safe and effective for treating patients with GERD. There was a significant and sustained improvement in symptoms, esophageal acid exposure and LES pressures. Further, LES-EST can be optimized to individual patient needs. All patients had received significant clinical benefit from LES-EST and the trial has been extended to two year. One year follow-up results of this trial will be available for presentation in March 2012.

S096

REVISION OF FAILED TRADITIONAL FUNDOPLICATION USING ESOPHYX TRANSORAL FUNDOPLICATION Reginald C. W Bell, MD,

Katherine D. Freeman, NP, Rachel Hufford, RN SurgOne P.C.

Introduction: Recurrent gastroesophageal reflux disease (GERD) after traditional fundoplication occurs due to loosening of the fundoplication without a weakening of the hiatal closure in 10-30% of cases. Although laparoscopic revision of failed fundoplication has been reported to be effective and safe in specialty centers, the surgery is tedious and involves risk of gastric, esophageal, and vagal nerve injury that is higher than with primary fundoplication. The EsophyX device offers an alternative, less invasive, transoral approach to revision of loose fundoplication with avoidance of the dissection and risks associated with the conventional revision.

Methods: Patients who had previously undergone a traditional Nissen or Toupet fundoplication and had symptomatic and objective evidence of recurrent GERD due to loosening of the wrap without any evidence of loosening of the hiatal closure, were offered the EsophyX TIF procedure for revision. This study was approved by Western Institutional Review Board. The subjective outcomes were evaluated with GERD Health Related Quality of Life (GERD-HRQL) and Reflux Symptom Index (RSI) questionnaires. Secondarily, normalization of esophageal acid exposure and the number of reflux episodes measured objectively by ambulatory pH tests and proton pump inhibitors (PPIs) use after revision were evaluated.

Results: Eleven patients underwent revision of a prior Nissen fundoplication using EsophyX; 9 completed follow-up and were included in this study. One patient underwent unsuccessful EsophyX revision of a Toupet and did not participate in follow-up. Median age was 60 (28-75) years, 4 were female, and median BMI was 24 (17-41) kg/ m2. These 9 patients presented with typical and/or atypical medically refractory GERD symptoms at a median of 3 (1-15) years after primary fundoplication. All had objective evidence of GERD by endoscopy, barium esophagram, or ambulatory reflux testing. Endoscopy confirmed loosening of the fundoplication without evidence of transthoracic wrap migration, paraesophageal hernia, or > 2cm axial herniation. All patients successfully completed the TIF procedure with median operative time of 71 (47-90) minutes and were discharged within 24 hours. One patient early in our experience developed a postoperative bleed requiring transfusion and led to technique changes that have reduced this risk. At a median of 8 (5-19) month follow up, 7 of 9 patients completed GERD-HRQL and RSI questionnaires and 8 of 9 completed pH tests. Mean GERD-HRQL score improved significantly from 14.1 (2.5) preoperatively to 3.7 (1.2) post TIF (p=0.003). Mean RSI score improved >50% in 4 of 6 patients. Seven patients had impedance/pH or 48-h telemetry capsule pH testing off acid-suppressive medication preoperatively and postoperatively. In these 7 patients mean % time with pH < 4 improved from 9.8% (21%-4.8%) to 3.6% (13.4%-0.1%); p=0.09, Mann-Whitney U. Number of reflux episodes per 24-h decreased from 62 (105-21) to 16 (26-0); p=0.004, Mann-Whitney U. Only one patient remained on PPI therapy after TIF and that despite a pH test demonstrating 0.5% esophageal acid exposure. No denovo dysphagia or bloating was reported.

Conclusions: Transoral revision of failed fundoplication without herniation using EsophyX is technically feasible. It results in symptomatic and objective improvement of GERD without the risks of laparoscopic dissection.

S097

SURGICAL OUTCOMES AND OPERATIVE RISK OF LAPAROSCOPIC TOTAL GASTRECTOMY FOR GASTRIC CARCINOMA: RESULTS FROM A LARGE SINGLE CENTER COHORT Oh Jeong, MD, Young Kyu Park, MD PhD, Mi Ran Jeong, MD, Kwang Yong Kim, MD Department of Surgery, Chonnam National University Hwasun Hospital, South Korea

Background: Compared to the widespread use of laparoscopic distal gastrectomy (LDG) for early gastric cancer, laparoscopic total gastrectomy (LTG) still remains as a challenging procedure, because of its technical difficulties and concerns about subsequent complications. In this study, we evaluated surgical outcomes and operation risk of LTG in comparison with those of LDG, and sought to analyze risk factors for postoperative morbidity and mortality of LTG for gastric carcinoma. Methods: Among prospectively constructed data of 1064 patients undergoing laparoscopic gastrectomy between April 2007 and May 2011, there were 118 patients who underwent LTG for middle and upper gastric cancer. Surgical outcomes, such as operative results, hospital stay, morbidity and mortality, were investigated, and were compared with those of LDG.

Results: There were 77 males and 41 females with a mean age of 63.7 years. When compared with LDG, patients with LTG showed older age, lower BMI, larger tumor size, and more advanced tumor depth with regard to the clinicopathological features. Of 118 patients, there was one case of open conversion and three cases of intraoperative complication. Nineteen (16.1%) patients underwent D2 lymphadenectomy, and 73

(61.9%) underwent complete omentectomy. Mean operating time was 292 ± 88 min and total harvested lymph nodes were 41 ± 16 . Patients with LTG experienced significantly longer operation time (292 vs. 220 min, p < 0.001) and more intraoperative blood loss (256 vs. 191 ml, p = 0.002) than those with LDG. Overall morbidity rate was 22.9% (27 of 118 patients), which was significantly higher than those with LDG (22.9% vs. 12.7%, p = 0.002). There were 2 (1.7%) cases of postoperative mortality. The most common complication was anastomosis leakage (n=9) and luminal bleeding (n=9), followed by abdominal infection (n=3) and abdominal bleeding (n=2). Univariate and multivariate analysis of risk factor of postoperative morbidity revealed that old age (≥ 60yrs, OR=2.55, 95% Cl=0.95-6.84) and D2 lymphadenectomy (OR=3.87, 95% Cl=1.30-11.55) were independent risk factor for postoperative complications.

Conclusions: LTG is feasible technique for the treatment of upper and middle gastric cancer. However, it carries greater operative risk than those of LDG. Further improvement of anastomosis technique and much experience of laparoscopic gastrectomy are warranted for the proper application of LTG for gastric carcinoma.

S098

LAPAROSCOPIC APPROACHES TO GASTRIC GASTROINTESTINAL STROMAL TUMORS (GIST): AN INSTITUTIONAL EXPERIENCE. Michael

<u>J Pucci, MD</u>, Francesco Palazzo, MD, Pei-wen Lim, BS, Karen A Chojnacki, MD, Ernest L Rosato, MD, Adam C Berger, MD Thomas Jefferson University Hospital, Department of Surgery, Philadelphia, PA, USA

Introduction: Gastrointestinal stromal tumors (GIST) are uncommon gastric neoplasms that can generally be treated by surgical excision. Over the past eight years, our institution has gained experience in resecting these tumors by minimally invasive methods. As our experience with advanced laparoscopic techniques improves, our treatment algorithm for these tumors has changed. Since 2003, our approach has been to attempt laparoscopic resection as first line treatment for small and medium-sized gastric GISTs (< 7 cm) in any position along the stomach. The purpose of this study is to review our experience with laparoscopic resection, report our outcomes, and offer our perspective on the technical nuances involved in handling these neoplasms via a minimally invasive approach.

Methods: We queried our prospectively maintained, IRB-approved database for laparoscopic gastric GISTs resections. From 2003 to 2011, fifty-seven gastric GISTs were resected via laparoscopy at our institution. We reviewed operative notes for information on the technique employed. Data on tumor location, size, margin status, operative time, and blood loss was collected and reviewed.

Results: Fifty-seven gastric GISTs were resected over 8 years. 37 tumors (65%) were located on the body of the stomach (14 on the posterior body and 23 on the anterior body). Eleven tumors (19%) were positioned in the fundus. Four (7%) GISTs were located at the gastroesophageal junction (GEJ). Five tumors (9%) were located at the antrum of the stomach. The mean tumor size was 3.8cm with a mean estimated blood loss of 39ml. We achieved complete microscopic resection (R0) in 95% of the cases. Most tumors were amenable to local wedge resection. Fundus and GEJ tumors were generally treated with an anterior gastrostomy and transgastric wedge resection. Antral tumors were either resected with local wedge or antrectomy with gastro-enteric reconstruction. Intraoperative endoscopy was utilized in select circumstances; usually to locate a small lesion, confirm completeness of resection, or check luminal patency. Technical approaches varied depending on location of the pendasm

Conclusion: As our large, single-institution experience with gastric GISTs has increased, we view laparoscopic resection as first-line treatment in small and moderate sized tumors. Our results confirm the safety of minimally invasive resection and its oncologic efficacy. We have employed several technical variations of laparoscopic wedge resections to treat tumors in difficult anatomic locations. Adequate preoperative planning allows for a proper operative approach in almost all locations of the stomach.

S099

CAN FINDINGS ON ESOPHAGOGRAPHY PREDICT PALLIATION
OF ACHALASIA AFTER LAPAROSCOPIC HELLER MYOTOMY AND
ANTERIOR FUNDOPLICATION? Alexander S Rosemurgy, MD, Krishen
Patel, Kenneth Luberice, BS, Harold Paul, BS, Abigail Espeut, BS, David S
Estores, MD, H. Worth Boyce, MD, Sharona Ross, MD University of South
Florida, Department of Surgery, Tampa Florida Tampa General Medical
Group, Tampa General Hospital, Tampa Florida

Introduction: Laparoscopic Heller myotomy with anterior fundoplication (LHMAF) is the "gold standard" for palliation of achalasia. This study was undertaken to determine if postoperative outcomes after LHMAF could be predicted by preoperative findings on esophagography.

Methods: Preoperative barium esophagrams of 122 patients undergoing LHMAF were reviewed through protocol and the number of esophageal curves, esophageal width, and angulation of the gastroesophageal (GE) junction were determined. These findings were correlated with symptoms of achalasia, which were scored by the patients preoperatively and at last follow-up utilizing a Likert scale (1=least bothersome/never to 10=most bothersome/always). Median data are presented.

Results: Before LHMAF, symptoms of achalasia were frequent and severe (e.g., dysphagia =8,9 and regurgitation =7,9, respectively). LHMAF greatly reduced the frequency and severity of symptoms (e.g.,dysphagia=2,1 and regurgitation =0,0, respectively, p<0.05 for each). There were no significant relationships among the number of esophageal curves, esophageal width, and angulation of the GE junction. Postoperatively, only the number of esophageal curves correlated with only one symptom frequency. (Table)

Postoperative Symptom Frequency Postoperative Symptom Severity Factors

Regurgitation Dysphagia Vomiting Regurgitation Dysphagia Vomiting Angle NS NS NS NS NS NS NS

Curve NS P = 0.05* NS NS NS NS

Width NS NS NS NS NS NS

Table. This displays the correlations (represented by p-values) between factors and postoperative symptoms (frequency and severity). * = p-value<0.05 NS = not significant

84% of patients rated their overall experience as very satisfied or satisfied. The number of preoperative esophageal curves, esophageal width, or angulation of the GE junction did not predict postoperative satisfaction.

Conclusions: LHMAF provides dramatic palliation for achalasia; salutary benefits are profound and broad. Findings on preoperative esophagography generally do not predict symptoms after LHMAF; the only significant relationship is "flat" and patients can expect remarkable relief. Surgeons should not be deterred in applying LHMAF for achalasia even when the preoperative esophagram denotes "end-stage" achalasia because significant and dramatic palliation should be expected.

S100

COMPARISON OF OPEN AND LAPAROSCOPIC GASTRECTOMY WITH LYMPH NODE DISSECTION FOR GASTRIC CANCER Bac Nguyen Hoang, Prof PhD, Long Vo Duy, Ms, Long Tran Cong Duy, Ms, Thuan Nguyen Duc, MD University Medical Center, Hochiminh city, Vietnam

Background: Laparoscopic gastrectomy with lymph node dissection for gastric cancer has been performed in Vietnam as a technique that may offer benefits for patients. However, many controversies exist due to no evidence and no long-term results. There was no prospective multi-center large-scale randomized controlled trial in the world on the long-term outcome of laparoscopic gastric cancer surgery. The aim of this study was to compare technical feasibility, morbidity, mortality and 3-year survival of open and laparoscopic gastrectomy with lymph node dissection for gastric cancer.

Method: This study was designed as a prospective, non-randomized clinical trial with a total of 212 patients affected gastric adenocarcinoma between March 2007 and August 2011, at University Medical Center,

Hochiminh city, Vietnam. Of these, 130 (61.3%) patients were underwent open gastrectomy (OG), while 82 (38.7%) patients were to the laparoscopic gastrectomy (LG) group. Demographics, ASA status, pTNM stage, histologic type of the tumor, number of resected lymph nodes, operative time, intraoperative blood loss, postoperative complications, and 3-year overall survival rates were studied to assess outcome differences between the groups.

Results: In all patients, the procedures were completed with D2 resection. For total gastrectomy, a Roux-en-Y reconstruction was performed, and a Billroth II reconstruction was used in subtotal gastrectomy. There was no conversion to laparotomy in the laparoscopic group. The demographics, preoperative data, and characteristics of the tumor were similar in the two groups. There was no significant differences in the mean operative time (176 vs. 182 min.), and the estimated intraoperative blood loss (120±20 vs. 102±16 ml), (OG vs. LG, respectively). No transfusion was required in the two groups. The mean number of resected lymph nodes was 31.4 ± 15.3 in the OG group and 29.3 ± 12.4 in the LG (P>0.5). All resected margin was negative and no patients occurred postoperative leakage and mortality in the 2 groups. A significant differences were found in the median hospital length of stay $(8,2\pm2,1 \text{ vs. } 6\pm1,5 \text{ days};$ p=0.03), and the overall postoperative complications (13.8% vs. 7,2%; p=0.025), (OG vs. LP, respectively). The postoperative complications include the wound infections (10 vs. 3 patients), intra-abdominal abscesses (2 vs. 1 patients), deep wound dehiscence (1 vs. 0 patient), and minor medical disorders (5 vs. 2 patients), (OG vs. LG, respectively). One patients with wound dehiscence in the OG group was required reoperation to close the abdominal wall but no reoperation was required in LG group. Three-year overall survival rates were 72.4% and 75.8% in the OG and LG groups, respectively (P>0.5).

Conclusions: Laparoscopic gastrectomy for gastric adenocarcinoma is comparable to the open approach with regard to oncologic principles of resection, with equivalent margin status and adequate lymph node retrieval, demonstrating technically feasibility and equivalent 3-years survival. Additional benefits of decreased postoperative complications, decreased length of hospital stay make this a preferable approach for selected patients.

S101

MINIMAL INVASIVE SURGICAL APPROACH FOR THE TREATMENT OF GASTROPARESIS Joerg Zehetner, MD MMM, John C Lipham, MD, Farrokh Ravari, MD, Shahin Ayazi, MD, Afshin Skibba, MD, Ali Darehzereshki, MD, Rodney J Mason, MD, Namir Katkhouda, MD USC Department of Surgery

Background: Gastroparesis is a chronic disorder resulting in decreased quality-of-life. The Gastric Electrical Stimulator (GES) is an alternative to gastrectomy in patients with medically refractory gastroparesis. The aim of this study is to analyze the outcomes of patients treated with the gastric stimulator versus patients treated with laparoscopic subtotal or total gastrectomy.

Methods: A retrospective chart review was performed in all patients that had surgical treatment of gastroparesis from January 2003 - June 2011. Postoperative outcomes were analyzed and symptoms were assessed with the Gastroparesis-Cardinal-Symptom-Index (GCSI).

Results: There were 93 patients: 65 patients (24 male/41 female) with GES, implanted either with laparoscopy (n=20) or mini-incision (n=45), and 28 patients (10 male/18 female) with laparoscopic subtotal (n=23), total gastrectomy (n=2) or completion gastrectomy (n=3). 30-day morbidity rate (6.2% vs. 14.3%, p=0.23) and in-hospital mortality (3.1% vs. 3.6%, p=1.00) was similar for GES and gastrectomy. In 9/65 patients (14%) with persistent symptoms the GES was explanted and a subtotal gastrectomy performed; the morbidity rate in these patients was 11.1% and no mortality. In 6/65 patients (9%) the GES was removed for infection (n=3), subjective lack of benefit (n=1) or for replacement due to pacer damage/malfunction (n=2). In the GES group there were 9 patients who died within 36 months; none of these deaths were associated with the device placement. In the gastrectomy group 1 patient died unrelated to the surgery during follow-up. Of the 54 GES patients available for follow-up (median follow-up time 24 months), 35 patients (65%) reported favorable outcome: median GCSI score was 2.33 in patients

feeling better versus 3.95 in the patients who failed to respond to the GES. Of the 26 patients available for follow-up (median follow-up time 33 months) treated initially with laparoscopic subtotal or total gastrectomy, 24 patients (92%) were reporting favorable outcome: Median GCSI score was 1.89 in patients feeling better versus 4.11 in the patients who failed to respond to gastrectomy. The median GCSI score of patients with favorable outcome with the GES compared to patients with subtotal or total gastrectomy was not significantly different (1.89 vs. 2.33, p=0.30). In the 9 patients that underwent subtotal gastrectomy for failed GES, 8 patients (89%) reported a favorable outcome. Overall, favorable outcome was achieved in 68 of 80 (85%) patients available for follow-up treated with either primary GES, primary gastrectomy or secondary gastrectomy for failed GES.

Conclusion: Gastroparesis can be successfully treated by gastric electrical stimulator placement or laparoscopic gastrectomy. The gastric stimulator patients with no improvement of symptoms can be successfully treated by laparoscopic subtotal gastrectomy. We propose that the algorithm for the treatment of gastroparesis should be laparoscopic gastrectomy or mini-incision GES placement initially followed by laparoscopic gastrectomy for those that do not respond to the device.

S102

GASTRIC ELECTRICAL STIMULATION FOR DRUG-RESISTANT GASTROPARESIS Nv G Jayanthi, MD FRCS, Sp L Dexter, MD FRCS, Ai Sarela, MD FRCS Department of Upper Gastrointestinal, Metabolic & Bariatric Surgery, St James's University Hospital, Leeds, UK

Introduction: Drug-resistant gastroparesis is a debilitating condition. Several clinical studies have demonstrated that most, but not all, patients get significant relief from vomiting by gastric electrical stimulation (GES) with the Enterra[™] device (Medtronic). Enterra[™] therapy has been approved by the U.S. Food & Drug Administration on a humanitarian device exemption basis. Selection criteria for Enterra[™] therapy remain uncertain and trial of temporary GES may be of predictive value. We commenced our Enterra[™] programme in May 2008, with a policy of routine temporary GES trial, and present our early results.

Patients & Methods: Consecutive patients referred to a specialist upper gastrointestinal surgery unit, at a university hospital in the UK, between May 2008 and June 2011, for consideration of Enterra[™] therapy were identified from a prospectively-maintained database. Patients were referred by gastroenterologists, who believed that medical therapy had been exhausted. The diagnosis of gastroparesis was confirmed and the extent of gastric emptying was measured by a radionuclide-labelled meal and gastric scintigraphy. Clinically suitable patients underwent temporary GES, by an endoscopically-placed electrode. A gastroparesis cardinal symptom index diary was used to evaluate clinical benefit and select patients for permanent Enterra™ therapy. The permanent device was implanted laparoscopically, with electrodes placed in the gastric wall at 9cm and 10cm proximal to pylorus along the lesser and greater curvature, respectively. Position of the electrodes was confirmed by ontable endoscopy. A previously published energy algorithm (Abidi, 2006) was used to modify the stimulation program during follow-up.

Results: A total of 63 patients with medical therapy-resistant gastroparesis were referred for Enterra™ therapy during the study period. One patient died whilst awaiting transfer. To date, 42 patients have undergone temporary GES. There was clinically-meaningful symptom improvement in 31 patients (74%), who were selected for permanent placement of the Enterra™ device. Laparoscopic placement of the permanent device has been completed in 29 patients. 22 patients have been assessed following permanent Enterra™ therapy. At a median follow up of 31 weeks, clinically-significant symptomatic improvement was noted in 16 patients (73%). One patient has required placement of a feeding jejunostomy following failure of symptom resolution despite sequential increase in energy delivery.

Conclusions: Gastric electrical stimulation with Enterra[™] provides clinically significant symptom resolution in the majority of patients with severe gastroparesis. Patient-selection for implantation of a

permanent Enterra[™] device is aided by a prior trial temporary GES, with an endoscopically-placed electrode. However, despite use of selection measures, patients need to be cautioned about uncertainty of the ultimate outcome.

S103

MOTOR RESPONSE TO MULTIPLE RAPID SWALLOWS (MRS) CAN PREDICT DYSPHAGIA IN PATIENTS SCHEDULED FOR LAPAROSCOPIC

ANTIREFLUX SURGERY Nathaniel Stoikes, MD, Jesse Drapekin, RA, Anisa Shaker, MD, Vladimir Kushnir, MD, L. Michael Brunt, MD, C. Prakash Gyawali, MD Division of Gastroenterology and Section of Minimally Invasive Surgery, Washington University School of Medicine, St. Louis

INTRODUCTION: When multiple swallows (MRS) are rapidly administered, esophageal peristalsis is inhibited, and pronounced lower esophageal sphincter (LES) relaxation ensues. After the last swallow of the series, a robust contraction sequence results. Abnormal responses include incomplete inhibition or suboptimal contraction after MRS. We speculate that MRS has value in predicting esophageal transit symptoms in patients undergoing laparoscopic anti-reflux surgery (LARS).

METHODS AND PROCEDURES: Records of patients undergoing esophageal high resolution manometry (HRM, Sierra Scientific/Given Imaging, Los Angeles, CA) before LARS were evaluated. Inclusion criteria included symptom score sheets evaluating esophageal symptoms (dysphagia, heartburn, regurgitation, chest pain) before and after LARS, completion of MRS procedure (5 rapid swallows of 2 mL water 3-5 seconds apart) during HRM, and an adequate HRM study without artifacts. MRS was evaluated for adequate inhibitory response during swallows, and contraction pattern following MRS. Contraction patterns were evaluated separately in proximal (S2) and distal (S3) smooth muscle contraction segments on HRM. Abnormal MRS responses included the following: incomplete inhibition, abnormal contraction (S2, S3 or both) or presence of an intersegmental trough (IST) of >3 cm between skeletal and smooth muscle contraction segments when peristalsis was intact.

RESULTS: Sixty-three patients (mean age 60.3±1.7 yrs, 48 F) undergoing HRM prior to LARS successfully performed MRS (median 5 swallows, longest interval 3.2 \pm 0.1s between swallows). At presentation, all patients had heartburn or regurgitation; 28 subjects (44.4%) reported some degree of dysphagia to solids or liquids. Mean LES end-expiratory pressure was low (11.2 ±1.3 mmHg); 16 patients had values <5 mmHg. On HRM wet swallows, patients had a mean of 84.5% transmitted sequences; 8 had at least moderate esophageal body hypomotility (of which 6 had ≥80% peristaltic failure). After MRS, 14 patients (22.2%) had an intact peristaltic sequence. Of the remainder, 29 patients (46.0%) had segmental failure (complete failure=19; failure of S2=10); 18 (28.6%) had incomplete inhibition; and 14 (22.2%) had an IST; some had overlapping abnormalities. When stratified by presence or absence of dysphagia, 46.2% of subjects without dysphagia had a normal MRS response; 76.9% had formation of peristaltic segments following MRS. In contrast, only 16.0% of subjects with dysphagia (10.7% with preoperative dysphagia and 22.7% with postoperative dysphagia) had a normal MRS response (p≤0.03 compared to subjects with no dysphagia). Of patients with pre-LARS dysphagia who had worsening dysphagia following LARS, 62.5% had an abnormal MRS response. Incomplete inhibition during MRS (39.3%) was the predominant pattern with pre-LARS dysphagia, while absent peristalsis after MRS (36.4%) dominated in subjects with post-LARS dysphagia.

CONCLUSIONS: High resolution manometry with multiple rapid swallows helps predict dysphagia in subjects undergoing preoperative esophageal function testing prior to LARS. Our results suggest differing pathophysiologic mechanisms for pre- and post-LARS dysphagia.

S104

PARTIAL FUNDOPLICATION RESULTS IN EXCELLENT OUTCOMES AND BETTER DYSPHAGIA CONTROL THAN TOTAL FUNDOPLICATION AFTER LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR Vladan N Obradovic, MD, Girish Luthra, MD, Aamir Akmal, MD, Dancea C Horatiu, MD, Wai M Yeung, MD, Mohanbabu Alaparti, MD, Mathew E Plank, PAC, Andrea L Plank, Jon D Gabrielsen, MD FACS, Anthony T Petrick, MD FACS Geisinger Medical Center, Danville Pennsylvania

Background: The objective of this study was to identify whether partial fundoplication leads to better dysphagia outcomes in patients undergoing laparoscopic paraesophageal hernia (LPEHR). LPEHR is now recognized as safe and effective when done in experienced centers. Controversy remains as to the optimal surgical approach; but, as experience increases approaches can be more specifically tailored to patient needs.

Methods: Our study was a retrospective EMR review of 341 patients who underwent LPEHR at our institution from October 2001 through July 2010. 26 patients were excluded who underwent no fundoplication. In the study group (n=315), 86 patients had partial fundoplication (PF) and 229 had total fundoplication (TF). Patients in both groups were compared for dysphagia symptoms pre- and post-operatively. The groups were studied for demographic and peri-operative differences as well as morbidity, mortality, LOS and hernia recurrence. GI symptom, antacid use, and QOLRAD scores were also analyzed. Differences were calculated for significance using the unpaired T-test and Fisher's exact test.

Results: Average age was significantly higher in PF vs the TF group (70 vs. 63; p<0.0001) with more PF female patients (84% vs 67%; p=0.005). BMI was not significantly different between the groups nor were the presenting symptoms of dysphagia (67% vs 72%) or reflux (77% vs 73%). The PF group had a significantly larger % of intra-thoracic stomach (64% vs. 54%; p=0.003) and were more likely to have mesh cruroplasty (93% vs 59%; p<0.0001). LOS, complications and mortality were not significantly different. Overall 30-day mortality rate for all 315 patients was 0.95%. Both procedures effectively reduced pre-operative dysphagia (PF 50% vs TF 38 % reduction); however, significantly fewer patients in the PF group experienced dysphagia after fundoplication (17% vs 33%; p=.008). The reduction in pre-operative reflux symptoms was also significant for both groups (PF 71%; p<0.001 and TF 66%; p<0.001) with comparable incidence of post-operative reflux between the groups (PF 5.8% vs TF 7.9%; p=0.63). GI symptom, antacid use, and QOLRAD scores were significantly improved post-operatively in both groups with no significant difference between the PF and TF groups. There was no significant difference in PEH recurrences between the groups with an overall rate of 6.35% for all 315 patients.

Conclusion: Many groups, including our own, have demonstrated the safety and efficacy of LPEHR in experienced centers. Our PF patients were older with larger PEH's and more likely to have crural mesh. The two groups had similar incidence of dysphagia and reflux symptoms pre-operatively, yet the PF patients had significantly better reduction of dysphagia and overall dysphagia incidence post-operatively. The groups also had equivalent control of GERD symptoms, reduction in antacid use and QOLRAD improvement. This improvement was accomplished with very low PEH recurrence rates. While conclusions are limited by the retrospective design, we believe PF leads to superior dysphagia outcomes after LPEHR and should be strongly considered in those patients presenting with dysphagia as their primary symptom.

S105

THORACOSCOPIC ESOPHAGECTOMY WHILE IN A PRONE POSITION FOR ESOPHAGEAL CANCER: A PRECEDING ANTERIOR APPROACH METHOD Soji Ozawa, MD DMSc, Eisuke Ito, MD, Akihito Kazuno, MD, Osamu Chino, MD DMSc Department of Gastroenterological Surgery, Tokai University School of Medicine

INTRODUCTION: Although many esophageal surgeons are interested in thoracoscopic esophagectomy for esophageal cancer, the rate of thoracoscopic esophagectomy was about 20% in Japan in 2009. This low

rate may be due to the difficulty in both maintaining a good surgical field and the meticulous procedures that are required. The purpose of this study was to establish and evaluate a new procedure for thoracoscopic esophagectomy in a prone position using a preceding anterior approach to make esophagectomy easier to perform.

METHODS AND PROCEDURES: We have performed thoracoscopic esophagectomy while the patient was in a prone position for 44 patients with esophageal cancer between September 2009 and September 2011. The indications for this operation were the absence of severe pleural adhesion, cases with T1b to T3 cancer, and cases without preoperative chemoradiotherapy. Patients were placed in a prone position, and five trocars were inserted into the right thoracic cavity; only the left lung was ventilated, and pneumothorax was maintained with 6 mmHg of CO2 gas. The anterior pleura of the upper posterior mediastinum was incised between the esophagus and the trachea. The lymph nodes around the right recurrent laryngeal nerve and the upper esophagus were dissected. The esophagus was mobilized from the trachea in the first step and from the posterior structure in the second step. The middle and lower esophagus was also mobilized in the same manner as that for the upper esophagus; the lymph nodes around the esophagus were then dissected anteriorly in the first step and posteriorly in the second step. After the esophagus was transected, the lymph nodes around the left recurrent laryngeal nerve were dissected. The time and blood loss associated with the thoracoscopic procedure and the adverse events were evaluated. RESULTS: The median operation time for the thoracoscopic procedure was 220 minutes, and the median blood loss was 20 g. The median operation time of the latter 22 cases (210 min) was shorter than that of the former 22 cases (259 min) (p=0.012). The median blood loss of the latter 22 cases (15 g) was also less than that of the former 22 cases (27 g) (p=0.026). No intraoperative incidents occurred. We did not convert the procedure from thoracoscopic surgery to open surgery in any of the cases. There were no operative deaths in this series. As postoperative complications, pneumonia occurred in 8 cases (18%), recurrent laryngeal nerve palsy occurred in 6 cases (14%), and chylothorax occurred in 1 case

CONCLUSIONS: A thoracoscopic esophagectomy in a prone position for esophageal cancer using a preceding anterior approach is a safe and feasible procedure. After experiencing more than 20 cases, the performance of the procedures stabilized. The advantages of this method were that the mediastinal organs are shifted downwards as a result of gravity and that the surgical field for the posterior mediastinum eventually becomes wide open. This method, which is performed while the patient is in a prone position, seems to make esophagectomies easier to perform.

S106

COMBINED PARAESOPHAGEAL HERNIA REPAIR AND PARTIAL LONGITUDINAL GASTRECTOMY IN OBESE PATIENTS WITH SYMPTOMATIC PARAESOPHAGEAL HERNIAS John H Rodriguez, MD, Kevin El-hayek, MD, Poochong Timratana, MD, Matthew Kroh, MD, Bipan Chand, MD Cleveland Clinic Foundation

INTRODUCTION: Obesity is a risk factor for gastroesophageal reflux disease and hiatal hernia. Studies have demonstrated poor symptom control in obese patients undergoing fundoplication. The ideal operation remains elusive, however, addressing both obesity and the anatomic abnormality should be the goal. Hurdles for a bariatric operation exist including insurance coverage, patient desires, and patient suitability when choosing an operation. We present a series of patients who underwent longitudinal partial gastrectomy combined with paraesophageal hernia repair with short-term outcomes. METHODS AND PROCEDURES: We retrospectively identified 18 obese (BMI > 30 kg/m²) and morbidly obese (BMI > 35 kg/m²) patients who presented between 12/2007 and 8/2011 for management of a large or recurrent paraesophageal hernia. All patients had a combined primary paraesophageal hernia repair and partial longitudinal gastrectomy. Hiatal hernia closure was performed in all with or without mesh overlay reinforcement after complete intraabdominal reduction of the viscera. In addition, greater curvature mobilization and longitudinal resection

was performed. Charts were retrospectively reviewed to collect preoperative, operative, and short-term post-operative results. Quantitative data was analyzed using the Student t test and qualitative data with chisquare testing.

RESULTS: Laparoscopy was successful in all 18 patients. Mean preoperative BMI was 37.9 +/- 4.8 kg/m². Mean operative time was 237.5 +/- 81.4 min. On pre-operative endoscopy, 5 patients who had undergone prior fundoplication had anatomic failures (transhiatal migration, wrap disruption, diaphragmatic closure failure) while the remaining 12 had type III and one type IV paraesophageal hernia. Mesh was used to reinforce the hiatus in 15/18 cases. Mesh selection was at the discretion of the surgeon and included 10 biologic (9 Permacol and 1 Strattice) and 5 bioabsorbable (Bio-A). Suspected intraoperative pneumothorax requiring tube thoracostomy occurred in one patient. Post-operative complications included pulmonary embolism (n=1), and pulmonary decompensation (n=2) due to underlying chronic obstructive pulmonary disease. Mean length of stay was 5.3 +/- 3 days. Upper GI esophagram was performed on all patients with no short-term recurrence of paraesophageal hernia. Weight loss was seen in all patients within the first month with a mean BMI drop of 2.9 +/- kg/m². All patients experienced total to near resolution of pre-operative symptoms within the first month.

CONCLUSION: Combined laparoscopic paraesophageal hernia repair and partial longitudinal gastrectomy is a safe operation in obese and morbidly obese patients with large or recurrent paraesophageal hernias. In short term follow-up, this approach has demonstrated effective symptom control as well as weight loss. Long term follow-up is necessary to determine the durability of this operation in the obese and morbidly obese patients.

S107

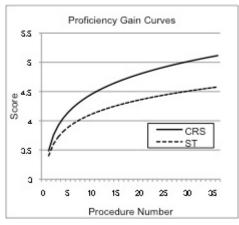
DO EXPERIENCED OPEN SURGEONS LEARN LAPAROSCOPIC COLORECTAL SURGERY FASTER? A STUDY FOR THE NATIONAL TRAINING PROGRAM IN ENGLAND Danilo Miskovic, MD, Melody Ni, PhD, Amjad Parvaiz, FRCS, Austin Acheson, MD, Ian Jenkins, MD, John Griffith, MD, Mark Coleman, MD, George Hanna, PhD Imperial College London

Introduction: It remains unclear to what degree experience in open surgery impacts the learning of the according laparoscopic operation. The aim of this study was to investigate the impact of previous experience in open colorectal resections on the learning rate in laparoscopic colorectal surgery.

Methods: Data from the National Training Programme in Laparoscopic Colorectal Surgery in England were split into procedures performed by senior open colorectal surgeons (CRS) and surgical trainees (ST). Patient demographics, case specifications and clinical outcomes were analysed. Case complexity and performance scores were evaluated using a validated task-specific self-assessment form [global assessment score (GAS), range: 1-6]. Nonlinear regression was used to analyze learning curves. Linear regression was used to determine the learning rate in terms of number of cases required to reach a sufficient skill level to perform the case without any substantial support by the trainer (GAS score 5).

Results: 1233 supervised, elective operations were analysed. 990 procedures were performed by 119 CRS and 242 cases by 25 ST. There were no differences for patient demographics and case selection. Clinical outcomes were not different between the groups, demonstrated by the rates of conversions (CRS 5.2%, ST 5.8%, p=0.703), complications (13% vs. 12.8%, p=0.91), mortality (0.6% vs. 0.4%, p=0.718) and reoperations (3.5% vs. 3.7%, p=0.899). The self-perceived difficulty of the cases was not different (CRS 3.71, ST 3.83, p=0.273). The overall performance score was significantly higher for the CRS group (4.17 vs. 3.91, p=0.008). There was no difference for generic laparoscopic tasks such as port insertion (p=0.092), however resectional tasks, such as vascular pedicle dissection (p<0.001) or mobilization of the colon (p=0.008) were significantly higher in the CRS group. The learning curve for the ST group was slower than for CRS (see graph). CRS surgeons had a learning rate of 23 cases [15-31 (95% CI)], ST surgeons 36 cases [19-55 (95% CI)].

Conclusion: Results suggest that experience in open colorectal surgery increase the self-perceived learning rate for laparoscopic resections in supervised training. Confidence in anatomical landmarks and knowledge of pathological characteristics may be beneficial for the understanding of advanced laparoscopic surgery. Since supervised training is safe and acceptable clinical outcomes can be achieved, there is no need to achieve competency in an open colorectal surgery before embarking on laparoscopic training.



S108

SHORT-TERM OUTCOMES OF LAPAROSCOPIC INTERSPHINCTERIC RESECTION FROM PHASE II TRIAL TO EVALUATE LAPAROSCOPIC SURGERY FOR STAGE 0/I RECTAL CARCINOMA: JAPAN SOCIETY OF LAPAROSCOPIC COLORECTAL SURGERY LAP RC (NCT00635466)

Shoichi Fujii, MD PhD, Seiichiro Yamamoto, MD PhD, Masaaki Ito, MD PhD, Shigeki Yamaguchi, MD PhD, Kazuhiro Sakamoto, MD PhD, Yusuke Kinugasa, MD PhD, Yukihito Kokuba, MD PhD, Junji Okuda, MD PhD, Kenichi Yoshimura Kenichi Yoshimura, MD PhD, Masahiko Watanabe, MD PhD Japan Society of Laparoscopic Colorectal Surgery

(Introduction) To examine the technical and oncological feasibility of laparoscopic surgery for rectal carcinoma, we conducted a phase II trial to evaluate laparoscopic surgery for stage 0/l rectal carcinoma in patients with a preoperative diagnosis of stage 0/I rectal carcinoma. Intersphincteric resection (ISR) is a promising method of sphincterpreserving surgery for very low rectal cancer. Laparoscopic ISR (LISR) is still not an established technique, and its safety and feasibility were unclear. The aim of this study was to clarify the safety and feasibility of LISR in a prospective multicenter study of laparoscopic surgery for clinical Stage 0/I rectal cancer in Japan (Lap RC). (Method) Only accredited surgeons specialized in laparoscopic surgery for the colon and rectum from 43 institutions in Japan participated in the study. Eligibility criteria included histologically proven rectal carcinoma; clinical stage 0/l; tumor size ?8 cm; patient age 20-75 years; no bowel obstruction; no prior chemotherapy or radiotherapy; written informed consent. The planned sample size was 490. Between February 2008 and September 2010, 495 patients with rectal cancer underwent laparoscopic surgery in 43 hospitals throughout Japan. All data of patient's background, operative and postoperative outcomes were recorded prospectively. (Results) A total of 495 patients were registered, and of those, 78 patients (15.8%) underwent LISR. Mean age was 58.9 years (31-77), male was 52 patients (66.7%) and female was 26 patients (33.3%). Diverting stoma was performed in 69 patients (88.5%). Conversion to open surgery occurred in 4 patients (5.1%). Reason for conversion in 2 patients (2.6%) was uncontrollable bleeding, and it for other 2 patients (2.6%) was necessity of pelvic side wall lymph node dissection. There was no mortality. Median operative time was 345 minutes (198-565), amount of blood loss was 100 ml (0-1760), and 3 patients (3.9%) were transfused intraoperatively. Median number of dissected lymph node was 14 (3-33), and all (proximal, distal and vertical) pathological cut margins were negative. Postoperative surgical complication of Grade2 or more was detected in 12 patients (15.4%), including anastomotic leakage in

5 patients (6.4%), bowel obstruction in 5 patients (6.4%) and surgical site infection in 2 patients (2.6%). Abdominal drainage and diversion of intestine were necessary in 2 patients (2.6%) due to anastomotic leakage. Median length of postoperative hospital stay was 13 days (7-167). (Conclusion) LISR was feasible and safe for clinical Stage 0/I rectal cancer with favorable short-term outcome. The safety of this procedure requires confirmation through prospective accumulation of more cases.

S109

ACUTE VERSUS ELECTIVE LAPAROSCOPIC SIGMOID RESECTION FOR DIVERTICULITIS Marty Zdichavsky, MD, Tobias Meile, MD, Maximillian Von Feilitzsch, MD, Dörte Wichmann, MD, Alfred Königsrainer, MD University Hospital Tuebingen, Germany

Objective: Surgical treatment of acute sigmoid diverticulitis is still under debate while elective laparoscopic treatment has proven short-term benefits. The aim of this study was to evaluate the outcome of laparoscopic sigmoid colectomy in patients with acute diverticulitis. **Methods:** 139 patients were retrospectively analysed. Indications for operation were acute complicated diverticulitis (Hansen and Stock Ila and Ilb) and chronically recurrent diverticulitis with or without sigmoid stenosis (Hansen and Stock Ill). One-stage laparoscopic resection and primary anastomosis were routinely performed in a 3-trocar technique. Data recorded were age, sex, ASA-score, operative time, duration of hospital stay and complications.

Results: Of 139 patients, 80 patients underwent elective laparoscopic sigmoid resection for diverticulitis (Group I) and 59 patients for acute diverticular disease (Group II). M:F ratio was 41:39 for Group I and 33:26 for Group II. In both groups females were older than males. Mean operative time was 173 min (range, 63-372 min) and 160 min (range, 60-370 min) for Group I and II, respectively. Majority of patients were ASA II in both groups. Mean postoperative hospital stay was equal for both groups. Minor complications were similar in both groups with 8.8%. Major complications with operative intervention were 1.7% for acute resection, but 5% for elective treatment. One anastomotic leak occurred in the elective group.

Conclusions: Laparoscopic surgery for acute diverticular disease is safe and effective. For recurrent and complicated diverticulitis laparoscopic treatment should be recommended. Therapy regimen for perforated diverticulitis still needs more clinical trials for better evaluation.

S110

SURGICAL TREATMENT OPTIONS FOR RECTAL CARCINOID CANCER: TRANS-ANAL EXCISION VERSUS LOW ANTERIOR TOTAL MESORECTAL

EXCISION Yz Wang, MD, A E Diebold, BS, J P Boudreaux, MD, D Raines, MD, R Campeau, MD, L Anthony, MD, E A Woltering, MD Louisiana State University Health Sciences Center

Background: The biological behavior of rectal carcinoids has not been fully studied and appreciated due to the rarity of the disease and thus, the optimal surgical treatment remains controversial. Oftentimes, primary tumors less than 2cm are assumed to be indolent and are treated by trans-anal excision. We hypothesized that rectal carcinoids are more malignant than previously described and small tumors may warrant more aggressive surgery than what has been traditionally recommended.

Methods: The charts of 62 consecutive rectal carcinoid patients seen at our institution between 10/2006 and 8/2011 were retrospectively reviewed. The size of the primary tumors, the extent of disease and basic survival data was collected for analysis.

Results: Thirty-two patients had localized disease only and three patients had lymph node metastasis without distant disease. All 35 patients are alive. Twenty-seven patients were found to have distant disease; 10/27 (37%) had succumbed to the disease. Stratified by size of the primary tumor, the chances of lymph node metastases are as follows: <1cm: 2/26 (8%); 1.1-2cm: 9/13 (69%); 2.1-3cm: 4/5 (80%) and >3cm: 7/12 (58%). Twelve (12/27, 44%) patients with distant disease were initially treated with trans-anal excision and two of them have died. One of these patients had a primary tumor size of only 1cm.

Conclusions: Rectal carcinoids are more malignant than previously

portrayed. Primary tumors greater than 1 cm have a much higher rate of lymph node metastasis than what has been previously reported. We believe that tumors larger than 1cm should have a Low Anterior Resection (LAR) with Total Mesorectal Excision as their initial definitive treatment. For tumors less than 1cm, surgical treatment should be individualized. Trans-anal excision with a lifelong follow up is a reasonable choice. LAR with TME, in contrast, might be considered for young patients. Since, tumors of this size still carry an 8% chance of lymph node metastasis, and the potential of death from distant spread.

S111

PREGNANCY OUTCOMES FOLLOWING LAPAROSCOPIC-ASSISTED AND OPEN COLORECTAL CANCER SURGERY F. A. Haggar, Ph.D. MPH, D. B. Preen, Ph.D., K. Einarsdottir, Ph.D., R. P. Boushey, Ph.D. MD, J. Mamazza, MD. The Ottawa Hospital, The University of Ottawa; The School of Population Health, The University of Western Australia

OBJECTIVE: The purpose of this study was to investigate the pregnancy outcomes of patients who had previous open or laparoscopic-assisted surgery for colorectal cancer.

METHODS AND PROCEDURES: A population-based linked data study, combining data from the Western Australia Midwives Notification System and Western Australia Cancer Registry, was performed to compare outcomes for all pregnancies of patients who underwent surgical treatment for colorectal cancer during the period 1983 - 2007. Stratified analyses with the Mantel-Haenszel technique and a multiple logistic regression model were performed to investigate the association between colorectal surgery and a range of birthing outcomes while controlling for multiple clinical and socio-demographic confounders.

RESULTS: Of the 627,762 live births during the study period, 232 deliveries were to patients who had previously undergone either laparoscopic-assisted (n=79) or open surgery (n=153) for colorectal cancer. The following factors were significantly associated with a previous colorectal cancer surgery: caesarean delivery (OR=1.4; 95% Cls, 1.1-2.1; P=0.024), fertility treatments (OR= 2.2; 95%Cls, 1.7-3.8; P<0.001), premature rupture of membranes (odds ratios, 1.9; 95% confidence interval, 1.3-2.7; P=0.001), labor induction (odds ratios, 2.2; 95% CI, 1.7-2.8; P<0.001) and fetal macrosomia (birth weight >4 kg; odds ratios, 2.1; 95% CI,1.4-3.0; P<0.001). Comparison between the open and laparoscopic-assisted colorectal surgery group revealed significantly higher proportion of Caesarean delivery among women who had previous open surgery compared with those women who had laparoscopic-assisted surgery (25.2% vs. 12.2%; odds ratios, 2.4; 95% CI, 1.9-3.1; P<0.001). Even after controlling for multiple possible confounders the association between open colorectal surgery and Caesarean delivery remained statistically significant. No significant differences were noted between the groups regarding other pregnancy complications such as placental abruption, placenta previa, labor dystocia, or perinatal complications (such as meconium-stained amniotic fluid, perinatal mortality, congenital malformations and low Apgar scores at 1 and 5 minutes).

CONCLUSION: Women who had colorectal cancer surgery were significantly more likely to experience adverse perinatal outcomes compared with women who did not undergo surgery. Perinatal outcomes were similar between patients undergoing laparoscopic-assisted and open surgeries, except women who had previous open colorectal surgery were at significantly higher risk of Caesarean delivery.

S112

COMPARISON OF EARLY MOBILIZATION AND DIET REHABILITATION PROGRAM WITH CONVENTIONAL CARE AFTER LAPAROSCOPIC LOW ANTERIOR RESECTION: A PROSPECTIVE RANDOMIZED CONTROLLED

TRIAL Sung-min Lee, MD, Je-ho Jang, MD, Duck-woo Kim, PhD, Seung-chul Heo, PhD, Seung-yong Jeong, PhD, Kyu-ju Park, PhD, Sung-bum Kang, PhD Department of Surgery, Seoul National University College of Medicine, Seoul National University Bundang Hospital, Seoul National University Boramae Hospital, Seoul National University Hospital

Purpose: Although the early recovery program was reported to be

effective after laparoscopic colectomy compared to conventional care, it is not reported about the efficacy of fast-track program after rectal cancer surgery. This study aimed to evaluate the efficacy of a rehabilitation program after laparoscopic low anterior resection in a randomized controlled trial. Methods: Between July 2007 and September 2011, 98 patients who had received laparoscopic low anterior resection with defunctioning temporary ileostomy were accrued to the study and randomized on a 1:1 basis to a rehabilitation program group with early mobilization and diet (n = 52) or conventional care group (n = 46). The rehabilitation program group received early oral feeding, early ambulation, early removal of urinary catheter and regular laxative. The primary outcome was recovery time, measured with criteria of tolerable diet for 24 hours, safe ambulation, analgesic-free, and afebrile status without major complications. Secondary outcomes were postoperative hospital stay, complications, quality of life by Short Form 36, pain by visual analogue scale and readmission. This study was registered (registration number NCT00606944, http://register.clinicaltrials.gov). Results: Recovery time was not different in both groups (rehabilitation program group, 7.2 (5-8.3) days vs. conventional care group, 7.1 (5-8) days, P=0.791). There was no difference in postoperative hospital stay between the two groups (rehabilitation, 8.7 (7-10.75) days vs. conventional, 8.3 (7-10) days; P=0.436). There was no difference in complication rates between the rehabilitation program group and conventional care group, but more complications were noted in the rehabilitation program group (42% vs. 24%; P=0.051), which was related to high postoperative ileus (25% vs. 13%, P=0.135) and acute urinary retention (17.3% vs. 4.3%, P=0.056). Quality of life and pain were similar in both groups. Conclusions: This randomized trial does not support that a rehabilitation program with early mobilization and diet is beneficial after laparoscopic low anterior resection.

S113

LYMPH NODE RETRIEVAL IN COLORECTAL CANCER IN THE ERA OF MINIMALLY INVASIVE SURGERY: ARE WE FOLLOWING ONCOLOGIC PRINCIPLES? <u>Laila Rashidi, MD</u>, Mike L Kueht, MS, Aakash H Gajjar, MD University of Texas Medical Branch, Galveston, Texas, USA

Introduction: Hand-assisted laparoscopic surgery (HALS) and single incision laparoscopic surgery (SILS) are minimally invasive surgical techniques that have been slowly adopted by general and colorectal surgeons. Conventional laparoscopic surgery is associated with shorter hospital stay, decreased postoperative pain, earlier return to gastrointestinal function, and fewer postoperative wound and pulmonary complications. According to National Institute of Health (NIH) and American Joint Committee of Cancer (AJCC) at least 12 lymph nodes are required for accurate colon cancer staging. Our study compared lymph node harvesting in laparoscopic (including HALS and SILS) versus open colorectal cancer surgery.

Methods and Procedure: This study is a retrospective single-center chart review series. We searched records for all colon and rectal related surgeries from 2005 to 2011 and excluded surgeries for causes other than malignancy. Patients were divided into four major groups based on the type of surgery: open surgery (OS), straight laparoscopy (LAP), hand assisted laparoscopy (HALS), and single incision laparoscopy (SILS). Patients in all groups were further divided based on the technique of surgery (right, left, transverse, sigmoid colectomy, and lower anterior resection). The mean procedure time, length of stay, and number of lymph nodes resected with each surgical technique were compared using 2-tailed student T test.

Results: A total of 222 colectomies for colorectal malignancy were considered. There were a total of 112 LAP procedures and 96 OS procedures. 7 HALS and 7 SILS were performed. The average age of all patients was 62.5 + 13 years. There were 104 (47%) female and 118 (53%) male participants. Patients were 67% Caucasian, 20% African American, and 13% Hispanic. The average number of lymph nodes resected per patient by LAP, HALS, and SILS (19.6) was lower than that of OS (23.1) (p= 0.019), however, the HALS and SILS group had greater node retrieval (20.5) compared to LAP group (16.3) (p=0.151). OS average OR time (195 min) was longer than both the LAP (168 min) and HALS group (193 min),

however, the time for the SILS group was longer (245 min). The average hospital stay was 1.9 times longer for OS (12.8 days) when compared to the combined LAP, HALS, and SILS group (6.8 days) (p=0.005). The average hospital stay for HALS and SILS (3.7 days) was less compared to LAP (6.9 days). (p=0.002).

Conclusion:

HALS and SILS surgery allow for higher lymph node retrieval compared to conventional LAP, however, is less, but not statistically significant compared to OS. These techniques do not compromise oncologic principles recommended by NIH and AJCC. HALS and SILS allow for less time in the hospital compared to LAP and OS, however, SILS was associated with longer operative times possibly attributed by innovation and its learning curve. Our study was limited by the number of HALS and SILS performed. More procedures are required to evaluate the practicality of HALS and SILS.

S114

SHOULD ALL EXCISED RECTAL POLYPS BETATTOOED? A PLEA FOR LOCALIZATION <u>Deborah Keller, MD</u>, Jane Jaffee, DO, Amit Khanna, MD MPH Temple University Hospital

Five to eight percent of colonoscopically removed benign rectal lesions contain invasive carcinoma. Rectal tattooing has been advocated for follow-up localization of the resection site. Despite proven benefits, tattooing is not routinely performed on benign appearing rectal polyps. Our hypothesis was that benign appearing rectal polyps with invasive cancer are rarely tattooed, confounding management. Our objective is to show malignant character is not commonly recognized and all lesions should be tattooed to aid identification. Secondary goals are to determine the frequency of localization, tattoo placement, polyp characteristics, and accuracy of prediction of malignant potential

Patients with polyps containing rectal cancer that underwent resection were identified from our institution's IRB approved Tumor Registry. A retrospective chart review was performed on the colonoscopic records. Data extracted included polyp size, gross appearance, pathology, resection margins, location on preoperative colonoscopy, removal technique, tattoo performance, and surgical procedure performed.

Forty-eight patients had polypectomies with rectal cancer in the specimen from 1/1/2003 to 8/1/2010. Forty-six reports were available for analysis. Distance from the anal verge was only noted in 7 patients (15.2%). The predominant procedure was hot snare polypectomy (n=30; 62.5%). Three polyps were "suspicious for malignancy". Two of the 3 suspicious lesions were carcinoid, 1 was benign. Polyp histology varied, including adenocarcinoma (n = 5), carcinoma-in-situ (n = 20), and carcinoid (n = 22). Thirteen patients had incomplete polypectomy resections. None of the incomplete resections were "suspicious for malignancy" or tattooed. Additional strategies were used to manage incomplete resections, including surveillance (38%), repeat colonoscopic polypectomy (30.7%), and surgery (30.7%). Narrow band imaging was used to identify the polypectomy site in 2 patients that underwent segmental resection of the polypectomy site without tattoo localization.

In our cohort, the majority of rectal polyps were not readily identified as malignant or tattooed at initial colonoscopy. This suggests that clinical endoscopic visual features underestimate malignant potential. Repeat colonoscopy has been advocated as the procedure of choice for the management of incomplete polypectomy, but necessitates precise localization. Narrow band imaging and re-endoscopy may assist in localization. The distance from the anal verge should be measured and a tattoo should be performed in all patients.

S115

TRANSANAL VERSUS TRANSABDOMINAL SPECIMEN EXTRACTION WITH LAPAROSCOPIC LOW ANTERIOR RESECTION: A COMPARATIVE ANALYSIS ON 432 PATIENTS WITH RECTAL CANCER Song Liang, MD PHD, Morris E Franklin, Jr, MD FACS The Texas Endosurgery Institute

BACKGOUND AND OBJECTIVES: This prospective comparison study focused on the patients with rectal cancer who underwent either transanal or transabominal specimen extraction after laparoscopic low anterior resection with total mesorectal excision and was specifically aimed at investigating if the transanal approach can be accepted as a safe and effective method for extracting the malignant specimen from peritoneal cavity.

METHODS: A prospectively designed database of a consecutive series of patients undergoing laparoscopic low anterior resection for rectal malignancy with various TMN classifications between April 1991 to May 2011 at the Texas Endosurgery Institute was analyzed, and all the statistical calculations were performed with SPSS.

RESULTS: A total of 432 patients underwent laparoscopic low anterior resection (LLAR) with total mesorectal excision (TME) during this study period. Transabdominal specimen extraction was applied to 256 patients for delivering specimens out of the peritoneal cavity after the laparoscopic procedure while 179 patients experienced transanal specimen extraction. In comparison on perioperative data, transanal group did not show significant difference from transabdominal arm on age (67yo vs 69yo; p= 0.12), operative time (180.9+/-43.5 minutes vs 198.3+/-43.5 munites; p= 0.07), estimated blood loss (126.6+/-73.6 ml vs 172.2 + -144 ml, p = 0.82), intraoperative complications (1.1% vs 0.8%; p= 0.69), postoperative complications (2.8% vs 4.2%, p=0.59), and hospital stay (6.9 +/- 2.8 days vs 9.1 +/- 3.7 days; p=0.83). During long-term follow-up, 9 out of 179 patients who underwent LLAR/TME with transanal specimen extraction were confirmed to have malignant recurrence with 2-year local recurrence rate of 5.0%, which did not statistically differ from that of transabdominal group (2.3%, p=0.15).

CONCLUSIONS: Transanal specimen extraction in laparoscopic rectal cancer resection is a safe and effective approach with comparable recurrence rate of cancer and postoperative complication rates, thus it can be integrated into laparoscopic low anterior resection as an alternative approach to extract the malignant specimen(s) from the abdominal cavity.

S116

SPHINCTER SPARING SURGERY FOR THE DISTAL 3 CM OF THE TRUE RECTUM: RESULTS AFTER NEOADJUVANT THERAPY AND MINIMALLY INVASIVE RADICAL SURGERY OR LOCAL EXCISION George J Nassif, DO, Henry Schoonyoung, MD, Sara Berman, BS, Al Denittis, MD, Erik Zeger, MD, Mo Mohiuddin, MD, Gerald Marks, MD, John H Marks, MD Lankenau Medical Center

Introduction: The characteristics for ideal treatment of rectal cancer include controlling the cancer, minimal morbidity and mortality, minimal trauma to the patient, and avoidance of a colostomy with preservation of adequate function. These goals become more challenging the further distal in the rectum the cancer is located.

Hypothesis: Minimally invasive sphincter sparing surgery can accomplish good cancer control, maintaining sphincter function, with minimal morbidity and mortality in rectal cancers of the distal 3 cm after receiving neoadjuvant chemoradiation therapy.

Methods: We retrospectively reviewed data from a prospectively maintained rectal cancer database of a single colorectal surgery practice to identify all patients with cancers of the distal 3 cms undergoing sphincter preservation surgery (SPS) via a laparoscopic total mesorectal excision or local excision by transanal endoscopic microsurgery (TEM). All patients had to have received neoadjuvant therapy. Patient data including demographics, initial tumor characteristics, staging, type dose and response to chemoradiation therapy, operative details, perioperative morbidity and mortality, local recurrence and survival were analyzed.

Results: 161 patients (men=108) underwent SPS by 3 techniques: TATA=106, TEM=49, LAR=6. Average age was 62yo (22-90yo). Mean level in the rectum, from the anorectal ring by procedure was TATA= 1.3cm (-1.0 – 3.0), TEM 1.5cm (-0.5 -3.0). and LAR=2.9cm (2.5-3.0), (p>0.05). Preoperative T stage of disease by procedure was T3 (N=108): TATA-83, TEM-20, LAR-5; T2 (N=48): TATA-22, TEM-25, LAR-1; T1 (N=3): TATA-1, TEM-2; T4 (N=2): TEM-2. All patients received concomitant 5 FU based chemotherapy and radiation, mean =5300cGy; (3000-7295cGy). Mean EBL was 376cc (10-3600cc). There were no mortalities. Morbidity rate was 0 for LAR; TATA= 13.2%; TEM=32% (Wound disruption Major=10%; Minor=16%). Significant pathologic downstaging occurred with an ypCR of 34% for uT2 and a ypCR of 19% for uT3. Overall LR=3.7%. By procedure: follow up, local recurrence and KM5yAS were: TATA: 37.9mo/ 3%/ 95%; TEM: 36.3mo/ 6%/ 88%; LAR: 63.1mo/ 0%/ 75% (p>0.05).

Conclusion: Advances in minimally invasive sphincter sparing surgery of rectal cancer promises to further expand curative options after neoadjuvant therapy. This study demonstrates positive oncologic outcomes, low local recurrence rates and high 5 yr survival after minimally invasive sphincter preserving surgery. A colostomy free lifestyle and cancer control make the MIS approach an excellent treatment option for complex distal rectal cancers.

S117

COLORECTAL CANCER FOLLOWING NEGATIVE COLONOSCOPY, IS 5-YEAR SCREENING THE CORRECT INTERVAL TO RECOMMEND?

<u>Steven K Nakao, MD</u>, Iswanto Sucandy, MD, Steven Fassler, MD, Mark Zebley, MD, Soo Kim, MD Abington Memorial Hospital

BACKGROUND: Despite the sensitivity of screening colonoscopy, polyps and cancers can still go undetected. With the polyp-to-cancer transformation cycle averaging 7-10 years, present guidelines recommend repeat colonoscopy within 10 years after negative screening. However, not all colorectal cancers follow this progression, and a 10-year interval may be too long for repeat surveillance. This study evaluates the incidence and pathology of colorectal cancers following a previous negative screening colonoscopy.

METHODS: Records of patients undergoing colorectal cancer resections at our institution were reviewed retrospectively. The patients were divided into two groups: Group 1, patients with a negative colonoscopy within 5 years; Group 2, patients without previous colonoscopy or with previous colonoscopy at intervals >5 years. Group 1 patients were evaluated by colonoscopy for anemia, diverticulitis, obstruction, and bleeding. Age, tumor location, operation performed and pathology findings were recorded. Chi² was used for statistical analysis.

RESULTS: 233 patients were included in this study. Group 1 contained 43 patients with a mean age of 73 years (range: 35-94, median: 75, M:18, F:25). Group 2 had 190 patients with a mean age of 68 years (range 19-91, median: 70, M:94, F:96). 18% of the study population had newly discovered colorectal cancer within 5 years. Both groups were subdivided by age: <50 years, 50-80 years, and >80 years (Table 1). No significant differences were found in the distribution of the T- and N-stages between the two groups, or between the two groups when the rate of lymphovascular invasion (19% vs 17%; p = 0.39) and perineural invasion (7% vs 11%; p = 0.58) were compared.

CONCLUSIONS: Within 5 years, 18% of our study population developed colorectal cancer. Most of these cancers were found within the 50-80 year age group, and were predominately located in the right colon and distally in the sigmoid and rectum. While distal cancers may be visualized by flexible sigmoidoscopy more proximal cancers will be missed, necessitating the need for colonoscopy. While staging was similar between the two groups, Group 1 cancers were not more aggressive despite having appeared within 5 years. Due to our incidence of colorectal cancer within a 5-year interval, a shorter period for routine colonoscopy may be necessary.

Table	1					
		Group 1			Group 2	
	Number of Patients	Location	Stage	Number of Patients	Location	Stage
<50	2	Right- 2(100%)	Stage I– 2(100%)	20	Right- 6(30%) Left- 3(15%) Sigmoid- 4(20%) Rectum- 7(35%)	Stage I– 6(30%) Stage II– 4(20%) Stage III– 10(50%)
50-80	28	Right- 11(39.3%) Transverse- 1(3.6%) Left- 2(7.1%) Sigmoid- 7(25%) Rectum- 6(21.4%) Synchronous- 1(3.6%)	Stage I– 12(42.9%) Stage II– 7(25%) Stage III– 7(25%) Stage IV– 2(7.1%)	133	Right- 44(33%) Transverse- 5(3.8%) Left- 12(9%) Sigmoid- 21(15.8%) Rectum- 47(35.2%) Synchronous- 4(3.6%)	Stage I– 45(33.9%) Stage II– 7(35.3%) Stage III– 39(29.3%) Stage IV– 2(1.5%)
>80	13	Right- 9(69.2%) Sigmoid- 1(7.7%) Rectum- 3(23.1%)	Stage I- 4(30.8%) Stage II- 4(30.8%) Stage III- 5(38.4%)	37	Right- 23(62.2%) Left- 5(13.5%) Sigmoid- 1(2.7%) Rectum- 8(21.6%)	Stage I- 12(32.4%) Stage II- 12(32.4%) Stage III- 13(35.4%)
Total	43			190		

S118

SIMULTANEOUS LAPAROSCOPY-ASSISTED RESECTION FOR SYNCHRONOUS GASTRIC AND COLORECTAL CANCER Byung-kwon Abn Seung-byun Lee Joong-iae Yoo Sung-ubn Baek Ki-young Yoon

Ahn, <u>Seung-hyun Lee</u>, Joong-jae Yoo, Sung-uhn Baek, Ki-young Yoon Department of Surgery, Kosin University College of Medicine, Busan, South Korea

Purpose: Colorectal and gastric cancers are sometimes diagnosed as a synchronous carcinoma. Simultaneous surgical resection with lymphadenectomy is indicated for both cancers, if there is no other distant metastasis and curative resection is expected. Increasingly, laparoscopy-assisted resection for gastric or colorectal cancers is being performed. However, simultaneous laparoscopy-assisted resection for both cancers is rarely documented and its feasibility unknown. The purpose of this study is to evaluate feasibility and safety of simultaneous laparoscopic resection as compared to open surgery for colorectal and gastric cancers.

Methods: From January 2001 to December 2009, a total of 25 patients underwent simultaneous resection for colorectal cancers and synchronous gastric cancers. Three patients (2 male; age range 49-68 years) underwent laparoscopy-assisted resection (LAP group) and twenty two patients (17 male; age range 47-76 years) underwent open surgery (Open group) for gastric cancer and colorectal cancer as curative intention. In open group, one patient was excluded, which had a colorectal cancer, a gastric cancer and a thyroid cancer, synchronously. Results: The mean age (61.7 vs. 63.7 years, p = 0.613), body mass index (24.6 vs. 22.3, p = 0.039), anterior resection for colorectal cancer (66.7%)vs. 65.0%, p = 0.102) was comparable in the two groups, respectively. In LAP group, laparoscopic-assisted distal gastrectomy was performed for all three patients. In Open group, subtotal gastrectomy with billroth I gastroduodenostomy was most common procedure (66.7%). The operation time, blood loss volume was similar between the two groups. Gas out was earlier (2.7 vs. 4.6 days p = 0.068), postoperative hospital stay was shorter (14.7 vs. 18.2 days, p = 0.715) in LAP group. The postoperative complications were an ileus and a wound seroma in LAP group, pneumonia (10.0%), wound bleeding (5.0%) and leakage (5.0%) in Open group. Conclusion: The simultaneous laparoscopy-assisted resection for synchronous gastric and colorectal cancer is a feasible and safe procedure and should be indicated, provided it is performed by an experienced surgeon.



S119

MALE URINARY AND SEXUAL DYSFUNCTION AFTER LAPAROSCOPIC VERSUS ROBOT-ASSISTED TOTAL MESORECTAL EXCISION FOR

RECTAL CANCER <u>Jong Pil Ryuk, MD</u>, Gyu-seog Choi, MD, Jun Seok Park, MD, Soo Yeun Park, MD, Hye Jin Kim, MD, Whon-ho Choi, MD Kyungpook National University Medical Center

Introduction Urinary and sexual dysfunction are recognized complications of rectal cancer surgery in male individuals. This study compares the efficacy of robot-assisted total mesorectal excision (RTME) and laparoscopic total mesorectal excision (LTME) in improving functional outcomes.

Methods Between February 2009 and September 2010, 25 male patients who underwent RTME and 25 male patients who underwent LTME were followed up for at least 12 months. These patients were matched 1:1 by age, surgery date, tumor height, neoadjuvant chemoradiation, and tumor stage. Urinary and sexual function were evaluated using validated questionnaires, including those pertaining to the International Prostatic Symptom Score (IPSS) and 5-item version of the International Index of Erectile Function (IIEF-5) score, the scores were obtained at 3, 6, and 12 months after surgery and were compared with the scores before surgery. Results The data for the groups were found to be similar in terms age, surgery date, operative procedure, tumor location, T stage, TNM stage of the resected specimen, and use of protective ileostomy and adjuvant chemotherapy. The mean IPSS score did not significantly differ between the RTME and LTME groups at 3,6, and 12 months. However, in the RTME group, the degree of increase in the IPSS score was significantly lesser than that in the LTME group at 6 months (1.28 \pm 1.46 vs. 2.64 \pm 2.60, P = 0.050). Seventeen RTME patients and 17 LTME patients who had sexual activity before rectal cancer surgery could be followed up for the IIEF-5. The use of RTME was associated with greater improvement in the IIEF score than the use of LTME at 3, 6, and 12 months, and this difference was statistically significant at 6 months (14.00 \pm 6.22 vs. 9.06 \pm 6.64, P = 0.027).

Conclusions The RTME group patients experienced earlier restoration of bladder and sexual function than the LTME group patients. These functional outcomes suggest the efficacy of the robotic approach for rectal cancer surgery.

S120

ROBOTICALLY-ASSISTED LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH. THE UTILITY OF ROBOTIC SYSTEM IN BARIATRIC SURGERY Iswanto Sucandy, MD, Gintaras Antanavicius, MD FACS Department of Surgery, Abington Memorial Hospital, Abington, Pennsylvania

Introduction: Biliopancreatic diversion with duodenal switch (BPD/DS) is considered the most effective surgical option for morbidly obese patients. Several techniques have been described – open, laparoscopic, and combination of open and laparoscopic. There are only few centers in the United States that perform robotically-assisted laparoscopic BPD/DS and published literature describing outcomes of this technique is also limited. In this study we describe our experience of this approach as a safe alternative for treatment of morbid obesity especially in the superobese.

Methods: A prospectively maintained database was reviewed in all patients who underwent robotically-assisted laparoscopic BPD/DS between December 2008 and July 2011. Patient characteristics, perioperative complications (Major-anastomotic leak, hemorrhage, intraabdominal organ injury, and thromboembolic events; Minorsuperficial skin infection, others), outcomes, and benefits of this technique were analyzed.

Results: A total of 107 consecutive patients (F:M=83:24) were included in this series. Average age was 44.76 years (range 20-67), BMI 49.97 (range 37-70) and the number of preoperative comorbidities was 6.24 (range 3-11). Mean operative time for a typical BPD/DS with appendectomy was 264 minutes (range 192-413), which increased to 298 (range 210-463) minutes when lysis of adhesion was necessary.

All cases were successfully completed using minimally invasive approach. There were no intraoperative or 30-day major postoperative complications. Two patients had to return to the operating room: one for an endoscopic release of an inadvertently-sutured nasogastric tube during creation of the duodenoileal (DI) anastomosis and another for significant port site infection. Minor postoperative complications included carpal tunnel syndrome exacerbation (n=1), which did not require surgical intervention. Median length of stay was 3.0 (2-13) days. Two outliers stayed for 9 and 13 days due to carpal tunnel syndrome exacerbation and port site infection, respectively. Two patients were readmitted within 30-days due to fluid retention and incarcerated umbilical hernia. Percentage of excess body weight loss (EBWL) at 1,3,6,9,12, and 18 months were 18.9, 36.4, 54.5, 67.4, 73.9, 82.42 respectively. No BPD/DS related reoperation or mortality occurred in this study. Improved ease of operation, visualization, precision, and range of motion especially during creation of critical anastomosis are the advantages of this technique.

Conclusions: Robotically-assisted laparoscopic BPD/DS is a feasible, safe, and effective alternative for weight loss surgery with excellent outcomes.

S121

THE ROLE OF THE ROBOTIC ASSISTED LAPAROSCOPIC TECHNIQUE IN THE UNCINATE PROCESS DISSECTION DEBATE Federico Gheza, MD, Stefano D'ugo, MD, Mario Masrur, MD, Paolo Raimondi, MD, David Calatayud, MD PhD, Francesco Bianco, MD, Subhashini Ayloo, MD FACS,

Piercristoforo Giulianotti, MD FACS UIC - Chicago

INTRODUCTION: Partial pancreaticoduodenectomy (PD) with or without pylorus preservation remain the gold standard in pancreatic head tumors treatment. The laparoscopic pancreaticoduodenectomy is still the prerogative of a few centers worldwide, mainly for the technical difficulties. Uncinate process dissection represents one of the most challenging steps of the PD and in open surgery the discussion about the "uncinate first" or "superior mesenteric artery first" approches is animating the surgical debate. Ten years after the introduction of the robotic technology in minimally invasive PD, we herein describe the role of this approach in the uncinate process dissection.

METHODS: This single surgeon series includes 95 robotic assisted PD, collected from March 2001 to September 2011, 63 of which for malignant tumors. The trocar positioning, with the camera placed 4 cm on the right side of the umbilicus, is tailored to allow a perfect lateral-to-medial vision during uncinate process dissection and combined with the 30 degrees camera permits to approach the mesenteric vessels almost from behind. Our standardized uncinate process dissection proceeds like in the classical open technique: it is performed after the transection of the pancreatic neck and the first jejunal loop, as the last foundamental step of pancreatic head dissection. The technical difference with the robotic assistance is that the surgeon's point of view could range for 180 degrees on the right side of the vessels. This means that we can choose the direction of the dissection along the Leriche's plane approaching all the vessels from a better angle, without losing the traction on the freed head of the pancreas, applied using the fourth arm. This action reproduces the open maneuver of pulling out the uncinate process from its nest, which is the main advantage of this approach.

RESULTS: Following this pathway the uncinate process dissection was accomplished in all the patients, without major vascular injuries or need of conversion. The first technical improvement came with the introduction of the fourth arm: coming from the right side it is in the perfect direction to apply traction during the mesenteric vessels dissection. Our second major progress was the camera port positioning in the right side: theoretically the laparoscopic technique could provide the same point of view, but without the flexibility of robotic instruments moving the camera on the right could make the other phases of the PD extremely demanding.

CONCLUSIONS: Combining the classical open "uncinate as the last" approach and the whole robotic dissection armamentarium with a right-to-left and posterior vision, we can change the surgeon's capacity to dissect also the retroperitoneal peripancreatic tissue, trying to reach a higher number of R0 resection. Future experiences are needed to

evaluate the possible prognostic impact of the different approaches and their oncological relevance, but probably the robotic technique has to be included in this debate and no longer considered only in terms of safety and feasibility.

S122

IS HYBRID ROBOTIC LAPAROSCOPIC ASSISTANCE THE IDEAL APPROACH FOR RECTAL DISSECTION. Marek Zawadzki, MD, Slawomir J Marecik, MD, <u>Vamsi R Velchuru, FRCS</u>, John J Park, MD, Leela M Prasad, MD University of Illinois, Chicago, USA, Advocate Lutheran General Hospital, Park Ridge, USA

Background: The use of robotic assistance in the management of rectal cancer has gradually increased in popularity over the years but the optimal technique is still under debate. Typically, a low anterior resection (LAR) for carcinoma entails dissection in multiple abdominal quadrants. The current version of the da Vinci robot offers limited range of movement of the robotic arms. In order to compensate for these limitations, special techniques have been developed. These are the hybrid approach and the totally robotic approach. The authors' preferred technique is a hybrid approach with laparoscopic hand-assisted mobilization of the left colon and robotic assistance for rectal dissection. The aim of this study was to establish the efficacy of hybrid robotic laparoscopic LAR in treatment of rectal cancer.

Methods: Between August 2005 and July 2011, consecutive patients undergoing rectal dissection for cancer via the hybrid technique were included in our study. Surgical technique involved three stages - firstly hand assisted laparoscopic mobilization of the left and sigmoid colon and vascular control (both IMA and IMV); secondly robotic rectal dissection; and lastly anastomosis. Demographics, margin positivity, intraoperative, and short-term outcomes were evaluated. Results: The hybrid approach with laparoscopic hand-assisted mobilization of the left colon and robotic rectal dissection was performed in 77 patients with rectal adenocarcinoma. Of these, 68 underwent low anterior resection and 9 had a coloanal pull-through procedure. The robot was positioned between the patient's legs in 73 cases and by the patient's left hip in 4 cases. Most tumors were located in the mid or lower rectum (70%) and 62% of the patients received neoadjuvant treatment. The average age was 60.1 years with an average BMI of 28.0. Mean operative time was 327 minutes and the conversion rate was 3.9% (n=3). Reasons for conversion included morbid obesity (BMI of 43), advanced T4 tumor invading the pelvic sidewall, and intraoperative bleeding. All but one specimen had negative circumferential margins. Two patients had distal margin positivity. The anastomotic leak rate was 6.4% (n=5). Two patients developed pelvic abscesses, without clinically or radiologically confirmed anastomotic failure. One patient developed a colovaginal fistula. Four patients had focal neuropathy in the immediate postoperative period. No robot specific complications were observed. Conclusions: The hybrid approach involving hand-assisted left colon mobilization and robotic rectal dissection is a safe and feasible technique for minimally invasive low anterior resection. This combination maximizes the advantages of each method without compromising the benefits of a minimally invasive approach. This approach can be also considered an ideal technique for surgeons new to robotic rectal dissection.

S123

ENDOWRIST VERSUS WRIST: A CASE-CONTROLLED STUDY COMPARING ROBOTIC VERSUS HAND ASSISTED LAPAROSCOPIC SURGERY FOR RECTAL CANCER Frederick H Koh, <u>Ker-kan Tan</u>, Charles B Tsang, Dean C Koh Division of Colorectal Surgery, University Surgical Cluster, National University Health System, Singapore

Introduction:

Laparoscopic total mesorectal excision (TME) is one of the most challenging colorectal procedures. This study aimed to compare the outcomes of robotic assisted laparoscopic (RAL) and hand assisted laparoscopic (HAL) techniques in performing TME for patients with rectal cancers.

Methods: A retrospective review of all patients who underwent RAL TME for mid to distal rectal cancers from October 2004 to August 2011 was performed. These cases were then matched for age, gender and stage of malignancy with patients who underwent HAL TME during the same period. Only patients who had TME completed laparoscopically were included.

Results: The study group comprised of 19 RAL and 19 matched HAL patients with a median age of 61.5 (range, 47-92) years. Neoadjuvant chemo-radiotherapy was administered to eleven (28.9%) patients (RAL: 8 (42.1%), HAL: 3 (15.8%), p=0.048). There was no significant difference in the TNM stages of the disease between the groups. The median number of lymph nodes harvested were 16 and 14 for the RAL and HAL groups respectively.

The median operative times were significantly longer in the RAL group (390 vs. 225 minutes, p<0.001), and open conversions were required in 6 (15.8%) patients (RAL: 1 (5.3%), HAL: 5 (26.3%), p=0.180). There were no significant differences in the lengths of stay (RAL: 7, HAL: 6 days, p=0.476) and rates of peri-operative complications (RAL: 3 (15.8%), HAL: 7 (37.8%), p=0.269) between the 2 groups. The grades of the quality of the TME were similar in both groups as well. Circumferential resection margin involvements were seen in 2 (5.3%) patients (RAL: 2 (10.5%), HAL: 0 (0.0%), p=0.486).

Conclusions: RAL TME can be performed safely for low rectal cancers with similar peri-operative outcomes in comparison with the HAL technique. There was no difference in the quality of surgical resection. However, operating times were significantly longer.

S124

ROBOT-ASSISTED LAPAROSCOPIC MAJOR HEPATECTOMY FOR BENIGN AND MALIGNANT PATHOLOGIES – A COHORT STUDY Eric

<u>C.h. Lai, MBChB FRACS</u>, Chung Ngai Tang, MBBS FRCS, George P.c. Yang, MBBS FRACS, Oliver C.y. Chan, MBChB FRCS, Michael K.w. Li, MBBS FRCS Department of Surgery, Pamela Youde Nethersole Eastern Hospital, Chai Wan, Hong Kong SAR, China

INTRODUCTION: Due to the fear of intraoperative bleeding and technical difficulty, laparoscopic major hepatectomy remain a challenge for liver surgeons. The recent introduction of robotic surgical systems has revolutionized the field of minimally invasive surgery. Hopefully, its development can overcome the limitation of conventional laparoscopic surgery for major hepatectomy. Currently, the use of robotic system in laparoscopic major hepatectomy was rarely reported.

METHODS AND PROCEDURES: Between December 2010 and September 2011, 8 right hemi-hepatectomies and 4 left hemi-hepatectomies were performed by robot-assisted laparoscopic approach in a single tertiary center. A prospectively collected data was analyzed retrospectively. RESULTS: Overall mean duration of the operation was 325.2±92.7 (SD) minutes. Mean duration of the operation for right hemi-hepatectomy was 332.4±102.4ml, while mean duration of the operation for left hemi-hepatectomy was 321.3±67.8ml. Overall mean operative blood loss was 393.3±286.5 ml. Mean operative blood loss for right hemi-hepatectomy was 456.3±306.4ml, while mean operative blood loss for left hemi-hepatectomy was 156.9±40.7ml. No open conversion was needed. Three patients (25%) had postoperative complications. There was no mortality. Mean hospital stay was 6.3±3.4 days.

CONCLUSION: Our series indicate that in experienced hands, robotassisted laparoscopic approach for major hepatectomy is feasible and safe in appropriate selected patients. As experience grows, this procedure will be more common.

S125

GPU-ACCELERATED REAL-TIME TISSUE RECONSTRUCTION FOR SEMI-AUTOMATED IN-VIVO SURGERY Jedrzej Kowalczuk, MS, Jay Carlson, BS, Eric T Psota, PhD, Lance Perez, PhD, Shane Farritor, PhD, Dmitry Oleynikov, MD University of Nebraska Medical Center, University of Nebraska-Lincoln

Introduction: The objective of this study is to demonstrate the feasibility of a stereoscopic video system for three-dimensional reconstruction of the surgical environment. The availability of accurate real-time three-

dimensional reconstruction has the potential to enable vision-driven navigation of surgical robots and the automation of low-level surgical tasks. Here, a surgical vision system is proposed that uses a custom miniaturized stereoscopic video camera and a highly-accurate GPU-accelerated stereo matching algorithm to create a computer model of the surgical environment in real-time.

Methods and Procedures: To facilitate real-time reconstruction of the surgical environment, the stereoscopic video camera is positioned in front of live tissue within the normal viewing range of the surgical robot (5-10cm). The stereo video frames are captured at a rate of 30 frames per second, and processed by the GPU-accelerated stereo matching algorithm to produce a dynamic model of the environment. In order to demonstrate the accuracy of the reconstruction, several different synthetic views of the surgical environment are reproduced by overlaying the color images on the three-dimensional model, and then compared to actual images taken from the same viewpoints.

Results: The real-time three-dimensional reconstruction was evaluated in a non-survival procedure on a porcine model that was performed at the University of Nebraska Medical Center and was approved by the institutional review committee. The procedure involved positioning the stereoscopic video camera directly in front of the operating theatre, and recording 10 seconds of high-definition video with variations in movement and orientation of the camera in order to approximate the viewing conditions that would occur during in-vivo surgery. To allow for subjective evaluations, the reconstructed model was rotated and rendered from different positions and compared to actual images obtained from those viewpoints. The results demonstrate that the system is capable of producing an accurate model of the environment in real-time.

Conclusions: It was shown that the proposed stereoscopic imaging system is capable of capturing and processing high-definition stereo video within the surgical operating environment. In addition to using the video streams captured by the stereoscopic camera to provide the surgeon with depth perception, the video is also used to reconstruct the surgical environment in three-dimensions.

Results show that the system is capable of accurately reproducing the environment and providing realistic, synthetically rendered viewpoints of the operating theatre. The ability to produce real-time accurate three-dimensional reconstruction is a significant advancement towards the future automation of low-level surgical tasks.

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INITIAL ROBOTIC BARIATRIC SURGERY EXPERIENCE IN AN ESTABLISHED PROGRAM: A DESCRIPTIVE ANALYSIS. Anthony M

<u>Gonzalez, MD FACS FASMBS</u>, Jorge R Rabaza, MD FACS FASMBS, Carmen Rodriguez, RN MSHSA, Maria Fuego, RN BSN South Miami Hospital, Baptist Health South Florida, South Miami, Florida

Research has argued that robotic surgery not only provides patients with the same long-term postoperative benefits, but a lowered threat of surgical complications (Snyder, Wilson, T., Leong, Wilson, E.B., 2009). In a bariatric surgical program with over 2,500 laparoscopic cases, the impact of introducing robotic technology to the weight loss surgery armamentarium is unknown. Therefore, we chose to perform a descriptive analysis of our current robotic surgeries.

Starting August 2009, 144 selected bariatric procedures were performed through robotic technology--gastric bypasses (n=83), sleeve gastrectomies (n=38), gastric bands (n=13), and revisions (n=10). All patients were selected using standard National Institute of Health (NIH) guidelines and all preparations were performed to program standards.

Of 144 cases the mean BMI was 44.65+7.08, and the mean age was 43.36+12.44. The mean length of stay (days) by procedure was: 2.21+.84 for gastric bypasses, 2.37+1.63 for sleeve gastrectomies, 98+.02 for gastric bands, and 6.10+4.18 for revisions. Average surgical time (minutes) by procedure was: 160.04+68.53 for gastric bypasses, 179.16+73.92 for sleeve gastrectomies, 134.31+53.69 for gastric bands, and 176.90+63.31for revisions. There were 13 complications: 3 sleeve

gastrectomies, 5 revisions, and 10 gastric bypasses.

The addition of the robot in the performance of bariatric surgery has demonstrated acceptable outcomes and safety. It could be argued that the complications experienced are unrelated to the robotic technology specifically but to surgery in general. This descriptive review began the exploration of benefits of robotic bariatric surgery in this program; next steps could include evaluating its efficiency and efficacy in bariatric surgery.

S127

ROBOTIC SPLEEN-PRESERVING DISTAL PANCREATECTOMY Chang Moo Kang, Sung Hoon Choi, Jin Hong Im, Ho Kyoung Hwang, Woo Jung Lee Yonsei University College of Medicine, Seoul, Korea

Background: The advanced and delicate laparoscopic techniques are usually required for safe and successful laparoscopic spleen-preserving distal pancreatectomy. Unique characteristics of robotic surgical system are thought to be useful for this minimally invasive procedure.

Materials and Methods: From September 2007 to May 2011, patients who underwent robotic spleen-preserving distal pancreatectomy for benign and borderline malignant tumor of the pancreas were retrospectively reviewed. Perioperative clinicopathologic surgical outcomes were evaluated.

Results: Twenty-three patients were attempted for robotic spleenpreserving distal pancreatectomy, and 22 patients (95.7%) could intentionally save the spleen either by splenic vessels-conservation (SVC; 17, 73.9%), or by splenic vessels-sacrifice (SVS; 5, 21.7%). Seven patients were male and 16 were female with age, 43.2±15.2 years. Body mass index was check as 23.1±3.1 Kg/m2. Pathologic diagnosis of the resected pancreatic tumor included MCT in 6 patients, SCT in 5, SPT in 4, IPMT in 3, NET in 3, and other benign conditions (intrapancreatic accessory spleen and chronic pancreatitis) in 2. Tumor size was 3.2±1.5 cm in diameter, and length of resected pancreas was 8.4±2.4cm. Operation time was 398.9±166.3 min, but it gradually decreased as experiences were accumulated (Rsq=0.223, p=0.023). Estimated intraoperative blood loss was 361.3±360.1 ml, and intraoperative transfusion was done in 4 patients (17.4%). Soft diet was given on 1.2±0.4 days, postoperatively, and length of hospital stay was 7.0±2.4 days, postoperatively. Clinically relevant postoperative pancreatic fistula was noted in 2 patients (8.6%), but could be successfully managed conservatively.

Conclusion: Robotic surgical system is thought to be beneficial for improving spleen-preserving rate in laparoscopoic distal pancreatectomy. However, its expensive cost is great obstacle for popular clinical use of this surgical system.

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ENDOSCOPIC SUBMUCOSAL DISSECTION FOR COLORECTAL TUMORS

<u>Eun-jung Lee, MD</u>, Jae Bum Lee, MD, Suk Hee Lee, MD PhD, Do Sun Kim, MD PhD, Doo Han Lee, MD PhD, Du Seok Lee, MD PhD, Eui Gon Youk, MD PhD Daehang Hospital

Purpose: Endoscopic Submucosal Dissection (ESD) is a very useful endoscopic technique, making it possible to perform an en bloc resection of a lesion regardless of the size. Since the introduction of ESD to our hospital, we have performed 1000 colorectal ESD over 4 years and 8 months. The aim of this study is to report our colorectal ESD experience. Methods: Between October 2006 and August 2011, we performed ESD on 1000 consecutive colorectal tumors in 966 patients. We evaluated the clinical outcomes of these cases. Results: The mean resected tumor size was 24.1±13.3(3-145) mm. Our overall endoscopic en bloc resection rate was 97.5% (975/1000) and pathologically margin free rate was 91.2% (912/1000), respectively. Our perforation rate was 5.3% (53/1000). For 50 patients, perforation was managed by conservative management with/without endoscopic clipping while the other three patients received emergency laparoscopic operation. Pathological examination showed adenocarcinoma in 37.2% of cases (372/1000). We recommended additional radical surgery to 74 cases (submucosal invasion less than 1 mm with unfavorable pathology: 17 cases, unknown

depth of submucosal invasion: 1 case, submucosal invasion ≥ 1mm: 54 cases, invasion to proper muscle: 2 cases). Follow-up colonoscopies were performed on 610 patients. During the median follow-up period of 12(3-58) months, there were three recurrences (0.5%). Conclusions: ESD is technically difficult, with a substantial risk of perforation. Yet, ESD enabled en bloc resection of large colorectal tumors. As experience with the technique increases, ESD may gradually replace piecemeal EMR and radical colon resection in the treatment of colorectal tumors.

	Epithelial tumors: 874 cases	Submucosal tumors: 126 cases
Mean tumor size(range)	26.5±12.3 (5-145) mm	7.1±4.7 (3-50) mm
Pathology	Adenoma: 186 Adenoma with high grade dysplasia: 312 Adenocarcinoma: 372 Mucosal cancer: 241 Submucosal invasion: 129 Minimal invasion (<0.1cm): 74 Massive invasion (=or>0.1m): 54 Unknown depth of invasion: 1 Proper muscle invasion: 2 Others: 4	Neuroendocrine tumor: 112 Granular cell tumor: 8 Leiomyoma: 5 Neurilemmoma: 1

S129

RISK FACTORS AFFECTING OPERATIVE APPROACH, CONVERSION, AND MORBIDITY FOR ADRENALECTOMY: A SINGLE INSTITUTION SERIES OF 402 PATIENTS James G Bittner Iv, MD, Victoria M Gershuni, MS, Jeffrey F Moley, MD, Brent D Matthews, MD, Mary Quasebarth, RN, L Michael Brunt, MD Sections of Minimally Invasive Surgery and Endocrine and Oncologic Surgery, Department of Surgery, Washington University School of Medicine

Introduction: Laparoscopic adrenalectomy (LA) is preferred for removal of most adrenal pathology, but risks for conversion and selection of open adrenalectomy (OA) are limited in most series due to sample size. This study aimed to investigate selection variables for OA, risk factors for conversion, and 30-day outcomes between operative approaches.

Methods: A prospective registry of patients who underwent adrenalectomy for any indication at a single high-volume teaching hospital from 1993 through 2010 was reviewed retrospectively. Demographic variables, perioperative data, and outcomes of patients after LA and OA were compared using nonparametric tests (α =.05). Risk factors affecting operative approach, conversion, and 30-day morbidity were determined. Data are presented as mean with standard deviation or odds ratio (OR) with 95% confidence interval.

Results: In total, 402 patients underwent 422 adrenalectomies. The LA (n=356) compared to OA (n=46) patients were younger (49.4±14.4 vs. 55.0±14.4 years, p=.02), had lower American Society of Anesthesiology (ASA) classification (2.5±.6 vs. 2.7±.6, p=.04), smaller preoperative tumor size (3.2±2.1 vs. 8.5±5.1 cm, p<.01), and more functional lesions (67.4% vs. 26.1%, p<.01). Most patients were female (62.1% vs. 73.9%, p=.20), had left-sided lesions (both 52%), and presented with similar body mass index (BMI) (30.3±7.5 vs. 29.0±7.4 kg/m2, p=.21). A similar proportion of LA patients had a history of prior abdominal operations (46.1% vs. 43.5%, p=.43) but fewer underwent concurrent procedures at the time of operation compared to OA patients (19% vs. 63%, p<.01). The most common operative indication for LA was pheochromocytoma (33%) and for OA was non-functioning adenoma (24%). Mean operative times for LA and OA were 159 \pm 68 and 197 \pm 77 minutes (p=.04). LA was associated with fewer intraoperative complications (3.4% vs. 10.9%, p=.02), less estimated blood loss (≤100 ml, 81.7% vs. 28%, p<.01), and lower transfusion requirement (2% vs. 10.9%, p<.01). Conversion occurred in 6.2% of LA patients, who remained in the LA cohort for analysis. Risks for conversion included preoperative diagnosis, need for concomitant procedures (OR 3.2, 1.3-7.9), need for transfusion (OR 24.5, 5.1-117.9), and any intraoperative complication (OR 9.1, 2.5-32.9). Hospital length of stay for LA averaged 2.5 \pm 2.2 and for OA 9.1 \pm 12.1 days (p<.01). More OA patients experienced 30-day morbidity (11% vs. 23%, p<.01) but with similar severity (grade ≤2, 80% vs. 84.8%, p=.35). Variables that correlate with selection for OA are increasing patient age (p=.02), preoperative imaging size (p<.01), and ASA (p=.04), need for concomitant procedures

(OR 7.2, 3.8-13.9), and non-functional lesion status (OR 5.9, 2.9-11.7). Higher BMI, prior abdominal operations, and lesion side did not impact selection for OA. Perioperative risk factors predictive of increased 30-day morbidity following adrenalectomy included use of an open approach (OR 8.1, 4.2-15.8), concomitant procedures (OR 3.8, 2.2-6.7), longer operative time, need for conversion (OR 3.5, 1.4-8.6), and pathology type.

Conclusions: The nature of underlying adrenal pathology and need for concurrent procedures significantly impact the selection of patients for OA, the likelihood of conversion from LA to OA, and perioperative morbidity. These metrics should be considered when assessing operative approach and risks for adrenalectomy.

S130

PATIENT-REPORTED OUTCOMES AFTER SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY VS TRADITIONAL LAPAROSCOPIC CHOLECYSTECTOMY: A RANDOMIZED, PROSPECTIVE

TRIAL Matthew Sappington, MD, B Todd Moore, MD, Daniel J Margolin, MD, G Brent Sorensen, MD, Fengming Tang, MS, <u>Kimberly M Brown, MD</u> Saint Luke's Hospital of Kansas City, Department of Surgery, University of Missouri-Kansas City

Introduction: Single incision laparoscopic cholecystectomy (SILC) is a newer approach that has been shown to be a safe alternative to traditional laparoscopic cholecystectomy (TLC) in retrospective and small prospective studies. We do not yet have accurate data to inform patients about what specific benefits may be expected with SILC compared to TLC. As the demand for single-incision surgery may be driven by patient perceptions of benefits, we designed a prospective randomized study using patient-reported outcomes as our endpoints.

Methods: We performed a randomized, controlled trial comparing patient reported outcomes following SILC or TLC. After obtaining informed consent, patients scheduled to undergo elective cholecystectomy were randomized to SILC or TLC, stratifying for surgeon, diagnosis, body mass index (BMI), and prior abdominal surgery. Patients were blinded to the procedure by using uniform dressings that were maintained for 48 hours after surgery. Preoperative characteristics and perioperative data were recorded. Pain scores were recorded in recovery and at 48 hours. Satisfaction with wound appearance and perceptions of pain at 2 and 4 weeks were reported by patients on a 5-point Likert scale. We used the validated Gastrointestinal Quality of Life Index (GIQLI) survey preoperatively and at 2 and 4 weeks postoperatively to assess recovery. Procedural and total hospital cost per case were abstracted from hospital billing systems

Results: We enrolled 90 patients and randomized 70 to date. Patients left study because of patient desire for one procedure (12), no surgery was performed (4) or surgeon determined patient was not SILC candidate (4). Complete follow-up data are available for 32 SILC and 27 TLC patients. Mean age was 44 years (\pm /- 14), 83% were Caucasian, and 78% were female, with no difference between groups. Operative time was longer for SILC (60.1 +/- 22.7 minutes vs 49.4 +/- 13.6 minutes, p=0.036), but mean LOS was similar (6.8 +/- 4.8 hours SILC vs 5.9 +/- 4.7 hours TLC, p=0.47). Operating room cost (\$852 +/-\$182 SILC vs \$879 +/- \$153 TLC, p=0.56) and encounter cost (\$3035 +/- \$1000 SILC vs \$3225 +/- \$1183 TLC, p=0.541) were similar. GIQLI scores were not significantly different preoperatively, or at 2 or 4 weeks. Patients reported a mean of 9.3 +/-7.2 days from surgery to complete resumption of normal activities with SILC, and 8.7 +/-4.4 days with TLC (p=0.68). Patients reported higher satisfaction with wound appearance at 2 weeks with SILC, but there was no difference at 4 weeks. There were no differences in pain scores in recovery or at 2 or 4 weeks.

Conclusions: SILC is a longer operation, but can be done at the same cost as TLC. Recovery is not faster with SILC, and pain scores are not significantly different. There may be an improvement in patient satisfaction with wound appearance at 2 weeks. While demand for single-incision surgery may be driven by patient perceptions of benefit, further study is needed to accurately inform patients as to what benefit they may derive from SILC over TLC. Both procedures are valid approaches to cholecystectomy.



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LAPAROSCOPIC SLEEVE GASTRECTOMY IN ADULT AND PEDIATRIC OBESE PATIENTS: A COMPARATIVE STUDY Aayed R Alqahtani, FRCSC FACS, Mohamed Elahmedi, MD, <u>Hussam Alamri, MD</u> King Saud University, College of Medicine, Department of Surgery

Introduction: Bariatric surgery is currently the most effective approach for long-term weight loss in morbidly obese adults. Laparoscopic sleeve gastrectomy (LSG) is a recent bariatric procedure that has gained widespread popularity due to its association with significant weight loss, resolution of comorbidities, and a low complication rate. However, pediatric bariatric surgery is controversial, and the type(s) of bariatric surgery that are suitable for children and adolescents is under debate. There are no existing studies comparing bariatric surgery outcomes in adult and pediatric patients.

We performed a retrospective review of the safety, efficacy, and complications of LSG in adult and pediatric morbidly obese patients.

Methods and Procedures: A retrospective review of all patients who underwent LSG between March 2008 and February 2011 was performed. The 208 patients included 108 pediatric patients aged 21 years or younger, and 100 adult patients older than 21 years. Patient demographics, weight, height, operative time, hospital stay, weight loss, and post-operative complications were evaluated.

Results: Pediatric patients had a mean age of 13.9 ± 4.3 years and a median baseline BMI of 47.4 kg/m2 (range 31.8-96.9), while adults had a mean age of 34.0 ± 9.3 years, and a median baseline BMI of 46.1 kg/m2 (range 35.3-82.2). At 3, 6, 12, and 24 months postoperatively, median percentages of excess weight loss and excess BMI loss are shown in Table 1.

During the 24-month follow-up period, pediatric patients attended 213 of 301 (70.7%) follow-up visits, whereas adults attended 144 of 258 (55.8%) follow-up visits.

Postoperative complications occurred in 6 (5.6%) pediatric patients. One (0.9%) was readmitted for a suspected leak and managed conservatively, 2 had wound infections (1.9%), and 3 had heartburn (2.8%). There were no confirmed leaks or mortalities.

Postoperative complications occurred in 7 (7.0%) adult patients. One suffered a staple line leak that required reoperation, 1 was readmitted with pulmonary embolism, 2 had prolonged postoperative stay due to pneumonia, 2 had prolonged nausea and vomiting, and 1 had wound infection. There were no mortalities.

Table 1. Weight Loss and Follow-up Compliance in Pediatric and Adult Patients Following Laparoscopic Sleeve Gastrectomy.

,	Age Group	Baseline	3 Months	6 Months	12 Months	24 Months
Median BMI	Pediatric (n) Adult (n)	47.4 (108) 46.1(100)	39.6(88) 40.8(59)		31.2(42) 30.1(42)	30.8(8) 28.9(9)
Median Percentage Excess BMI Loss	Pediatric 1 Adult 2		31.4% 35.5%	52.8% 55.4%	68.9% 75.7%	81.6% 81.9%
Median Percentage Excess Weight Loss	Pediatric 1 Adult 2		28.9% 35.5%	48.1% 55.4%	61.3% 75.7%	62.3% 81.9%
Compliance	Pediatric Adult		81.5% 58.9%	75.2% 51.6%	52.6% 79.5%	57.1% 72.4%

¹ From BMI for age-and-gender corresponding to 85th percentile

Conclusions: Laparoscopic sleeve gastrectomy in the pediatric age group is as safe and effective as it is in adults. Pediatric patients had fewer "serious" complications and were more compliant with follow-up than adults. Nevertheless, long-term results are required to further clarify the safety and efficacy of LSG in pediatric patients.

 $^{^{2}}$ From BMI or the weight corresponding to BMI of 25 kg/m2

Notes

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IMPACT OF AN ENHANCED RECOVERY PROGRAM ON SHORT-TERM OUTCOMES AFTER SCHEDULED LAPAROSCOPIC COLON RESECTION

Nicoleta O Kolozsvari, MD, Giovanni Capretti, MD, Pepa Kaneva, MSc, Amy Neville, MD, Franco Carli, MD, A. Sender Liberman, MD, Patrick Charlebois, MD, Barry Stein, MD, Melina C Vassiliou, MD, Gerald M Fried, MD, Liane S Feldman, MD Steinberg-Bernstein Centre for Minimally Invasive Surgery and Innovation, McGill University, Montreal, Qc, Canada

Introduction: Enhanced recovery programs (ERP) in colon surgery can reduce complications and length of stay. A laparoscopic approach also improves postoperative short-term outcomes for elective colectomy. Our study investigated whether ERP further improved the short-term outcomes of scheduled laparoscopic colon resection.

Methods: We performed a medical record audit of all patients undergoing scheduled laparoscopic colon resection between January 2003 and August 2010 on a clinical teaching unit in a University-based institution. An ERP including accelerated introduction of oral nutrition, mobilization, pain control, and catheter management was introduced in 2005 with patients enrolled in the program at the surgeon's discretion. The target length of stay (LOS) was 3 days. Demographic data, intra and postoperative details and 30-day ER visit and readmission rate were collected. We compared LOS and short-term outcomes for patients on the program with those receiving traditional postoperative care using Chi-square and regression models. Data are presented as median [25th, 75th percentile]. Statistical significance was defined as p<0.05.

Results: 136 (46%) of 297 eligible patients were enrolled in the enhanced ERP. At baseline, the two groups were similar in terms of age, gender distribution, BMI, ASA and diagnosis, but patients in the program were more likely to have their operation by a colorectal surgeon (96% vs. 88%, p=0.01). We excluded year from our regression models as there was high co-linearity between ERP enrolment and the year of the surgical procedure. Patients in the ERP ate solids earlier (POD 1[1,2] vs. 3[2,3.5], p<0.001) and had earlier removal of their urinary catheter (POD1[1,1] vs. 2[1,2], p<0.001). LOS was 4[3,6] days for both groups (p=0.004), with more patients in the ERP discharged by POD 3 (47 % vs. 26%, p=0.0006). After adjusting for other variables, ERP enrolment remained an independent predictor of LOS (p=0.007), along with age (p=0.003) and in-hospital complications (p<0.001). Complication rates were similar between the two groups (37% vs. 39%, p=0.18). Specifically, there was no increase in postoperative nausea and vomiting (18% vs. 17%, p=0.72) or the need for nasogastric tube (10% vs. 7%, p=0.28) despite rapid diet advancement in the ERP. There was also no difference in urinary retention (4% vs. 2%, p=0.34) notwithstanding earlier catheter removal. Patientsin the ERP had significantly fewer ER visits (2.9 vs. 9.3%, p=0.02) but there were no differences in readmission rates (8% vs. 7%, p=0.73). Among patients without complications, LOS was shorter if they were enrolled in the ERP (3[3,4] vs. 4[3,4] days, p<0.001).

Conclusion: In patients undergoing scheduled laparoscopic colonic resection in a university-based clinical teaching unit, an enhanced recovery program can further reduce length of stay and postoperative ER visits without increasing readmission rates.

S133

PRE-OPERATIVE ENDOSCOPIC TREATMENT DOES NOT ADVERSELY IMPACT LAPAROSCOPIC MYOTOMY OUTCOMES <u>S El Djouzi, MD</u>, V B Tsirline, MD, P D Colavida, MD, A Brokamp, A Walters, MS, D Stefanidis, MD PhD, T B Heniford, MD Carolinas Medical Center

BACKGROUND: Achalasia patients often present for laparoscopic Heller myotomy (LHM) after multiple endoscopic dilations and/or botox injections. Previously, surgeons documented concern that LHM may be substantially more difficult following these interventions due to chronic periesophageal inflammation. We compared outcomes of LHM based on preoperative endoscopic procedures in order to determine risk of operative therapy.

METHOD: A review of 166 consecutive LHM cases from December 1998 to September 2011 at a tertiary care hospital was performed. Included

were patients' history of endoscopic intervention(s) ,OR time, estimated blood loss (EBL), intra and post-op complications, and LOS as surrogate markers.

RESULTS: Average age was 45.7 ± 1.3 and 51% were male. Mean BMI was 26.0 ± 0.82 . In toto, 3.8% had prior myotomies. Of 166 patients, 27% had preoperative botox injection, 40% had at least one dilatation and 10.8% had both. The demographics and comorbidities were similar between groups. Median surgery duration was 180 min, EBL was 39 cc, and LOS was 2 days. There was no statistical differences between patients who had preoperative botox injection and those who did not in terms of surgery duration (185.37 min ±9.93 vs 186.87 min ±4.68 , p = 0.220), EBL (50.0 ml ±10.36 vs 95.21 ml ±20.48 , p = 0.103) or LOS (2.34 days ±0.276 vs 2.45min ±0.326 , p = 0.160). Likewise, there were no significant differences between patients who had and had not had preoperative dilation. Incidence of pre-operative and post-operative complications between the endoscopic intervention groups and those without were 6.7% vs. 3.4%, and not significantly different (p=0.347). No patient suffered an esophageal perforation.

CONCLUSIONS: The peri-operative course of the Heller myotomy patients is not influenced by pre-operative endoscopic treatments with therapeutic intent. The length of operation and incidence of complications were not altered. Pre-operative endoscopic Botox and/or dilation, even several of them in a single patient, does not predispose a patient to greater risk of perforation.

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LAPAROSCOPIC VERSUS OPEN HERNIA REPAIR, RESULTS FROM THE NATIONWIDE INPATIENT SAMPLE P.D. Colavita, MD, A.L. Walters, MS, V.B.
Tsirline, MD, A.E. Lincourt, PhD, B.T. Heniford, MD Carolinas Medical Center, Charlotte, NC

Introduction: Laparoscopic ventral hernia repair has become increasingly popular since its inception. The purpose of this study is to compare laparoscopic and open ventral hernia repair with mesh in the United States, using the Nationwide Inpatient Sample (NIS).

Methods: The NIS, a representative sample of approximately 20% of all inpatient encounters in the USA, was queried for all ventral hernia repairs with graft or prosthesis in 2009 using ICD-9-CM codes. Patients with other anterior abdominal wall hernias, such as umbilical or peristomal, or who had a resection of any portion of the digestive tract were excluded. The remaining patients were stratified into laparoscopic and open repairs. Socio-demographic data, comorbidities, complications (splenectomy, GI tract laceration, transfusion, total parenteral nutrition use, and infections) and outcomes (in-hospital death, length of stay (LOS), and total charges) were compared between groups. The Charlson comorbidity index, a commonly used and well validated index designed to calculate mortality risk of 22 weighted comorbidities, was employed to compare comorbidities of the patients in both groups based on ICD-9-CM coding.

Results: A total of 11804 cases were documented in the NIS sample after inclusion and exclusion criteria were met. Laparoscopic repairs were performed 27.4% of the time. There were no statistically significant differences in race, gender, or mean income by zip-code. Mean age (58.76 years in open group vs. 58.05 years, p=0.0087) and mean Charlson score (3.54 vs 3.48, p<0.0001) differed significantly between groups. Open surgery was more often associated with emergent admissions (21.7% vs 15.1%, p<0.0001). There were significant differences comparing complications and outcomes between open and laparoscopic groups: complication rate (7.54% vs. 3.77%, p<0.0001), average LOS (5.1 days vs. 3.5days, p<0.0001), total charge (\$45700 vs \$36400, p<0.0001), and mortality rate (0.88% vs 0.36%, p=0.0002). After controlling for confounding variables with multivariate regression, LOS and mortality rate did not significantly differ between groups. The difference in total charges remained significant (p=0.0032), and complication rate remained significantly more likely after open surgery (OR 1.54, p<0.0001).

Conclusion: Laparoscopic ventral hernia repair with mesh results in fewer complications and lower hospital charges compared to open

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repair. Patient comorbidities and selection bias may limit the number of patients who receive laparoscopic ventral hernia repair. Regionalization studies may better illuminate the low rates of laparoscopic surgery.

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GALLBLADDER DAMAGE CONTROL: COMPROMISED PROCEDURE FOR COMPROMISED PATIENTS <u>Justin Lee, MD</u>, Reza Kermani, MD, Haisar Dao, MD, Kevin F O'donnell, MD St. Elizabeth Medical Center, Tufts University School of Medicine

Introduction: As experience of open cholecystectomy has decreased significantly in the past two decades both in surgical practice and training, open cholecystectomy is generally performed for severe inflammation necessitating conversion to an open procedure or suspected malignancy. Literature describes partial cholecystectomy (PC), laparoscopic partial cholecystectomy (LPC), and trocar cholecystostomy (TC) in an effort to avoid common bile duct injury. PC however is not without complications with recent case reports of recurrent biliary stone and "stump" cholecystitis. The objectives of this study were to 1) analyze recent nine year trends in utilization of PC, LPC, and TC, 2) characterize patient and hospital variables, and 3) identify associated variables for common bile duct injury.

Methods: Retrospective cohort analysis of the Nationwide Inpatient Sample (NIS) files from 2000 to 2008 was performed. For the purpose of the study, gallbladder damage control was defined as PC, LPC, and TC. Data analysis included patient demographics, diagnoses, procedures, complications, hospital characteristics, length of stay, total hospital charges, and inpatient mortality.

Results: A national estimate of 10,872 gallbladder damage control cases were identified, characterized by mean age 61.12 (0.18, SEM) years old, 50.6% female, 67.9% white, and 14.5% Hispanic. Most common diagnoses were, calculus gallbladder cholecystitis (49.4%), acalculus cholecystitis (20.9%), and pancreatitis (10.7%). Procedures performed included PC (47.8%), LPC (27.2%), TC (25.3%), and intraoperative cholangiogram (IOC) (19.7%). 13.6% postoperative complications were identified, including pulmonary complications (4.3%), hemorrhage/ hematoma/seroma (3.4%), and accidental puncture or laceration during procedure (3.3%). Common bile duct injury occurred in 3.3% overall. Hospital characteristics included non-teaching (82.1%), urban hospitals (67.8%), and regional variations of 42.1% from the South and 45.2% from the West. Inpatient outcomes included: mean length of stay of 11.4 days (0.16, SEM), mean total hospital charge of \$71,296.69 (1106.03, SEM), 7.4% mortality, and 16.8% discharges to skilled nursing facility. Multivariate logistic regression analysis identified assoicated variables for common bile duct injury: pancreatitis (1.38 OR, 1.03-1.86 CI, P=0.031), open PC (2.98 OR, 2.18-4.07 CI, P<0.001), and teaching hospitals (1.48 OR, 1.13-1.94 CI, P=0.004). IOC was a commonly associated procedure in the setting of common bile duct injury (2.03 OR, 1.59-2.59 CI, *P*<0.001).

Conclusion: Various circumstances may require gallbladder damage control with PC, LPC, and TC. Postoperative complications and common bile duct injury remain significantly high despite limited resection. We found pancreatitis, open PC, use of IOC, and teaching status of hospitals to be associated with common bile duct injury. High morbidity and mortality of gallbladder damage control may reflect both compromised nature of the procedures and multiple comorbidities.

S136

REVISIONAL SURGERY AFTER FAILED LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: A SYSTEMATIC REVIEW Ahmad Elnahas, MD, Kerry Graybiel, MD, Forough Farrokhyar, MPhil PhD, Scott Gmora, MD FRCSC, Mehran Anvari, MBBS PhD FRCSC FACS, Dennis Hong, MD MSc FRCSC FACS McMaster University, St. Joseph's Healthcare Hamilton

Background: Laparoscopic adjustable gastric banding (LAGB) has emerged as one of the most commonly performed bariatric procedures worldwide. Unfortunately, revisional surgery is required in 20-30% of cases. Several revisional strategies have been proposed, but there is no consensus regarding the best surgical option. The aim of this systematic review is to determine which revisional surgery (laparoscopic sleeve

gastrectomy, laparoscopic roux-en-y gastric bypass, or laparoscopic biliopancreatic diversion with duodenal switch) is best suited to enhance weight loss following failed LAGB due to complications or inadequate weight loss.

Methods: EMBASE, MEDLINE, PsycINFO & Cochrane Clinical Trials were searched using the most comprehensive timeline for each database. A total of 24 relevant articles were identified. Two investigators independently extracted data and differences were resolved by consensus. The weighted means were calculated for weight loss measurements.

Results: A total of 106, 514, and 71 patients underwent conversion from LAGB to laparoscopic sleeve gastrectomy (LSG), laparoscopic roux-en-y gastric bypass (LRYGB) and laparoscopic biliopancreatic diversion and duodenal switch (BPDDS), respectively. Prior to revisional surgery, the weighted mean BMI was 38.8 (6.9) kg/m², 43.3 (8.1) kg/m², and 41.3 (7.2) kg/m² for the LSG, LRYGB, and BPDDS group, respectively. The majority of data was reported at 12-24 months follow up. The mean BMI within this interval was 28.0 (10.5) kg/m², 32.2 (6.4) kg/m², and 33.0 (5.7) kg/m² for the LSG, LRYGB, and BPDDS group, respectively. In addition, the mean excess weight loss (EWL) was 22.0% (2.8), 57.8% (11.7), 47.1% (14.0) for the LSG, LRYGB, and BPDDS group, respectively. The EWL reached 78.4% (35) in the BPPDS group after two years follow up.

Conclusion: Failed LAGB is best managed with conversion to a malabsorptive bariatric procedure. Stable weight loss occurs with salvage LRYGB. Although results for revisional BPPDS appear promising, additional research, with higher methodological quality, is needed.

S137

UTILITY AND ACCURACY OF ENDOBRONCHIAL ULTRASOUND AS A DIAGNOSTIC AND STAGING TOOL FOR THE EVALUATION OF MEDIASTINAL ADENOPATHY Rebecca J Johnson, MD, J E Stephenson, MD FACS, C Schammel, PhD, B L Johnson, MS, K Banks, S Hutcheson, W Wall, W D Bolton, MD Greenville Hospital System University Medical Contact

Objective of Study: Endobronchial ultrasound (EBUS) is a technique for mediastinal evaluation which is less invasive than cervical mediastinoscopy, the traditional gold standard. The purpose of our study is to evaluate the utility and accuracy of EBUS as a diagnostic and staging tool at a regional teaching institution.

Methods: We retrospectively reviewed our institutional thoracic surgery database for patients undergoing EBUS from August 2008 to March 2011. All procedures were performed by a single surgeon, using a linear probe endobronchial ultrasound and onsite immediate pathology interpretation as well as cell block tissue evaluation.

Results: 190 patients underwent EBUS: 90 (47%) patients underwent EBUS for diagnosis only; 73 (38%) for staging only; and 27 (14%) for both diagnosis and staging. Diagnoses obtained by diagnostic EBUS included non-small cell lung cancer- n=27 (23%); other cancer- n=24 (21%); sarcoid/granulomatous- n=8 (7%); benign lymphoid tissue- n=57 (49%); and was nondiagnostic in only 1 case (1%). For staging EBUS, 27 (37%) patients had malignancy found in the lymph node specimen, while 46 (63%) patients had benign lymph node tissue. 103 patients therefore had a benign result at the time of EBUS. Fifty-six (54%) of these patients underwent subsequent mediastinal lymph node dissection or mediastinoscopy for tissue confirmation with the remainder undergoing follow up surveillance chest CT scans. Two patients had a false negative EBUS, one patient with a false negative diagnostic EBUS and one with a false-negative staging EBUS. Both false negative studies sampled levels 4L, 4R, and 7, with each having only one station that was found to be positive for malignancy. The overall false negative rate was 2% for all benign results, and 4% for those benign results confirmed with lymph node dissection or mediastinoscopy. The sensitivity and specificity of diagnostic EBUS was 97% and 100%. The sensitivity and specificity for staging EBUS was 98% and 100%. In those patients undergoing a staging EBUS, a mean of 2.6 nodal stations were sampled, with 71% (n=73) of these patients having three lymph node stations sampled and 29% (n=30) had two lymph node stations sampled. The mass itself was

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sampled in eight patients.

Conclusion: We found endobronchial ultrasound to be a highly accurate and minimally invasive manner in which to both diagnose mediastinal masses and stage the mediastinum for patients with non small cell lung cancer.

S138

DOES A DEDICATED SURGICAL TEAM REALLY MAKE THE BARIATRIC SURGICAL SUITE MORE EFFICIENT? <u>Matthew Fourman, MD</u>, Leena Khaitan, MD Case Western Reserve University Hospitals

Background

Over the last several years there has been an emphasis on team training in the operating room to improve efficiency and reduce adverse outcomes. A consistent surgical team has been considered particularly important in the care of the patient undergoing bariatric surgery due to the complexity of the surgery and patient comorbidities. Most studies evaluate effect on adverse outcomes. The purpose of this study was to determine whether a dedicated bariatric operative team lead to a more time efficient and cost efficient operating room

Methods: Using the Extuitive cost tracking software, all consecutive bariatric surgical procedures performed by a single surgeon, in the same way, at two separate institutions were reviewed from January 2010 through August 2011. Site A is Tertiary Care, 947 bed teaching hospital with no dedicated operative team and Site B is a rural 150 bed hospital with a dedicated bariatric surgical team. A dedicated team in this study is defined as a consistent nursing and anesthesia staff. All bariatric cases including Laparoscopic Adjustable Gastric Band (LAGB), Laparoscopic Sleeve Gastrectomy (LSG), and Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) were reviewed. Revisions and open cases were excluded. All cases were performed with a consistent fellow. Data was collected on patient demographics, operative time, "in room" time and cost of operative supplies. Operative time (OT) is defined as time from incision to placement of dressing. "In room time" (IRT) is total time in the operating room. The difference (DIFF) between the two is set up time before and after the actual procedure. Data was compiled in a database and analyzed using Microsoft Excel software. (p<0.05 considered significant) Results: A total of 111 cases (59 at Site A, 52 at Site B) were analyzed. At Site A, there were 10 LAGB, 2 LSG, and 47 LRYGB. At Site B, there were 17 LAGB, 5 LSG, and 30 LRYGB. There was no difference in patient demographics or BMI between locations. IRT trended toward being less at Site B (198.4 vs. 182.8 minutes, p=0.06). When comparing IRT by procedure, minimal differences were noted. OT did not differ between sites. When compared by procedure, the set up time (DIFF) was noted to be significantly less at Site B (48 min vs. 40.6 min, p=0.04) for LAGB and for the cases overall (55.6 min vs. 47.1 min, p=0.01). When costs were averaged across all cases, operating room costs were significantly less at Site B (\$4,948.91 vs. \$6,400.25, p< 0.05). When case types were compared, LRYGB was significantly less expensive at site B (\$5,872.34 vs.

Conclusions: Based upon this data, it appears that bariatric surgical cases can be done in a more time efficient and cost efficient manner with a dedicated operative team.

S139

LAPAROSCOPIC PREPERITONEAL INCISIONAL HERNIA REPAIR
FOLLOWING RENAL TRANSPLANTATION Lucian Panait, MD, Robert L
Bell, MD, Kurt E Roberts, MD, Andrew J Duffy, MD Yale School of Medicine

Introduction: The incidence of hernias at the transplantation incision following renal transplantation is reported to be 4%. These incisions are usually located in the right lower quadrant (RLQ) and create hernias close to the pelvic bones. Incisional hernia repairs in this location are hindered by limited residual abdominal wall tissue in the region and the proximity of the renal graft. Recurrence following standard operative techniques is up to 22% at 2 years. We present early results with a new technique for laparoscopic preperitoneal incisional hernia repair (LPIHR) in renal transplant recipients which addresses the difficulties in treating this condition.

Methods: Three patients underwent RLQ LPIHR at our institution. Average age was 61.3 years and average BMI 24.6 kg/m2. One patient had had two previous attempts at open repair. One other patient had had a prior intraperitoneal laparoscopic repair and had developed a recurrence inferior and lateral to the intraperitoneal mesh. All were right lower quadrant transplant incisions. Laparoscopic repair was undertaken. The time from the kidney transplantation to the LPIHR averaged 19 months.

Results: All procedures were completed laparoscopically. After adequate enterolysis and exposure of the fascial defect, a peritoneal flap is created at the arcuate line, and carried to the superior pole of the renal graft. The bladder is mobilized inferiorly in order to expose the pubic tubercle and Cooper's ligaments on both sides. The region of the ureteral implant is carefully avoided. Dissection is continued anterior and laterally to the kidney graft, taking care not to violate the renal capsule. This enables medial mobilization of the graft and allows positioning of a dual-sided polyester mesh, appropriately sized to the defect, anterior and lateral to the kidney and bladder. Helical titanium tacks are used to anchor the mesh to the Cooper's ligaments. Transfascial sutures are utilized through healthy tissues as able. Length of hospital stay in our case series averaged 3 days (1-5 days). Median follow-up was 50.6 days. All patients developed postoperative seromas, but these decreased in size after the intial postoperative period. No early recurrences have developed. Graft function was not compromised in any of the patient.

Conclusions: Laparoscopic preperitoneal incisional hernia repair following renal transplantation is a safe and effective repair, associated with minimal complications and good short term results. The procedure holds promise to become standard of care in this category of patients.

S140

INCISIONAL HERNIA AFTER SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY Patricia L Eichhorn, MD, T. Paul Singh, MD, Brian Binetti, MD Department of Surgery, Albany Medical Center

Introduction: Incisional hernia (IH) after laparoscopic surgery has always been a significant issue. As laparoscopic surgery has migrated to single incision/port (SIS), these concerns have become more prominent. Limited data regarding the outcomes from SIS have limited its adoption as a primary option for selected procedures. Outcomes for IH in the SIS population at 12-24 months are not well known. These results may influence the adoption of this procedure.

Method: 27 consecutive patients underwent SIS cholecystectomy at a tertiary care hospital from 6/2009 to 5/2010 by a single surgeon. A standard SIS procedure with 4 instruments in a 15 mm incision was utilized for the operation. All patients were followed postoperatively for mean of 7.7 months (range 0.5-24 months) in the outpatient clinic for development of IH. One patient was lost to follow up. 4/27 pts (14.8%) developed IH post procedure. IH occurred at 3 (2), 6, and 7 months. All subsequent IHs were repaired by a standard laparoscopic approachexcept for one patient who deferred the operation. None of these patients had recurrence as of this date. There was no correlation between age, BMI, or previous operation to IH in this group. One pt in this group did have ESRD on peritoneal dialysis at the time of SIS. Adjusted rate of IH in the remaining group was 3/26 (11.1%).

Conclusion: The cosmetic benefit of SIS must be balanced against the potential outcomes of complications related to the procedure. The rates of IH in this population were higher than what may be expected for comparable laparoscopic cholecystectomy. In SIS procedures that require larger abdominal access for specimen removal or procedural access, SIS IH may match the known hernia rates. Further study regarding SIS port site placement may result in improved outcomes. Long term studies regarding SIS and IH are needed to determine the true incidence of IH.



RETROGRADE INTUSSUSCEPTION AFTER ROUX-EN-Y GASTRIC BYPASS Saber Ghiassi, MD MPH, <u>Daniel Moon, MD</u>, Keith Boone, MD

FACS, Kelvin Higa, MD FACS University of California, San Francisco, Fresno Retrograde or antiperistaltic intussusception is a very rare complication of Roux-en-Y gastric bypass. It involves intussusception of the distal bowel into the proximal bowel almost exclusively at or near the

bowel into the proximal bowel almost exclusively at or near the jejunojejunostomy. This video shows the laparoscopic resection of retrograde intussusception of the common channel into the jejunojejunostomy, and the recreation of the Roux-en-Y anatomy 8 years after gastric Bypass.

V002

LAPAROSCOPIC MANAGEMENT OF GI BLEED FROM PENETRATING ULCER AFTER RYGB Jun Levine, MD, David Lee, MD, Ronald Ross, MDBS, Koji Park, MD, Julio Teixeira, MD FACS St Luke's Roosevelt Hospital Center, NY

33 y/o woman s/p RYGB was found to have G-G fistula causing an ulcer which eroded anteriorly to the liver, posteriorly to pancreas and into the splenic artery causing massive UGI bleed.

V003

GASTRECTOMY AND ROUX-EN-Y ESOPHAGOJEJUNOSTOMY FOR GASTRIC NECROSIS AFTER GASTRIC BAND SLIPPAGE Jason

<u>F Richardson, MD</u>, Ninh T Nguyen, MD University of California Irvine Medical Center

A video demonstration of a gastrectomy and Roux-en-Y esophagojejunostomy performed in a patient who developed gastric necrosis after gastric band slippage. Radiologic review, endoscopic evaluation, gastric band removal, gastric resection, and reconstruction are featured in this video.

V004

LAPAROSCOPIC REPAIR OF HIATAL HERNIA WITH DOR FUNDOPLICATION AFTER SLEEVE GASTRECTOMY IN A PATIENT WITH INTRACTABLE GERD AND RETAINED GASTRIC BODY Andre Teixeira,

MD MBA MPH, Carolina Ampudia, MD, Samuel Szomstein, MD FACS FASMBS, Raul Rosenthal, MD FACS FASMBS Cleveland Clinic Florida

Introduction: Sleeve gastrectomy is one of the newest procedures and one of the fastest growing surgeries in the bariatric armamentarium. Technical details of the sleeve are important and failure to adhere to strict technical guidelines may result in complications.

Materials and Methods: A 26-year-old female status post vertical sleeve gastrectomy performed in a different institution 2 years ago presented to our office with severe gastroesophageal reflux disease (GERD) refractory to medical therapy. UGI revealed severe reflux and a hiatal hernia.

The patient underwent a laparoscopic reoperation. Using sharp dissection, the sleeve was dissected off the liver. The liver is cranially retracted. Adhesions to the anterior wall of the stomach were sharply taken down. Right and left crus of the diaphragm were dissected and a somewhat large fundic remnant was identified, isolated and reduced into the abdominal cavity. The diaphragmatic crus was closed posteriorly with a running double layer of quills 2-0 Prolene sutures. Anteriorly another 2-0 silk suture was used to reinforce the hiatus. An Ewald tube was passed and the retained fundus was then sutured with 2 interrupted 2-0 silk sutures to the lesser side of the esophagus in an attempt to create a Dor type fundoplication.

Result: The recovery of the patient was uneventful, with a normal UGI on POD1 without leak or obstruction. The patient presented to the office 2 weeks postoperative and she was completely off the PPI and no symptoms of reflux were present.

Conclusion: Sleeve gastrectomy is accepted as an effective surgical option for treatment for morbid obesity. Strict technical guidelines and an excellent preoperative workup need to be followed in order to

prevent complications from the operation. Sleeve gastrectomy creates a high-pressure system that can make GERD unbearable for patients with hiatal hernia and incompetent lower esophageal sphincters. The use of an anterior fundoplication type Dor can be a feasible alternative for patients with GERD.

V005

THE USE OF A T-TUBE TO MANAGE LEAK AFTER SLEEVE

GASTRECTOMY Matthew Y Lin, MD, Ankit Sarin, MD, Stanley J Rogers, MD, Andrew M Posselt, MD, Jonathan T Carter, MD University of California, San Francisco

Laparoscopic sleeve gastrectomy is gaining momentum as an alternative option to Roux-en-y gastric bypass in bariatric surgery. Post-operative leaks, albeit rare (~4%), can be quite devastating. While it is widely accepted that early diagnosis and control of a leak offers the best chance of resolution and survival, the modalities to achieve this is not well-defined. We present a high definition video in which a novel technique involving a latex t-tube is used to control a post-sleeve gastrectomy leak.

V006

ENDOSCOPIC TREATMENT OF GASTRIC LEAK FOLLOWING SLEEVE GASTRECTOMY USING AN ENDOSCOPIC CLIPPING SYSTEM Alisa M

Coker, MD, Marcos Michelotti, MD, Takayuki Dotai, MD, Luciano Antozzi, MD, Geylor Acosta, MD, Anibal Rondan, MD, Nikolai Bildzukewicz, MD, Mark A Talamini, MD, Bryan Sandler, MD, Garth R Jacobsen, MD, Thomas Savides, MD, Santiago Horgan, MD Center for the Future of Surgery, Department of Surgery, University of California San Diego

We demonstate the endoscopic treatment of three cases of a gastric leak after sleeve gastrectomy, demonstrating the use of a novel endoscopic tool. This latest innovation in endoscopy allows us to minimize the impact of a potentially cautastrophic complication.

V007

LAPAROSCOPIC CONVERSION OF GASTRIC BAND TO LAPAROSCOPIC GASTRIC BYPASS DUE TO FAILURE OF WEIGHT LOSS AND WORSENING GASTROESOPHAGEAL REFLUX Guillermo Higa, MD, Abraham Abdemur, MD, Samuel Szomstein, MD, Raul Rosenthal, MD Cleveland Clinic Florida

Introduction: One of the most difficult and challenging problems in bariatric surgery is working with a patient who has failed to achieve control of comorbidities or weight through a primary bariatric procedure. There are a number of patients who experience complications or failure of weight loss after gastric band procedure.

Methods and Procedures: We present a case of a 48-year-old female who underwent a conversion of gastric band to laparoscopic Rouxen-Y gastric bypass due to failure of weight loss and worsening gastroesophageal reflux secondary to a hiatal hernia. Once the port is removed, we proceed to dissect the band capsule using sharp dissection. The hiatal crus is closed with a figure-of-eight of QuillTM suture. Using an Ewald tube as guidance, the stomach is vertically transected, creating a gastric pouch which is approximately 30 cc in diameter. The ligament of Treitz is identified and 50 cm from it, and the small bowel is transected. The distal limb of the small bowel is brought to the upper abdomen in an antecolic- antegastric fashion. A side-to-side gastrojejunostomy between the pouch and alimentary limb is performed. The posterior wall is created with a linear stapler and the anterior wall is closed with a double layer of running 2-0 Vicryl sutures. The anastomosis is checked for leaks with air and methylene blue. 100 cm from the gastrojejunostomy, a side-toside jejunojejunostomy between the biliopancreatic and alimentary limbs is created with two applications of a linear stapler before the jejunojejunostomy is closed.

CONCLUSIONS: Laparoscopic conversion from LAP-BAND to RYGBP is safe and can be an alternative for patients who failed weight loss after undergoing a LAP-BAND procedure. Revisional surgery represents a technical challenge and should be performed only by surgeons who have completed the learning curve for laparoscopic RYGBP.

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V008

LAPAROSCOPIC REVISION OF ROUX-EN-Y GASTRIC BYPASS: RESECTION OF GASTROJEJUNAL ANASTOMOSIS, TRIMMING GASTRIC POUCH, AND A PROXIMAL REMNANT GASTRECTOMY Andre Teixeira, MD, Abraham Fridman, MD, Rena Moon, MD, Samuel Szomstein, MD FACS FASMBS, Raul Rosenthal, MD FACS FASMBS Cleveland Clinic Florida

Introduction: Bariatric surgery is becoming more popular and widespread throughout the world, and long-term complications are being diagnosed more frequently. The surgical management that is often necessary should be handled in highly specialized and experienced centers.

Materials and Methods: A 48-year-old female presented to our clinic with vague epigastric abdominal pain associated with food and weight regain status post laparoscopic Roux-en -Y gastric bypass in 2002. Preoperative UGI study showed an enlarged gastric pouch and an EGD showed a questionable gastro-gastric fistula.

She underwent a laparoscopic revision of her gastric bypass. The intraoperative findings included a gastro-gastric fistula, posterior marginal ulcer penetrating into the pancreas, and an enlarged gastric pouch. With the aid of the green cartridge linear stapler, the stomach was transected proximally at the level of the remnant approximately 5 cm distal to the gastric fundus. Over an Ewald tube, the pouch was also trimmed and a new pouch, which is approximately 30 cc in diameter, was constructed. Gastrojejunal anastomosis was resected, and a new anastomosis was constructed using a white linear stapler and two-layer suture closure.

Result: The recovery of the patient was uneventful, with a normal UGI on POD1 without leak or obstruction.

Conclusion: Despite an extensive preoperative workup in revisional bariatric surgery, the operative findings can often be different and unexpected. To manage many of these findings, the surgeon must be both technically skilled and knowledgeable with this disease process. Therefore, reoperative bariatric surgery is safest when performed in a high volume center, where the surgeons have the technical skills, knowledge, and experience of treating these long-term complications.

V009

COMPLETE ENDOSCOPIC/TRANSGASTRIC RETRIEVAL OF ERODED GASTRIC BAND: A NOVEL APPROACH TO A COMMON COMPLICATION

<u>Kevin M El-hayek, MD</u>, Poochong Timratana, MD, Stacy Brethauer, MD, Bipan Chand, MD FACS Cleveland Clinic

Complications of laparoscopic adjustable gastric banding (LAGB) include band slippage, material infection, and band erosion. Band erosion can lead to chronic infection, obstruction, and delayed perforation; therefore, removal is indicated. We present a novel approach to band retrieval following partial erosion involving a complete endoscopic/transgastric technique.

V010

REVISION OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY FOR REACTIVE HYPOGLYCEMIA Saber Ghiassi, MD MPH, <u>Benjamin Shadle, MD</u>, Keith Boone, MD FACS, Kelvin Higa, MD FACS University of California, San Francisco, Fresno

Severe reactive hypoglycemia following gastric bypass is a rare late complication that typically presents 1-5 years after surgery. Hypoglycemia results from an exaggerated insulin response to a glucose load. Etiology may include the rapid transit of food to the small intestine due to lack of the pyloric channel and hypertrophic pancreatic islet cells due to elevated GLP-1. However, the exact cause of the hyperinsulinemia is unknown.

We present the case of a 50 year-old woman who presented with severe reactive hypoglycemia 7 years after laparoscopic Roux-en-Y gastric bypass. Her symptoms improved but continued despite dietary modification and medical therapy with Acarbose. Patient's symptoms

resolved with tube feeds after laparoscopic gastrostomy tube insertion. She then underwent laparoscopic revision of Roux-en-Y gastric bypass to sleeve gastrectomy. She has been asymptomatic with normal blood glucose at follow-up.

V011

REVISION OF ROUX Y GASTRIC BYPASS FOR DISTAL ESOPHAGEAL STENOSIS <u>Daniel Moon, MD</u>, Saber Ghiassi, MD MPH, Keith Boone, MD FACS, Kelvin Higa, MD FACS University of California, San Francisco, Fresno

Thirty-two year-old woman underwent Roux-en-Y gastric bypass for morbid obesity followed by laparoscopic repair of leak at gastric pouch staple line and insertion of self-expanding stent. She eventually developed recurrent distal esophageal stenoses requiring multiple therapeutic endoscopies and stent placement. She underwent revisional surgery at 14 months, including resection of distal esophagus, gastric pouch and proximal roux limb, and reconstruction with Roux-en-Y esophagojejunostomy.

V012

LAPAROSCOPIC BAND AND GASTRIC IMBRICATION (ILAP) <u>Armando</u> <u>Ramirez, MD</u>, Guy Voeller, MD, George Woodman, MD University of Tennessee Health Science Center, Memphis

The Lap Band is an effective weight loss procedure. Coupled with an imbrication of the fundus and body of the stomach, weight loss results may be enhanced. This is accomplished by reducing gastric capacity and promoting early satiety. The imbricated Lap Band can be performed with minimal morbidity and early results have been promising. Our technique is illustrated in this short video.

V013

LAPAROSCOPIC TRANSABDOMINAL HERNIOPLASTY OF A LUMBAR HERNIA OF THE GRYNFELT – LESSHAFT TRIANGLE Juan D Hernandez,

<u>MD</u> Fundacion Santa Fe de Bogota, Universidad de los Andes We present the case of a 51 years old lady with a reproduced right

lumbar hernia. The first intervention was planned for a lumbar lipoma, but a hernia of the Grynfelt- Lesshaft triangle was found and repaired. After two years the mass reappeared accompanied by abdominal pain and an episode of bowel obstruction. CT scan shows the hernia, marked by an arrow, with a large sac containing omentum.

At Laparoscopy it can be seen the omentum retracted over the ascending colon.

The procedure is started by dissecting the hernia sac to free the omentum and pull it out of the cavity.

A large amount of omentum was contained in the hernia causing pressure over the ascending colon, causing the episodes of obstruction. The hernia sac was inspected. Remaining adhesions are cut.

The edges of the defect are dissected to create an extraperitoneal space where the mesh is going to be placed.

On the superior aspect of the orifice, this dissection requires the inferior pole of the right kidney to be mobilized anteriorly. Dissection of the lateral and posterior peritoneum is completed on a wide enough area to place a mesh extending five centimeters from the edge of the aponeurotic defect. Anterior edge is dissected with the same goal.

Once completed, the exposure allows seeing the psoas major muscle medially and adjacent to it, the quadratus lumborum muscle as the medial border of the hernia.

The Mesh is introduced through a 12 mm trocar and extended to cover the defect leaving adequate margins. It is also checked its position in the extraperitoneal space.

Mesh is tucked behind the kidney and extended making sure no wrinkles are left.

Next, mesh is fixed to the muscles to make sure it remains in position. Additional tackers are placed around the defect to secure it. Finally, the peritoneum is closed over the mesh, leaving the kidney in its original position.

V014

SINGLE INCISION LAPAROSCOPIC BOCHDALEK HERNIA REPAIR

Thomas J Swope, MD Mercy Medical Center

Objective: To demonstrate that single incision laparoscopy can be safely utilized to repair a Bochdalek hernia.

Case History: A 56 year old male presented with a symptomatic right sided Bochdalek hernia. He complained of right chest pain especially with exertion. The hernia was identified on CT scan performed during one of his emergency room evaluations. He underwent successful single incision laparoscopic retroperitoneal repair with mesh. He was discharged from the hospital on the first post-operative day and recovered uneventfully with resolution of his symptoms.

Conclusion: This is the first video documenting a single incision laparoscopic approach toward this type of hernia. The video highlights the techniques utilized for single incision laparoscopy to safely repair this type of congenital henria not frequently seen in adults.

V015

LAPAROSCOPIC REPAIR OF DIASTASIS OF RECTI <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, R Parthasarthi, P S Rajan, V Vaithiswaran, Singh Jasmeet, Jai Ganesh GEM Hospital & Research Centre

Introduction: Rectus abdominis diastasis or divarication of recti is a term used to define the split between the two rectus abdominis muscles. It is common in pregnancy and persists in 30-60% of women at different sites along linea alba. Primary diastasis occurs following excessive exercise and secondary occurs during or following pregnancy. For some women it returns to normal on its own but many times it persists. Other etiological factors include abdominal distension, advanced age, familial weakness of abdominal musculofascial tissues. Indications for surgery for diastasis are controversial and mainly includes pain and cosmesis.

Patient and technique: 34 year old female presented with history of lax abdominal wall with discomfort in abdominal after stressful activity for three years. On examination she was diagnosed to have diversification of recti and because of her symptoms and her wish for tight abdomen, we planned laparoscopic repair.

Team setup: Patient was placed supine in Trendelenburg position. Surgeon was at her right shoulder with cameraman near her left shoulder. Monitor was at foot end.

Port Placement: Pneumoperitoneum was achieved using Veress needle at epigastrium. 10mm port was placed at epigastrium for 300 camera and 5mm working ports were created in left and right hypochondrium. Procedure

The defect was plicated using No.1 loop nylon and 15 by 20cm Gortex mesh was placed using four transfacial and multiple intracorporeal sutures.

Outcome: The procedure was completed in 80 minutes without any intraoperative complication. Patient was discharged on 2nd postoperative day.

Conclusion: Our technique of management of diversification of recti laparoscopically is feasible and reproducible with good outcomes.

V016

MINIMALLY-INVASIVE SEPARATION OF COMPONENTS WITHOUT LAPAROSCOPY Jonathan Carter, MD, Ankit Sarin, MD, Matthew Lin, MD, George Allman, MD University of California - San Francisco

Separation of components may improve results of incisional hernia repair. Recently, laparoscopic techniques to perform separation of components have been described that preserve perforator vessels to the skin flap, but are time-consuming and costly. We present an educational technique video of a rapid and easy-to-perform minimally-invasive separation of components without the need for laparoscopy.

V017

INTRACOPOREAL DEFECT CLOSURE WITH A MECHANICAL SUTURING DEVICE FOR LAPAROSCOPIC VENTRAL HERNIA REPAIR WITH MESH

<u>Dustin Lee, DO</u>, Henry Lujan, MD FACS FASCRS, Victor Maciel, MD Miami International Surgical Services

The video depics one of 17 cases performing laparoscopic ventral hernia repair with closure of the hernial defect using the Endostitch device. The knots are tied extracoporeal and the mesh is secured to the fascia using a Protacker. Of the 17 cases we had no recurrences.

V018

LAPAROSCOPIC REPAIR OF A LARGE PERICARDIAL HERNIA Chan W Park, MD, Aurora D Pryor, MD Duke University

Introduction: Pericardial hernias are rare but known iatrogenic complications following pericardial windows performed for various indications. To date, only a handful of case reports are available in the literature, and surgical experience is also extremely limited. We present a video depicting the technique for the laparoscopic repair of an 8cm by 5cm pericardial hernia defect.

Method: A standard 4-port laparoscopic approach for the repair of a diaphragmatic hernia was undertaken in a 49-year old female with worsening dysphagia, epigastric discomfort, and a previous surgical history significant for pericardial window performed for an acute pericardial effusion several years prior. Greater omentum, left lobe of liver, and portions of stomach, small, and large intestines were identified within the pericardium and carefully reduced back into the abdomen. Minimal bipolar electrosurgical dissection and sharp adhesiolysis was performed to circumferentially free up the edges of the pericardial defect, and a 19cm by 15cm Gore-tex® permanent mesh was utilized to repair the hernia. The mesh was secured into position with permanent sutures (placed laparoscopically and trans-fascially) and spiral tacks.

Results: Satisfactory coverage of the pericardial defect with generous mesh overlap extending beyond the hernia edges was achieved with a minimally invasive approach. The patient's post-operatively recovery was complicated by bilateral lung consolidation and atelectasis, but she was managed with conservative medical treatment and discharged on post-operative day 4.

Conclusion: Pericardial hernias are rare, and surgical experience in managing this condition is limited. This video presents a minimally invasive surgical approach to repairing a large pericardial hernia.

V019

LAPAROSCOPIC ROUX EN Y HEPATICOJEJUNOSTOMY AFTER BISMUTH IV BILE DUCT INJURE Augusto C Tinoco, PhD, Luciana Elkadre, PhD, Livia Rodrigues, MD, Renam Tinoco, PhD HOSPITAL SÁO JOSE DO AVAI

A young female patient, 35 years old, arrived at the Emergency Room with severe jaundice and a history of 3 months of laparoscopic cholecistectomy in another service and a laparotomy days after. She was submitted to a MRI and diagnosed with a Bismuth IV bile duct injury. This video shows how we treated this high injury performed by laparoscopy with a Roux en Y hepaticojejunostomy in the trifurcation of the hepatic duct

V020

ETAMIS: ENDOSCOPIC VISUALIZATION FOR TRANSANAL MINIMALLY INVASIVE SURGERY Alisa M Coker, MD, Cristina Metildi, MD, Takayuki Dotai, MD, Geylor Acosta, MD, Luciano Antozzi, MD, Marcos Michelotti, MD, Nikolai Bildzukewicz, MD, Juan S Barajas-gamboa, MD, Bryan Sandler, MD, Garth B, Jacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Jacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Jacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Jacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Jacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Jacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia Baramourthy, MD, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia B, Carth B, Lacobson, MD, Mark A, Talamini, MD, Sonia B, Carth B, Lacobson, MD, Mark A, Talamini, MD, Carth B, Lacobson, MD, Car

MD, Garth R Jacobsen, MD, Mark A Talamini, MD, Sonia Ramamoorthy, MD, Santiago Horgan, MD, <u>Elisabeth C Mclemore, MD</u> Center for the Future of Surgery, Department of Surgery, University of California San Diego

We present the novel technique of eTAMIS, use of an endoscope for visualization during transanal minimally invasive surgery. This allows for broader viewing options of masses that are located too high for transanal excision.

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Scientific Session Video Abstracts

V021

SINGLE-INCISION LAPAROSCOPIC RIGHT COLECTOMY WITH D3 DISSECTION FOCUSED UPON COUNTER TRACTION FOR RIGHT SIDED COLON CANCER Masanori Kotake, MD, Noriyuki Inaki, MD, Hiroyuki Bando, MD, Tetsuji Yamada, MD Ishikawa Prefectural Central Hospital

[Introduction] Recently, laparoscopic surgery has been considered the best treatment for colon cancer. With the advent of Natural Orifice Transluminal Endoscopic Surgery (NOTES), presently there is a strong development in laparoscopic surgery to avoid or reduce the number of the abdominal incisions. Single-incision laparoscopic surgery (SILS) has advantages over NOTES in ease of instrument use and operative technique. Thus, single-incision laparoscopic colectomy (SILC) is rapidly spreading in the field of minimally invasive colon and rectal surgery. But most SILC can't form effective counter traction. This report presents the surgical technique, safety and feasibility of performing single-incision laparoscopic right colectomy using the E-Z access (Hakko, Japan) and the curved reusable instruments (Richard·WOLF, Germany) for right sided colon cancer. This procedure can form effective counter traction and instrument collision is less than another method.

[Materials and methods] Between December 2010 and August 2011, SILC was performed for 16 patients. The indication of SILC is only cases the ileocolic vessels (occasionally right colic vessel) are cut. All patients had a cancer of the cecum or ascending colon. Single access to the abdomen was achieved with a 2.5-3.0cm umbilical incision. The Lap protector was attached to the small incision. After the insertion of a 12-mm trocar into the E-Z access, it was attached at the Lap protector. Second and third 5-mm trocars were inserted. 1st assistant retracted the tissue by the curved reusable instruments without trocar, enabling counter traction in cooperation with operator. The roots of the vascular pedicles were isolated and divided from the superior mesenteric artery and vein during D3 lymph node dissection. The mesocolon was dissected using a medial to lateral approach. In all cases, terminal ileum is transected once using the linear stapler in early phase of the operation, which secure a good view of the operative field, clear anatomy, less damage of the organ and smaller scar of the abdomen. After right coloparietal dissection and hepatic flexure mobilization were performed, the specimen was retrieved through the umbilical port. Extracorporeal anastomosis was performed using the linear staplers. Preliminary short-term results were analyzed retrospectively.

[Results] There were 7 men and 9 women with a median age of 67 years. Their median body mass index was 22.6 kg/m2. The SILC procedure was performed with a mean incision length of 2.9 cm and a mean operative time of 161 min. Surgical blood loss was 14ml. The mean number of lymph nodes extracted was 18. There were no intraoperative complications, no need to add a second port, and no need to convert to open surgery. The mean postoperative stay was 11.3 days. There were no different from conventional LAC.

[Conclusion] Our preliminary results show that This procedure are safe and feasible method; nevertheless, larger randomized experiences are needed to demonstrate the benefits of SILC compared with standard laparoscopic resections. We believe that SILC for colon cancer is an effective minimally invasive procedure and a bridge to NOTES for colon resection.

V022

SINGLE INCISION LAPAROSCOPIC ANTERIOR RESECTION FOR RECTAL CANCER Dan Geisler, MD Associate Staff West Penn Allegheny Health System

The recovery benefits to patients undergoing a minimally invasive approach to colorectal disorders has been well established. The oncologic results of a traditional laparoscopic resection for colorectal cancer are at least equivalent to that of an open procedure when performed by a well-trained surgeon. With heightened interest in even less invasive surgery, single incision laparoscopic colorectal surgery is quickly gaining acceptance. The first single incision laparoscopic resection in the United States was performed by Paul Curcillo in 2007. Since that time, we, along with others, have quickly adopted

this technique for both benign and malignant disorders of the colon and rectum. Case series of greater than 100 patients have now been reported showing the feasibility and efficacy of this minimally invasive approach. Here we present a single incision laparoscopic anterior resection for an upper rectal cancer in a 46 year old woman. The pathologic specimen revealed an intact mesorectum with adequate proximal and distal margins. The estimated blood loss was 25 mL and the patient was discharged home on postoperative day 2. With strict adherence to oncologic technique, an appropriate resection can be performed while allowing for an even greater improvement in minimizing the invasiveness of a major abdominal reection.

V023

LAPAROSCOPIC LAVAGE FOR ACUTE PERFORATED DIVERTICULITIS

Javier Nieto, MD, <u>Tara Martinez</u>, <u>DO</u>, Eric M Haas, MD FACS FASCRS Division of Elective General Surgery, Department of Surgery, The University of Texas Medical School at Houston, Houston, TX

The proposed purpose of laparoscopic colonic lavage for the management of acute perforated diverticulitis in a patient presenting with generalized peritonitis is to provide safe and feasible treatment with the avoidance of the high morbidity and mortality rates associated with an emergent open surgical resection. We report a case of a 53-yearold male who presented with diffuse abdominal pain and a recent episode of uncomplicated diverticulitis managed medically with oral antibiotics. An outside CT scan was performed with findings concerning for perforated diverticulitis. Physical examination was significant for generalized peritonitis. We performed a laparoscopic colonic lavage with primary repair of a sigmoid colon perforation with overlay of an epiploic appendage. Future considerations for this approach may include the development of a uniformed set of inclusion criteria, the identification of predictors of failure, and the evaluation of the feasibility of laparoscopic lavage serving as definitive treatment without the requirement for future resection.

V024

LAPAROSCOPIC TOTAL COLECTOMY WITH TRANSVAGINAL REMOVAL OF THE COLON AND ILEORECTAL ANASTOMOSIS Ziad T Awad,

MD FACS, Keyur Chavda University o fFlorida College of Medicine - Jacksonville

40 year old female with lower GI bleeding. Colonoscopy showed 2 lesions (transverse and sigmoid colon), biopsies from both showed adenocarcinoma. CT scan showed large metastatic lesion at segment VIII liver (biopsy positive adenocarcinoma). PET scan showed another lesion at the back of the left lateral segment.

Five 5 mm and one 12 mm trocars were used. The whole colon was mobilized, the vessles were controlled with energy source. The terminal ileum and rectosigmoid junction were transected with laparoscopic linear stapler. Posterior colpotomy was made and wound protector was placed transvaginally. The whole colon was removed transvaginally. The anvil was placed transvaginally and the colpotomy was closed with few interrupted sutures of 0 vicryl. The ileorectal anastomosis was done intracorporeally.

Hospital stay 2 days. At 2 weeks postop. she was started on chemotherapy.

The transvaginal removal route may be used in selected cases of colon cancer femle patients.

V025

THE POOR MAN'S TEM Roel Hompes, MD, Frederic Ris, MD, Christopher Cunningham, FRCS, Neil Mortensen, FRCS, Ronan Cahill, FRCS 1. department of colorectal surgery, John radcliffe hospitals, Oxford 2. Department of visceral surgery, Geneva University Hospitals, Geneva, Switzerland 3. Department of colorectal surgery, Beaumont Hospital, Dublin, Ireland

<u>Objective</u>: Single port laparoscopic tools and principles are transferable to transanal work. Initial experiences and small series have recently been

reported with the use of commercially available singe port system. In an effort to improve on the ergonomic constraints as well as to reduce the costs associated with these commercially available ports, we have further evolved our personal experience with the glove port towards an access modality the equivalent of Transanal Endoscopic Microsurgery (TEM) for the intraluminal management of rectal disease. We here describe this new and cost-effective technique for transanal work in a short video. Materials and Methods: The glove TEM port is constructed on table by using a circular anal dilator (CAD), wound retractor-protector (ALEXIS, Applied Medical) and standard sterile surgical glove. The wound retractor-protector is inserted through the CAD and anchors itself at the anorectal junction. Sealing the outer ring of the wound retractor with the cuff of the surgical glove creates a workspace and airtight seal. Through the fingers of the glove, standard laparoscopic trocar sleeves are inserted (along with a gas sufflation channel) through which a conventional 30-degree videoscope along with straight rigid laparoscopic instruments are inserted. Excellent views can be obtained with the regular laparoscopic optics after the creation of a stable pneumorectum of 10-15mmHg. The same principles apply for the dissection and resection as with a conventional TEM. The flexibility of the glove provides enhanced instrument maneuverability in each of the horizontal, vertical and rotational planes as well as improved tip abduction and adduction especially useful for suturing.

Results: Initial preliminary work standardised both set-up and application of the apparatus and confirmed it outperformed commercially available counterparts in this application with regard to stability, instrument maneuverability and range of movement. Thereafter, all patients eligible for TEM have been offered the option to participate in our pilot study. With this new access modality, ten consecutive patients between October 2010 and January 2011 underwent resection of benign (n=6) or malignant (n=4) rectal tumours. Only one case had to be converted to a conventional TEM procedure because anatomical features prohibited inserting the CAD high enough into the anal canal. The case we present here is a full-thickness excision of an early rectal cancer in an 87 year old female patient who was unfit for the conventional radical rectal resection.

<u>Conclusions</u>: The glove TEM port is a safe, cheap and readily available tool that can be used in combination with regular laparoscopic tools for transanal resection of rectal lesions. It is surgeon friendly, economically attractive and universally applicable.

V026

AN UNUSUAL CECAL MASS Amy Neville, MD, Marilou Vaillancourt, MD, Etienne Auger-dufour, MD, Liane S Feldman, MD, Gerald M Fried, MD McGill University Health Center

This is a case presentation of a patient is found to have a calcified mass at the base of the cecum and presumed to have an appendiceal mucocele. At the time of surgery, the mass is discovered to be a foreign body.

V027

LAPARO-ENDOSCOPIC SINGLE SITE (LESS) DISTAL

PANCREATECTOMY AND SPLENECTOMY Sharona B Ross, MD, Franka Co, BS, Harold Paul, BS, Kenneth Luberice, BS, Edward Choung, MD, Alexander S Rosemurgy, MD University of South Florida & Tampa General Medical Group

This video is of a Laparo-Endoscopic Single Site (LESS) distal pancreatectomy and splenectomy undertaken on a 62 year old gentlemen diagnosed with pancreatic adenocarcinoma Laparo-Endoscopic Single Site surgery can be efficaciously applied to a broad range of operations with the salutary benefits of multi-incisional laparoscopy but with superior cosmesis. Notably, LESS surgery provides equal and satisfactory access to all quadrants of the abdomen, providing an optimal portal for minimally invasive surgery. This video documents that LESS surgery is applicable for a safe, expeditious, and efficacious distal pancreatectomy with splenectomy.

After bupivacaine was injected into the umbilicus, a single 12mm incision was made without violating the umbilical ring. A 5mm deflectable tip

laparoscope was utilized. The stomach was widely mobilized as the short gastric vessels were divided. The gastrocolic omentum was divided with bipolar cautery and wide access to the pancreas was achieved. A malleable liver retractor lifted the liver and mobilized stomach away from the pancreas, providing adequate exposure to the left gastric artery, an important landmark. The dissection was then carried along the inferior border of the pancreas toward the caudal tip of the spleen and the splenic flexure of the colon was mobilized. In dividing the pancreas, the splenic vein was first divided, then the artery, utilizing a laparoscopic linear stapler. The specimen was freed by dividing lienophrenic ligaments and was removed in an extraction bag. Hemostasis was ensured and 10ml of dilute bupivacaine solution was sprayed over the subdiaphragmatic spaces prior to specimen extraction. With minimal extension of the incision and liberal use of water-soluble lubricant, it is possible to extract a relatively large specimen through a relatively small incision. The incision was closed with absorbable suture in a figure-ofeight fashion. After recovery, there was no notable scar.

Laparo-Endoscopic Single Site (LESS) surgery will be embraced by patients for its superior cosmetic outcomes and for its promises of less pain and quicker return to daily activities. It can be undertaken safely and expeditiously without a notable postoperative scar. Patients will seek LESS surgery and surgeons will need to be able to provide it to meet patient demands.

V028

PURE LAPAROSCOPIC ANATOMICAL LIVER POSTERIOR SEGMENTECTOMY IN SEMI-PRONE POSITION. Tetsuo Ikeda, MD

PhD, Yoshihiko Maehara, MD PhD Department of Surgery and Science, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan.

Introduction: Pure laparoscopic liver resection is an effective treatment for hepatic cancer that has spread rapidly. However, its use is limited to tumors that are present in the lower edge and lateral segments of the liver. Because of mobilization of the heavy and fragile liver, reliable handling of vessels and a parenchymal division without massive bleeding are difficult. We developed a method that expands the indications for pure laparoscopic liver resection for hepatic cancer and herein present our technique of laparoscopic anatomical resection for a hepatocellular carcinoma (HCC) that was located in the dorsal liver.

Methods and Procedures: The patient was a 70-year-old man with hepatitis C cirrhosis, Child-Pugh score A. During follow-up computed tomography, a 2.2-cm lesion was observed in the posterior segment with early arterial enhancement and contrast washout; the lesion was subsequently confirmed with an arteriogram. α -Fetoprotein was 13 ng/mL (normal, <20 ng/mL). The ingenuities of our surgical techniques are as follows: (1) The patient is placed in semiprone position when the tumor is present in the right posterior segment. (2) The liver is retracted by neodymium magnet coupling. (3) Hepatic parenchymal division is performed using EnSealTM and water-dripping bipolar forceps. (4) The vessels are individually closed with vascular clips (Hem-o-lokTM). The Pringle maneuver, precoagulation, and parenchymal division with a linear stapler are not performed. The video demonstrates a pure laparoscopic posterior segmentectomy with the patient in semiprone position.

Results: Operative time was 264 min. Blood loss was 220 g, and no perioperative transfusion was required. Postoperative recovery was uneventful, and only simple oral analgesics were required for pain control. The patient was discharged on postoperative day 7. Histology showed a moderately differentiated HCC, and all resection margins were clear.

Conclusions: Pure laparoscopic anatomical hepatectomy for HCC in dorsal liverin the semiprone position using the coupling magnet EnSealTM, water-dripping forceps, and individual closure of vessels was feasible and safe. This procedures is considered to be a safe modality for anatomical laparoscopic hepatectomy. Anatomical laparoscopic resection of many parts of the liver can be possible with our method, and we believe that it will lead to an expansion of the indications for laparoscopic liver resection for HCC.

V029

LAPAROSCOPIC RESECTION OF THE EXTRA HEPATIC BILE DUCT AND BILIARY RECONSTRUCTION FOR CONGENITAL BILIARY DILATATION

<u>Takeshi Naitoh, MD FACS</u>, Takanori Morikawa, MD, Masahiro Iseki, MD, Masayuki Kakyo, MD, Naoki Tanaka, MD, Kazuhiro Watanabe, MD, Fuyuhiko Motoi, MD, Toshiki Rikiyama, MD, Yu Katayose, MD, Shinichi Egawa, MD FACS, Michiaki Unno, MD Tohoku University Hospital, Department of Surgery

Laparoscopic procedure requiring the biliary reconstruction is quite challenging operation. The bilio-enterostomy requires extra ordinary suturing skills under limited operative field. The congenital biliary dilatation is mostly associated with the anomalous arrangement of pancreato-biliary ductal system, which is abbreviated as AAPBDS, and the risk of biliary cancer occurrence is high. Therefore, the congenital biliary dilatation is absolute indication of operation. We recently experienced the laparoscopic resection of the extra hepatic bile duct and biliary reconstruction for the congenital dilatation of the bile duct. The bilio-pancreatic ductal junction was successfully confirmed with intraoperative cholangiography and the bilio-enterostomy was created by hand-sewn technique. Although the laparoscopic resection of the bile duct and biliary reconstruction is quite challenging procedure, it is feasible and it would yield many benefits for the patients, especially in terms of cosmetic results, since the rate of this disease is higher in young women.

V030

SIMULTANEOUS LAPAROSCOPIC RESECTION OF COLORECTAL CANCER AND SYNCHRONOUS LIVER METASTASES Go Wakabayashi,

MD PhD FACS, Takeshi Takahara, MD, Yasushi Hasegawa, MD PhD, Naoko Ito, MD, Masahiro Takahashi, MD PhD, Hiroyuki Nitta, MD PhD Department of Surgery, Iwate Medical University School of Medicine

Simultaneous laparoscopic resection of colorectal cancer and synchronous liver metastases is feasible and safe. We present a case to describe laparoscopic-assisted right hemi-colectomy followed by pure laparoscopic anatomical liver resection (S5; segment 5) for multiple synchronous liver metastases.

Case presentation: A 47 y/o female patient with ascending colon cancer with synchronous liver metastases was referred to our institute for simultaneous laparoscopic resection of ascending colon and two liver metastases located in S5. Operative procedure: Laparoscopicassisted right hemi-colectomy was first performed. Then, anatomical segmentectomy of S5 was performed by intra-hepatic Glissonian approach at the hilar plate. After parenchymal transection of Cantlie line, several Glissons into S5 were visualized and clipped, then divided. Parenchymal transection first started from the left margin of S5, then along the demarcation line, and finished at the right margin of S5. Results: Operative time was 298 min and blood loss was 30 ml. The patient was discharged on the 10th post-operative day without having any complications. Between 2002 and 2010, we experienced 16 cases of simultaneous laparoscopic resection of colorectal cancer and synchronous liver metastases. Mean age was 59 y/o ranging from 35 to 76, and 7 were male and 9 were female. Primary tumors were located in colon for 7 and in rectum for 9. Liver resections were 8 for partial, 2 for segmentectomy, 2 for sectionectomy, and 4 for lobectomy. Median operative time was 360 min ranging from 196 to 570. Median blood loss was 163 ml ranging from 2 to 1550. Median hospital stay was 14 days ranging from 7 to 84. One patient developed bile leakage after the surgery but treated conservatively.

V031

TWO BIRDS WITH FIVE TROCARS: LAPAROSCOPIC PANCREATICODUODENECTOMY AND RIGHT HEMICOLECTOMY

<u>Rebecca Kowalski, MD</u>, Niket Sonpal, MD, Jennifer Montes, MD, Paresh C Shah, MD FACS Lenox Hill Hospital, Northshore-LIJ Health System, Hofstra Medical School, New York, NY

We present a 54 year-old-woman who presented with a pancreatic duct obstruction due to a mass in the head of the pancreas with bulky

adenopathy in the right lower quadrant. Biopsies of both lesions were consistent with multifocal neuroendocrine tumor. There was no evidence of distant metastatic disease. The patient was offered a laparoscopic approach to a combined right hemicolectomy and pylorus-preserving pancreaticoduodenectomy. This video highlights some of the technical aspects of the procedure. Operative time was 5 hours with minimal blood loss.

V032

BILIARY ENDOSCOPY AND LITHOTRIPSY OF BILIARY STONES <u>Jordan A Siegel, MD</u>, David Imagawa, MD, Laura Findeiss, MD, Jaime Landman, MD University of California, Irvine

This is a case presentation of a patient with a history of Oriental cholangiohepatitis status post choledochojejunostomy with a large biliary stone requiring management. Our treatment approach was biliary endoscopy via an established transhepatic tract with holmium laser lithotripsy of the stone. The patient had a good outcome with this minimally invasive approach.

V033

EXTRAHEPATIC GLISSONEAN ACCESS IN LAPAROSCOPIC

ANATOMICAL LIVER RESECTION <u>Akihiro Cho, MD</u>, Hiroshi Yamamoto, MD, Osamu Kainuma, MD, Atsushi Ikeda, MD, Hiroaki Souda, MD, Yoshihiro Nabeya, MD, Nobuhiro Takiguchi, MD Chiba Cancer Center Hospital, Japan

Background: Although recent technological developments and improved endoscopic procedures have further spread the application of laparoscopic liver resection, laparoscopic anatomical liver resection has not yet become widely accepted due to the technical difficulties in controlling each Glissonean pedicle laparoscopically.

Methods: The subjects in the present study included 24 patients (8 female, 16 male) who underwent laparoscopic anatomical liver resection using extrahepatic Glissonean access. The mean patient age at the time of resection was 68.2 years (range, 43-78 years). The postoperative outcomes were retrospectively analyzed.

Surgical technique: The metallic arch of an Endo Retract Maxi (Covidien Japan, Tokyo, Japan) is extended between the hepatic parenchyma and the bifurcation of the right and left Glissonean pedicles, so the right or left Glisonean pedicle is encircled extrahepatically. In the same way, the anterior or posterior Glisonean pedicle is extrahepatically encircled. Retracting the round ligament and gallbladder allows a good operative field of view, facilitating the encircling of each Glissonean pedicle. Each Glissonean pedicle is divided en bloc using an endoscopic stapling system based on resection type.

Results: All Glissonean pedicles could be encircled en bloc extrahepatically, as planned. No serious complications, including major bleeding or injury of the portal triad, were encountered during procedures. No postoperative mortality was encountered in any of the 24 patients. The mean length of surgery was 374±119 minutes, and the mean blood loss was 365±211g. The duration of the hospital stay was 17.5±3.5 days.

Conclusions: Extrahepatic Glissonean access appears feasible and safe for laparoscopic anatomical resection of the liver.

Conflict of Interest: We have no conflicts of interest or financial ties to disclose.

V034

LAPAROSCOPIC FENESTRATION OF MULTIPLE LIVER CYSTS Alexander

Ramirez Valderrama, MD, Joel Ricci, MD, Benjamin Samstein, MD FACS Columbia University Medical Center, New York Hospital Queens

Laparoscopic wide cyst fenestration is today the preferred method in the surgical treatment of symptomatic liver cyst. We presented a laparoscopic fenestration of multiples liver cyst in a 62 year-old female with abdominal pain and fullness sensation for about six months. The patient underwent to laparoscopic surgery with complete unroofing of multiple liver cysts without any intra operatory or post operatory complications, and the patient was discharge home on post operatory

day two.

V035

SINISTROPOSITION: TRUE LEFT-SIDED GALLBLADDER. A RARE CONDITION IN A COMMON OPERATION. A SERIES OF THREE CASES

<u>Patrick R Reardon, MD</u>, Amanda Parker, MD, Michele A Riordon, MD, Vadim Sherman, MD, Brian J Dunkin, MD The Methodist Hospital Department of Surgery; Methodist Institute for Technology, Innovation, and Education Houston, Texas 77030

Introduction: Sinistroposition of the gallbladder (SPG), is a very rare anatomic variant. Between September of 2005 and June of 2009 we unexpectedly encountered three such cases. We report on these cases treated by laparoscopic cholecystectomy (LC). All cases were performed utilizing the fundus-down technique.

Methods: A retrospective review of 1556 consecutive cases in a database revealed 3 cases of SPG. Clinical data queried included operative time (OT), estimated blood loss (EBL), length of stay (LOS), port size and position, and intraoperative and postoperative complications. The cases were all initiated with a midline, supraumbilical, 2 mm port, as is our standard. A 10 mm port (or 5 mm port) was then placed at the umbilicus. Viewing through a 30° laparoscope via the umbilical port, the left-sided position of the gallbladder was noted. Once this anatomic variant was noted, a 2 mm left subcostal port was then placed, in a mirror image fashion to a standard LC port placement. Inspection of the area of the cystic duct revealed that the ductal anatomy was obscured by the gallbladder as it crossed over to the right side. The cholecystectomy was then completed in a fundus-down fashion.

Results: None of the cases was diagnosed preoperatively. There was one male patient, age 63 and two female patients, both aged 47. Mean values, \pm standard deviation, were: OT = 87.0 \pm 20.42 min; EBL = 33.3 \pm 14.4 ml; LOS = 0.0 \pm 0 days. One case required conversion of a 2 mm port to a 5 mm port because of a thickened gallbladder and one case required conversion of a 2 mm port to a 3 mm port due to a thickened gallbladder. The cystic duct entered the common bile duct on the right side in all patients. The cystic artery appeared to arise on the right side in all patients. The pathologic diagnosis in two patients was: cholelithiasis and chronic cholecystitis. In the third patient, the diagnosis was cholelithiaisis, cholecystitis, and hydrops of the gallbladder. There were no intraoperative complications or complications within 30 days. The incidence of SPG in this series of 1556 consecutive cases of LC was 0.19%.

Conclusion: Sinistroposition (SPG), is a very rare anatomic variant. The gallbladder is attached to segment III of the liver and crosses the common hepatic duct from left to right, obscuring the cystic duct insertion. The fundus-down technique allows the gallbladder to be mobilized and rotated to the right, exposing the cystic duct for safe completion of the operation. When this rare anatomic variation is encountered it can be safely treated laparoscopically and with the use of 2 mm instrumentation. The authors recommend using a fundus-down technique to improve visualization of the cystic duct junction with the common bile duct, increasing the safety of the operation. Particular attention should be paid to the posterior aspect of the dissection of the gallbladder bed as it crosses, from left to right, just anterior to the common hepatic duct and porta hepatis in order to avoid potential major complications.

V036

LAPAROSCOPIC LATERAL PANCREATICOJEJUNOSTOMY Daanish Kazi, DO, Maurice Arregui, MD St. Vincent's Hospital Indianapolis Indiana

Video submission for a case study of a 55 year old man with chronic calcific alcoholic pancreatitis with recalcitrant abdominal pain. Pain was due to pancreatic duct obstruction from intraductal stones leading to a dialated pancreatic duct. ERCP provided temporary relief of pain.

to a dialated pancreatic duct. ERCP provided temporary relief of pain. A laparoscopic pancreaticojejunostomy was performed for definitive drainage. Video shows techniques of laparoscopy applied to the procedure including laparoscopic ultrasound.

V037

SINGLE-PORT LAPAROSCOPIC HEPATECTOMY (WITH VIDEO)

<u>Mitsuhiro Asakuma, PhD MD</u>, Koji Komeda, PhD MD, Yoshiharu Miyamoto, PhD MD, Fumitoshi Hirokawa, PhD MD, Tetsunosuke Shimizu, PhD MD, Yoshihiro Inoue, PhD MD, Michihiro Hayashi, PhD MD, Kazuhisa Uchiyama, PhD MD Osaka Medical College

Introduction: We provide an initial report of the indications and procedures for single-port laparoscopic hepatectomy. Methods: Laparoscopic hepatectomy and single port laparoscopic surgery has been performed in 64 patients and 129 patients respectively at our institution. Among them, we experienced 8 cases of single port hepatectomy. Five cases (benign tumor: 2 cases, metastatic liver tumor: 3 cases) of partial resection and 3 cases (metastatic liver tumor: 2 cases, Hepatocellular carcinoma: 1 case) of lateral segmentectomy were performed. A surgical glove port was used and the patient was placed in the French position with the surgeon between the legs in all the cases. 2.0 cm long incision for the port was made on the umbilicus. Parenchyma without significant structure was divided using laparoscopic coagulating shears (LCS) while an Echelon FlexTM was used for significant vessels such as Glisson's sheath or root of hepatic vein. Specimens were retrieved through the umbilical incision. The incisions were extended until the size of specimen.

Results: All the procedures were successfully done by single port fashion, without any additional port. The mean operation time was 141min and the mean bleeding was 41ml. No post-operative complications occurred. The patient was able to resume an oral diet and full mobility free of opioid analgesia on the first postoperative day. The resection margin was clear. Video: (please refer accompanied video) (case No.3) A 66-year old man who was diagnosed metastatic liver tumor n S3. Operation was done by single port using surgical glove method. (case No.5) A 73-year old woman, diagnosed as metastatic liver tumor (S2), was performed single port partial resection via umbilical 2.0cm incision. (case No.4) A 62-years old woman who had metastatic liver tumor (S2.3), was underwent single port lateral segmentectomy of the liver.

Conclusions: Single port surgery is a new method of laparoscopic surgery which does not establish yet. So its indications have to be strict. From our limited experiences, it is important that resection surface should be a simple flat plane which can be straightly approached from the umbilicus. Or tumor located peripheral of the normal liver, though estimated plane is curved, could be also good candidate for this approach. Because safety is primly important factor to be assured, we have kept these criteria for single port hepatectomy. From the result of our series, all the operations have performed without blood transfusion and mean operative time was 141min. This is, we consider, the adequate consequence of our strict indication. The problem of this approach might be uncleanness of the benefit over the conventional method except cosmetic benefit. Time is too fast to define the conclusion, while some RCT is ongoing to answer this question. Thus single port hepatectomy have great potential to be a new less invasive surgery.

V038

LAPAROSCOPIC PANCREAS-PRESERVING RESECTION FOR ADENOCARCINOMA OF THE 3RD AND 4TH PORTION OF THE

DUODENUM <u>Giuseppe Portale, MD</u>, Valentino Fiscon, MD, Giovanni Migliorini, MD, Flavio Frigo, MD Department of General Surgery

Primary adenocarcinoma of the duodenum is a very rare malignant neoplasm of the gastrointestinal tract: radical surgical treatment (respecting the oncological principles of complete tumor resection with free margins) usually requires pancreaticoduodenectomy but in selected cases segmental duodenal resection has also been considered. We have treated a 73-year old patient with a large polypoid lesion of the 3rd portion of the duodenum with a pancreas-sparing duodenectomy using a totally laparoscopic approach, accomplishing a successful radical margin-free resection (second report in the Literature -to date- for duodenal tumor involving the 3rd portion of the duodenum). Twelvemonth endoscopic and radiologic follow-up have confirmed the good oncological results, the patient being free of disease.



V039

LAPAROSCOPIC TRANS-GASTRIC RESECTION OF LESSER CURVATURE

GIST Mahmoud Abu Gazala, MD, Abed Khalaileh, MD, Yael Kopelman, MD, Harold Jacob, MD, Ram Elazary, MD, Avraham I Rivkind, MD, Yoav Mintz, MD Hadassah Hebrew University Medical Center

We present a case of a 65 year old male with a 2.5cm GIST in the lesser curvature of the stomach.

In our previous experience of laparoscopic wedge resections in this area the patients tended to have a long post operative course with non functioning stomach necessitating prolonged NGT drainage and feeding tube for nutrition. Therefore in this case we elected to perform an inverted wedge resection, thereby decreasing the stomach surface removal to a minimum. In this procedure, two trocars were inserted into the stomach fundus and antrum, the tumor was grasped and resected with sufficient underlying tissue within the resection margins.

This technique is shown to be feasible and a valid option for such tumors, allowing for minimal but sufficient resection of normal gastric tissue surrounding the tumor.

V040

LAPAROSCOPIC GASTRODUODENOSTOMY AFTER ESOPHAGECTOMY FOR IMPAIRED GASTRIC EMPTYING Edward D Auyang, MD MS, Brant K Oelschlager, MD Department of Surgery, University of Washington

Introduction: Impaired emptying of the gastric conduit or neoesophagus after esophagectomy can have multiple etiologies including decreased motility secondary to vagus nerve damage and mechanical stricturing. Often times, these etiologies can be managed with promotility medications, dilation, and pyloroplasty. The patient with a mechanical obstruction who is refractory to these treatments presents a unique challenge. Few options exist other than replacement of the neoesophagus with a colonic interposition graft. In this video, we demonstrate a laparoscopic gastroduodenostomy as a potential operative solution to the problem of impaired gastric emptying after esophagectomy.

Methods: Laparoscopic gastroduodenostomy was performed in a 65 year old patient with a history of previous lvor-Lewis esophagectomy for caustic ingestion 25 years prior. She had a pyloroplasty as part of her initial operation, but has had chronic dysphagia and vomiting despite medical treatments and repeated endoscopic dilations. A gastroduodenostomy across the pylorus was performed completely laparoscopically in conjunction with an intraoperative upper endoscopy to create a wide-mouthed gastroduodenal anastomosis. At the completion of the operation, an upper endoscopy was repeated to confirm widening of the pylorus and absence of anastomotic leak.

Results: The operation was completed in 3 hours and 30 minutes with minimal blood loss and no complications. The patient was discharged home on post-operative day #4 on a soft diet.

Conclusion: Laparoscopic gastroduodenostomy is a feasible operation for patients who have had a previous esophagectomy with impaired gastric conduit emptying and are refractory to other medical and interventional treatments.

V041

LAPAROSCOPIC MEDIAN ARCUATE LIGAMENT RELEASE Richard M Peterson, MD MPH, Stephen J Fenton, MD University of Texas Health Science Center San Antonio; Wilford Hall Medical Center

Median Arcuate Ligament Syndrome (also known as Celiac Artery Compression Syndrome) was first described in 1963. There are very few series in the literature with most published work as case reports. The success of the surgical approach varies widely ranging from 53-93%. We offer a case of a 34-year-old female that presented with a 6-month history of abdominal pain and accompanied weight loss (25 lbs). Her complaints of pain were left sided and associated with position as well as 30-60 minutes following meals. After a thorough workup she was found by CT scan to have compression of her celiac artery from her median

arcuate ligament. After consultation with the vascular surgery service she was offered a laparoscopic release of her median arcuate ligament. Identification of the celiac artery was undertaken and careful dissection of the celiac trunk was completed. The fibers of the celiac plexus were dissected and entirely transected. The median arcuate ligament was divided. The patient tolerated the procedure well. By the evening of surgery she was tolerating a liquid diet. By post operative day 1 she was eating a regular diet with no complaints of abdominal pain after eating or with position. At her 1-month visit she had gained 5 lbs (weight 110 lbs) and was able to exercise without complaints of abdominal pain. At her 3-month visit she had gained a total of 14 lbs (weight 119 lbs) and remained pain free.

V042

MINIMALLY INVASIVE REPAIR OF A DELAYED STRICTURE AND SALVAGE OF A REVERSED GASTRIC TUBE John J Tiedeken, MD, Lance Uradomo, MD, Fred Brody, MD MBA The George Washington University Medical Center

Ingestion of caustic agents may result in severe scarring and stricture formation of the esophagus. Unfortunately, these injuries occur in pediatric patients. A reversed gastric tube esophagoplasty is an option for definitive surgical management of severe esophageal strictures refractory to medical treatment. However, delayed complications from this procedure have been reported. This video presents a patient who underwent a reversed gatric tube 20 years previously following a lye ingestion. Over the course of two decades she developed progressive reflux and a stricture. The video documents a minimally invasive approach to excise the stricture and salvage the original esophageal conduit.

V043

ESOPHAGEAL BALLOON-ASSISTED LAPAROSCOPIC HELLER MYOTOMY FOR ACHALASIA David L Webb, MD, Nathaniel Stoikes,
MD, Ben Powell, MD, Guy R Voeller, MD University of Tennessee Health
Science Center Department of Surgery

Esophageal perforation is a well-known and feared complication of laparoscopic Heller myotomy. Most series report an esophageal perforation rate ranging from 1-7% during this procedure. Our video depicts a hybrid technique of video endoscopic esophageal balloon-assisted laparoscopic Heller myotomy that allows for minimal use of energy sources, exact visualization of both longitudinal and circular muscle layers, and in our series, has lead to no instances of esophageal perforation.

V044

HYBRID RESECTION FOR GASTRIC SUBMUCOSAL TUMOR IN COMBINATION WITH SINGLE PORT LAPAROSCOPY AND PERORAL ENDOSCOPY Noriyuki Inaki, MD PhD, Hisashi Doyama, MD PhD, Yasuhiro Ishiyama, MD, Michihiro Yamamoto, MD, Hiroyuki Bando, MD PhD, Tetsuji Yamada, MD PhD Ishikawa Prefectural Central Hospital

Background: We developed a hybrid technique for the partial resection of stomach for gastric submucosal tumor (SMT) in combination with the Single Port Surgery (SPS) and peroral endoscopic dissection. The hybrid technique which is called "Laparoscopy and Endoscopy Cooperative Surgery" (LECS), is demonstrated and the clinical results are evaluated. Methods: LECS in combination with ordinary laparoscopic technique and peroral endoscopic dissection has been introduced to the partial resection of stomach for gastric SMT since May 2008. The procedure with SPS instead of ordinary laparoscopic technique has been introduced since July 2009. Surgical procedure with video; We put skin incision of approximately 2.5cm in the umbilical part and insert one 12mm trocar and two 5mm trocars. Peroral endoscopic full thickness resection is performed, securing least safety margin. During the procedure, SPS technique is performed as assistance. Resected specimen is perorally extracted in plastic bag. The hole of stomach is closed by suturing with SPS technique.

Results: We experienced 14 cases of SMT in total. LECS in combination with SPS and peroral endoscopic technique was performed in 9 cases. There is no complication associated with our technique. Conclusion: LECS in combination with SPS and peroral endoscopic technique was safe and feasible. It will contribute the quality of life of patients and less invasive surgery.

V045

LAPAROSCOPIC SPLENECTOMY FOR SPLENIC ARTERY ANEURYSM IN A PREGNANT PATIENT Amit Kaul, MD, Ulises Garza, MD, Angela Echeverria, MD, Felipe Maegawa, MD, Carlos Galvani, MD Section of Minimally Invasive and Robotic Surgery, Department of Surgery, University of Arizona

Introduction: Splenic artery aneurysms (SAA) are a rare entity, and commonly diagnosed incidentally. They are the third most common site of intra-abdominal aneurysms. Its association with pregnancy poses an increased risk of rupture; and they are associated with at least a maternal mortality risk of 50%; and fetal mortality rate between 70 – 90%. We present a case of a pregnant patient with symptomatic SAA, managed laparoscopically.

Methods: 38-year-old multiparous patient, diagnosed with a Splenic Artery aneurysm (SAA) incidentally in 2010 at an outside hospital. Subsequently, the patient became pregnant and started to have have symptoms towards the end of her second trimester, her symptoms included moderate to severe left upper quadrant pain. Failed embolization was attempted at that institution with worsening of the patient's symptoms. Patient was transferred to our institution. A CT angiogram revealed a 1.6cm saccular SAA without any evidence of extravasation or rupture. Patient was offered Laparoscopic Splenectomy with resection of the splenic artery aneurysm after clearence by her obstetrician.

Patient was placed in right lateral decubitus position. A total of four bladeless trocars, 15mm, 10mm and two 5mm, were inserted in under vision. The gravid uterus was visualized intact. The spleen was freed from its ligaments. The splenic artery was dissected proximally until the SAA was found. A linear stapler white load with staple line reinforcement was used to divide the splenic artery and vein. The spleen was taken out in an endo-bag. All the trocars were removed under vision. The fetal status was unaltered.

Results: Operating time was 90 minutes, estimated blood loss was 5cc. The fetal heart rate in the immediate post-operative period was 150 -155 bpm. No intraoperative or postoperative complications were observed. Patient was discharged from our care on post-operative day 3. **Conclusion**: Early diagnosis and treatment of this rare condition is essential. In the elective setting, laparoscopic surgery is technically feasible and potentially beneficial for the patient as well the fetus in terms of less operative stress and early recovery.

V046

THE FEASIBILITY OF A TWO-INCISION APPROACH FOR VIDEO- ASSISTED THORACOSCOPIC LOBECTOMY Hyun Koo Kim, Ho Kyung Sung, Hyun Joo Lee, Jiae Min, Young Ho Choi College of Medicine, Korea University Guro Hospital

ABSTRACT: Purpose: We performed video-assisted thoracoscopic (VATS) lobectomy with two incisions for treatment of benign lung disease or primary lung cancer and evaluated the feasibility of this procedure.

Methods: Fifty-two patients (male 35, female 17; mean age 58.9 ± 12.46 years) of 60 (86.7%) who underwent major pulmonary resection (lobectomy, bilobectomy, or pnemonectomy) have been performed a consecutive two-incision approach for VATS lobectomy from July 2010 to July 2011. The thoracoscopy port, approximately 1 cm long, is located at the 7th or 8th intercostal space in the mid-axillary line, and the working port, approximately $3\sim5$ cm long, at the 5th intercostal space in the operator site.

Results: The preoperative diagnosis was benign lung disease in 7 patients (13.7%) (3 pulmonary sequestration, 2 pulmonary tuberculosis, 1 emphysema, and 1 bronchogenic cyst) and primary lung cancer in

45 patients (86.3%). Clinical stage of lung cancer was T1 or T2 N0M0 in 38 patients (84.4%), T3N0M0 in 2 (5.0%), and N1 or N2 in 5 (11.4%). Two patients of N1or N2 disease underwent preoperative adjuvant chemotherapy. Of these, 9 patients (20.0%) needed the third port during surgery because of severe pleural adhesion (6 cases) or incomplete fissure (3 cases). Conversion to thoracotomy was performed in 4 patients (8.9%) due to anthracofibrotic lymph nodes (2 cases), major vessel bleeding (1 case), or securing bronchial resection margin (1 case). Mean duration of operation in the 39 cases completed by two-port VATS lobectomy was 145.1 ± 23.15 min (range, $94\sim225$). In 32 cases completed by two-port VATS lobectomy for primary lung cancer, the total number of dissected lymph nodes per patient was 19.2 ± 5.34 (range, $6\sim32$). The chest tube was removed on postoperative day 5.4 ± 2.8 (range, $3\sim18$), and there was no occurrence of major perioperative morbidity and mortality.

Conclusions: Two-incision VATS lobectomy is applicable in selected cases; however, when needed, conversion to standard VATS or thoracotomy should be performed without hesitation.

V047

LAPAROSCOPIC HYPERTHERMIC INTRA-PERITONEAL CHEMOTHERAPY (HIPEC) FOR PERITONEAL CARCINOMATOSIS Spiros P Hiotis, MD PHD, Anna G Rosenblatt, BA, Daniel M Labow, MD Mount Sinai School of Medicine

Patients with peritoneal carcinomatosis are sometimes eligible for treatment with surgical cytoreductive therapy and hyperthermic intra-peritoneal chemotherapy (HIPEC). These procedures are often planned in patients with metastatic appendiceal carcinoma, but patients with other primary cancers are occasionally candidates for HIPEC. HIPEC is conventionally performed as an open surgical technique, and is frequently associated with major open abdominal surgery leading to prolonged post-operative recovery times. However, HIPEC may be performed laparoscopically in cases requiring limited or no tumor debulking. In this film we illustrate a technique for laparoscopic HIPEC, performed entirely with 5mm laparoscopic trocars.

V048

PERORAL ENDOSCOPIC MYOTOMY FOR ESOPHAGEAL ACHALASIA

<u>Amy K Yetasook, BA</u>, Jin-cheng Zhao, MD, Michael B Ujiki, MD NorthShore University HealthSystem

Background: Optimal treatment that is minimally invasive is at the foundation of many laparoscopic procedures including those aimed at relieving the symptoms of patient with achalasia, a rare but well delineated primary esophageal motility disorder. The demonstration of the ability to use POEM and other flexible endoscopic approaches as clinically feasible in a patient population with achalasia with similar precision in short-term patient outcomes is noteworthy as there are distinct advantages to this ultra-minimally invasive approach.

Methods: Here we perform peroral endoscopic myotomy on an 81 year old patient with significant past medical history of a perforated duodenal ulcer treated with vagotomy and pyloroplasty as well as the existence of a large hiatal hernia (approximately 5 cm). Due to his presentation and past surgical history the patient decided to undergo POEM.

Results: The patient tolerated the procedure well with no complaints of postoperative pain and was relieved of his preoperative symptoms of dysphagia to both solids and liquids and weight loss.

Conclusions: Our single institution experience of POEM was feasible in a patient presenting with a singular medical and surgical history

V049

THORACOSCOPIC RESECTION OF GIANT MEDIASTINAL

PARATHYROID TUMOR <u>Shalini Reddy, MD</u>, Steven D Schwaitzberg, MD Cambridge Health Alliance, Harvard Medical School

Giant mediastinal parathyroid lesions (< 4cm) though rare, have been reported in the literature. The approach to these large lesions has primarily been via a throracotomy. This video demonstrates the thoracoscopic resection of one of the largest parathyroid lesions

reported in the literature measuring 8cm (nl = 4-6mm) and weighing 32gram (nl = 25-35 mg). This profoundly lethargic 78 year old man presented to the emergency department in acute renal failure with a serum calcium of 18mg/dl (nl < 10.4) and a parathyroid hormone (PTH) of 1447 pg/mL. (nl < 88). A Technitium 99 sestamibi scan demonstrated an ill defined mass in the mediastinum. MRI showed an 8 cm lesion just to the right of the trachea and esophagus in the posterior mediastinum that was hyperintense on T2 weighted signals . The lesion was resected using a right (side up) lateral thoracoscopic approach with ports placed in the 2nd, 4th and 6th interspaces.

Histologic examination revealed a benign parathyroid adenoma. Serum calcium and creatinine have returned to normal and the patient has made a complete recovery. Thoracoscopic resection of mediastinal parathyroid tumors can be applied to even very large lesions with precision and minimal blood loss.

V050

LAPAROSCOPIC ENUCLEATION OF PANCREATIC INSULINOMA WITH CONTROL OF INTRAOPERATIVE BLEEDING Bernadette U Laxa, MD, Barnard J Palmer, MD, William B Inabnet, MD Mount Sinai School of Medicine

Insulinomas are rare but vascular tumors that require surgical removal as a therapeutic measure. Laparoscopic enucleation has become the standard treatment when feasible with excellent results. We present a laparoscopic insulinoma enucleation, during which intraoperative bleeding was encountered. Bleeding was controlled with the technique of suction irrigation and electrocautery with a good outcome.

V051

ROBOTIC LIVER HEMANGIOMA RESECTION. FLUORESCENT IDENTIFICATION OF MICROHEMANGIOMAS WITH THE NEAR-INFRARED TECHNIQUE. David Calatayud, MD PhD, Luca Milone, MD, Stefano D'ugo, MD, Federico Gheza, MD, Mario Masrur, MD, Paolo Raimondi, MD, Enrique F Elli, MD, Francesco M Bianco, MD, Subashini Ayloo, MD, Pier C Giulianotti, MD FACS University of Illinois at Chicago Medical Center

Indocyanine green can be used as a fluorescent agent by means the near-infrared light (NIR) technique to visualize blood flow and related tissue perfusion.

This video shows a robotic resection of a liver hemangioma located in segment II.

With the fluorescent imaging we can determine more precisely the limits of the hemangioma tumor, by identifying present perilesional satellitosis, due to the vascular pattern of this lesion and its blood wash-out.

V052

LAPAROSCOPIC SINGLE INCISION ANTERIOR RESECTION C Palanivelu, P Senthilnathan, P Praveen Raj, R Parthasarthi, S Rajapandian, Jai Ganesh GEM Hospital & Research Centre

Background: Single incision laparoscopy is rapidly gaining acceptance as evidenced by increasing body of reported literature. Single incision anterior resection is indicated mainly in various benign and malignant diseases sigmoid colon and rectum. Recent reports are supportive of use of minimally invasive methods for these procedures.

Technique: Peritoneal incision made on the medial of the mesosigmoid close to the sacral promontory. Medial to lateral dissection is then carried out, raising the flap of mesosigmoid, preserving the left ureter and ovarian vessels.

Inferior mesenteric vessels divided close to the origin which aids in further mobilization of the mesosigmoid from retroperitoneal structures. Line of Toldt's is incised and both the planes are united thereby completely mobilizing sigmoid and descending colon.

Total meso rectal excision is done, starting posteriorly, moving laterally and completing anteriorly upto pelvic floor.

Rectum is circumferentially divided through the anal canal at the dental line and the specimen is delivered per anus.

Proximal division of colon is done about 10cm from the tumor and after ascertaining the vascularity colo anal anastomosis is done using interrupted sutures.

Covering ileostomy is placed in the same skin incision made for trocar placements.

Conclusion: Single incision anterior resection is feasible & safe procedure in lands of experienced laparoscopic surgeon. It is especially attractive to young patients because of cosmesis less post op pain & earlier return to recovery.

V053

REVISIONAL BARIATRIC SURGERY: FROM SLEEVE GASTRECTOMY TO ROBOTIC-ASSISTED GASTRIC BYPASS M. Masrur, MD, F. Gheza, MD, D. Calatayud, MD. PhD, S. D'ugo, MD, F. M. Bianco, MD, E. F. Elli, MD. FACS. Division of General, Minimally Invasive and Robotic Surgery, Department of Surgery, University of Illinois at Chicago, Chicago, Illinois, USA.

Introduction: The laparoscopic sleeve gastrectomy (LSG) is used as an effective procedure for morbid obese patients. There are long term complications associated to this procedure; one of these is the Gastroesophageal reflux (GERD), many times difficult to treat. We present here a video using the laparoscopic approach in a patient with LSG and severe GERD, and the resolution through conversion to Roux-en-Y gastric bypass (RYGBP).

Methods: A 59-year old obese woman, BMI 48, who underwent a LSG 20 months ago develops severe GERD with severe esophagitis. Due to the lack of medical control is elected for conversion to RYGBP.

Results: The procedure began with a diagnostic laparoscopy. After the Docking of the Robot, dissection was carried out on the scar tissue around the VSG using robotic monopolar hook. Dissection and repair of an small hiatal hernia was done. A Gastric pouch was created using staplers. Then the jejunum-jejunum anastomosis was done with stapler and hand sewn suture; and the mesenteric gap was closed with hand sewn suture. The gastro-jejunal anastomosis was created by double layer hand sewn suture using polydioxanone 3.0. An endoscopic evaluation of the stomach and air leak test was performed, confirming integrity of the gastro-jejunal anastomosis. The operative time was 260 minutes. There were no intra- or post-operative complications. Patient was discharged on postoperative day 3.

Conclusions: The GERD after a LSG is a complication many times difficult to treat. The conversion to RYGBP is a valid therapeutic option in these patients. Although more information on the long term follow up is necessary to draw definitive conclusions.

V054

ROBOTIC ASSISTED SINGLE INCISION LAPAROSCOPIC TOTAL EXTRAPERITONEAL BILATERAL INGUINAL HERNIA REPAIR $\underline{\text{Luca}}$

Giordano, MD FACS Aria Health, Philadelphia, PA, USA

laparoscopic total extraperitoneal ingunal hernia repair are routinely performed.

Robotic assistance to single incision laparoscopic operations, with instrument crossing and arm control reassignment, can facilitate the technical performance of the procedure.

This video demonstrate the technical feasibility of a robotic assisted total extraperitoneal bilateral inguinal hernia repair, highlighting the lack of limitation, normally experienced in standard laparoscopic single incision procedures, due to the diminished instuments range of motion.

V055

ROBOTIC ASSISTED TOTAL COLECTOMY WITH TRANSRECTAL EXTRACTION -SINGLE DOCKING Takayuki Dotai, MD, Carrie Peterson,

MD, Elisabeth Mclemore, MD, Santiago Horgan, MD, Mark Talamini, MD, Sonia Ramamoorthy, MD Center for the Future of Surgery, Department of Surgery, University of California, San Diego

This video shows the stepwise technique of robotic assisted total colectomy with transanal specimen extraction. This technique is safe and beneficial to minimize the risk of trocar site complications.



LAPAROSCOPIC ASSISTED ROBOTIC ESOPHAGECTOMY Sheetal

Nijhawan, MD, <u>Alisa M Coker, MD</u>, Michael Bouvet, MD, Nikolai Bildzukewicz, MD, Marcos Michelotti, MD, Takayuki Dotai, MD, Geylor Acosta, MD, Luciano Antozzi, MD, Juan S Barajas-gamboa, MD, Bryan Sandler, MD, Garth R Jacobsen, MD, Mark A Talamini, MD, Santiago Horgan, MD Center for the Future of Surgery, Department of Surgery, University of California San Diego

We demonstate the technique of laparoscopic assisted robotic esophagectomy, a safe and effective operation in a selected population. The robot enables the surgeon to enter and operate safely in the relatively tight mediastinal space.

V057

SINGLE QUADRANT ROBOTICALLY ASSISTED ROUX-EN-Y GASTRIC BYPASS: DESCRIPTION OF A SURGICAL TECHNIQUE Brad E Snyder, MD, Erik B Wilson, MD, Todd Wilson, Nicholas M Brown, MD, Nathan Miller, MD University of Texas Health Science Center at Houston

Surgery utilizing a robot has been successfully performed for Rouxen-Y gastric bypass (RYGB). Studies have shown the proven efficacy, reported lower complication rates, and technical benefits of robotic surgery. However, with some studies reporting longer operative times and no clear benefit with regards to complications and outcomes, use of robotic technology has yet to be universally adopted in RYGB. Technical innovations have to be implemented to prove the use of the robot does offer superior results. We propose a single-quadrant technique to the robotic assisted RYGB that is not only feasible and safe, but that offers many potential advantages with regards to decreasing operative time, preventing complications and improving outcomes.

V058

RESIDENT EDUCATION IN ROBOTIC SURGERY: BRIDGING THE GAP WITH THE SURGICAL ROBOT IN A ROBOTIC PROCTECTOMY

<u>Brian Bello</u>, Konstantin Umanskiy, Alessandro Fichera, Stephen Small Univeresity of Chicago

Since the introduction of the surgical robot, resident education in robotic surgery has been a challenge. The new surgical robot has new enhancements that can potentially bridge the gap in surgical education. We present a case of a young lady with Crohn's disease and the video of her robotic proctectomy demonstrating these new improvements.

V059

THE USE OF FLUORESCENCE IN ROBOTIC ADRENALECTOMY FOR PHEOCHROMOCYTOMA Luca Milone, MD PhD, David Calatayud, MD PhD, Mario Masrur, MD, Federico Gheza, MD, Stefano D'ugo, MD, Paolo Raimondi, MD, Enrique Elli, MD, Francesco Bianco, MD, Subashini Ayloo, MD, Pier Cristoforo Giulianotti, MD FACS Division of General, Minimally Invasive, and Robotic Surgery, University of Illinois at Chicago

Robotic surgery applications are expanding exponentially; adrenalectomy could be a perfect application for a robotic approach. Fluorescence using Indocyanin green is used to visualize biliary structures but could be helpful also in better understanding the vascular anatomy during adrenalectomy. We present the case of a robotic right side adrenalectomy for pheocromocytoma using the fluorescence when dissecting the lesion from the vena cava.

The use of fluorescence for robotic adrenalectomy allows better visualization of the vessels and organ relationship. The combination of robotic fine and precise maneuvers to the fluorescence visualization can allow a safer and more precise operation.

V060

ROBOTIC ASSISTED ULTRALOW ANTERIOR RESECTION WITH COLONIC J POUCH-ANAL ANASTOMOSISIS Celeste Kang, MD, Alessio Pigazzi, MD Department of Surgery, University of California, Irvine School of Medicine

A 72 year old male is newly diagnosed with low rectal adenocarcinoma. Following neoadjuvant chemoradiation therapy, a hybrid laparoscopic-robotic ultralow anterior resection with colonic J pouch-anal anastomosis performed in the lithotomy position. After the splenic flexure mobilization and high vessel ligation via the laparoscopic approach the robot is used to perform a total mesorectal excision with dissection of the rectum down to the anal canal, and stapling of the distal rectum 2 cm above the anal verge. A 6 cm J pouch is fashioned and an ultralow J pouch-anal anastomosis is performed using a circular EEA stapler. This video emphasizes the technique, feasibility and safety of this procedure.

V061

ROBOTIC ASSISTED SINGLE INCISION TRANSGASTRIC RESECTION
OF A 5 CENTIMETER GASTRIC MASS IN PATIENT STATUS POST
CORONARY ARTERY BYPASS GRAFT WITH GASTROEPEPLOIC ARTERY
Luca Giordano, MD FACS Aria Health, Philadelphia,PA, USA

Laparoscopic transgastric excisions of gastric lesions, not amenable to endoscopic removal, have been reported. The pathology examination of those lesions usually dictate further treatment when necessary. We report a case of a 78 years old male with past medical history significant for severe aortic stenosis, atrial fibrillation and coronary artery bypass graft done in the year 2009 with the use of the gastroepiploic artery. The patient was on anticoagulation therapy with coumadin. He presented to the emergency room with acute onset of upper gastrointestinal bleeding.

An Esophagogastrodoudenoscopy was performed revealing a 5 cm gastric mass with stigmata of bleeding, located on the lesser curvature. It was not possible to remove this lesion endoscopically. The patient gastroepiploic artery graft prevented the option of a formal gastrectomy at that time. The location of the lesion on the lesser curvature made it not amenable to a gastric wedge resection, and the need for patient anticoagulation pressed in proceeding to remove the etiology of the upper gastrointestinal bleed.

Robotic assisted single incision transgastric resection of the gastric mass seemed to be a valuable option, overcoming all the restrictions dictated by the case.

The procedure was uneventful. The patient had an uncomplicated post operative course, was advanced to a regular diet on post operative day number 2 and discharged to home on postoperative day number 7 with a therapeutic INR on coumadin.

The pathology exam showed a $5 \times 4 \times 3$ cm inflammatory fibroid polyp. No further treatment was necessary.

V062

A NOVEL COMBINED ENDOSCOPIC AND SURGICAL APPROACH TO RETRIEVE A RETAINED FOREIGN BODY CAUSING A RECTOVAGINAL FISTULA Faris M Murad, MD, Steven R Hunt, MD Washington University in St. Louis

A 45 year old obese female with menorrhagia undergoes robotic hysterectomy. The patient has a previous history of cellulitis after a C-section. During the operation, a piece of the bowel grasper was noted to be missing. The surgeons spent 2 hours searching for the foreign body. The foreign body could not be located and the patient was closed

A few days after the hysterectomy, the patient developed high fevers and was noted to have cellulitis. The patient then started passing stool through her vagina. A CT scan revealed a retained foreign body in the rectovaginal cuff. Initial consultation with colorectal surgery recommended an open operation with diversion. Patient sought a second opinion.

During sigmoidoscopy to evaluate for placement of a fully covered enteral stent, the foreign body was fluoroscopically visualized behind the rectal wall. After discussion with the patient, an attempt at endoscopic retrieval was planned.

Endoscopically a small enterotomy was created in the rectum. The foreign body was surrounded by scar tissue and could not be retrieved. Colorectal surgery was then consulted at our institution to utilize the TEM scope and attempt foreign body retrieval through the created enterotomy. The foreign body was retrieved and the fistula subsequently resolved without further intervention.

V063

ENDOSCOPIC SUTURE REPAIR OF FULL THICKNESS ESOPHAGOTOMY DURING PER ORAL ESOPHAGEAL MYOTOMY (POEM) FOR

ACHALASIA <u>Ashwin A Kurian, MBBS</u>, Neil H Bhayani, MD, Christy M Dunst, MD, Kevin M Reavis, MD, Lee L Swanstrom, MD Oregon Clinic and Foundation for Surgical Inovation and Education

A Per Oral Esophageal Myotomy (POEM) procedure was undertaken for the diagnosis of Achalasia on a female patient. A full thickness esophagotomy was inadvertently created when performing the mucosotomy and the dissection of the submucosal plane. The full thickness esophagotomy was closed in layers using a combination of an edoscopic suturing device for the muscle layers and resolution clips for the mucosa.

V064

ENDOLUMINAL STOMACH-SPARING RESECTION OF GASTRIC GISTS

Stephanie Downs-canner, MD, Kenneth Fasanella, MD, Kevin Mcgrath, MD, <u>Kenneth K Lee, MD</u> University of Pittsburgh School of Medicine

Gastrointestinal stromal tumors, or GISTs, are common mesenchymal tumors of the gastrointestinal tract. Malignant behavior among these tumors may occur, and therefore complete surgical resection is the primary treatment for GISTs. Wide margins are not needed and lymphadenectomy usually is not required as lymph node metastases are rare. 70% of GISTs arise in the stomach, and for these, laparoscopic resection is an attractive alternative to conventional open resection. For exophytic gastric GISTs, laparoscopic or open resection can often be easily accomplished by means of a wedge resection of the stomach using surgical staplers. GISTs that predominantly protrude into the lumen of the stomach, however, may be technically challenging as wedge resections performed in the same manner are apt to require more extensive resections of the stomach and result in greater alteration in the configuration of the stomach. Such intraluminal GISTs occurring near the gastroesophageal junction or pyloric channel are particularly problematic as conventional wedge resections in these locations may result in significant narrowing and distortion of the gastroesophageal junction or gastric outlet. In this video we demonstrate minimally invasive stomach-sparing endoluminal resection of a proximal gastric GIST using a combined laparoscopic and endoscopic single intragastric port technique.

Following establishment of pneumoperitoneum and per oral endoscopic localization of the intraluminal GIST, stay sutures were placed into the body of the stomach and a 12mm port was passed through the abdominal wall and into the stomach. The GIST was identified on the proximal lesser curvature of the stomach using both the endoscope passed orally and a laparoscope passed through the 12 mm port. Under endoscopic visualization, a linear stapler was inserted through the 12 mm port and used to resect the GIST. To facilitate positioning of the stapler beneath the mass, an endoscopic snare was secured around the mass and used to place traction upon the mass. The resected mass was then placed into a laparoscopic specimen bag and removed from the stomach and abdomen. After confirming that hemostasis was satisfactory along the gastric resection staple line, the port was removed from the stomach and the port site was closed using a linear staple. A minimal amount of stomach was removed and resulted in negligible changes in the capacity of the stomach. There were no significant anatomic alterations in the region of the gastroesophageal junction.

Final pathologic evaluation confirmed the diagnosis of a GIST with margins of resection uninvolved by the tumor.

Three additional intraluminal gastric GISTs located 1.5, 2.0, and 8.0 cm from the gastroesophageal junction have been removed in this manner. In all cases the margins of resection have been uninvolved by the tumors, and with follow-up ranging from 5 to 12 months there have been no signs of recurrence.

These cases demonstrate a novel laparoendoscopic technique of endoluminal stomach-sparing resection of gastric GISTs. This technique minimizes distortion of the stomach and changes in its capacity and may be particularly useful for the treatment of very proximal, very distal, or very large intraluminal gastric GISTs.

V065

NOTES TOTAL COLECTOMY IN A HUMAN CADAVER Kyung Su Han, MD, Dae Kyung Sohn, MD PhD, David W Rattner, MD, Patricia Sylla, MD Massachusetts General Hospital

We describe NOTES total colectomy with transanal and transgastric assistance in a male cadaver. The distal rectum was occluded by placing a pursestring suture approximately 2 cm above the dentate line, above the sphincter complex. The TEM platform (transanal endoscopic microsurgery) was inserted transanally and CO2 was insufflated. Starting just distal to the pursestring, full-thickness rectal dissection with total mesorectal excision was performed endoscopically through the TEM platform using TEM and laparoscopic instrumentation. Upon completion of the rectal and mesorectal dissection and entry into the peritoneal cavity, the IMA pedicle and rectosigmoid mesentery were divided and the sigmoid and left colon were further mobilized towards the splenic flexure. At that point, more proximal colon mobilization was performed with transgastric endoscopic assistance using a double-channel gastroscope. Mobilization of the transverse and right colon dissection were completed using combined transgastric and transanal endoscopic approach. The colon was exteriorized transanally. The total specimen length was 150 cm and the operative time was 450 minutes.

V066

TRANSVAGINAL NOTES CHOLECYSTECTOMY: KEY TECHNICAL

POINTS <u>Lucian Panait, MD</u>, Stephanie G Wood, MD, Robert L Bell, MD, Andrew J Duffy, MD, Kurt E Roberts, MD Yale School of Medicine

Introduction: Natural Orifice Transluminal Endoscopic Surgery (NOTES) is gaining increasing acceptance, equally among physicians and patients. Randomized trials are in progress to better assess the safety and efficacy of these procedures.

Methods: Sixty transvaginal NOTES cholecystectomies were performed at our institution to date. The greatest part of the operation is achieved with a laparoscopic camera positioned through a 12 mm vaginal port, and a working 5 mm port at the umbilicus. We exclusively use straight standard laparoscopic instruments for the intraabdominal part of the procedure. Transabdominal sutures are placed through the gallbladder fundus and infundibulum to facilitate retraction of the gallbladder and expose the cystic triangle area. Dissection of the cystic duct and artery is performed similarly to the standard laparoscopic technique. Results: Some key elements of the procedure need to be taken into account in order to minimize the chances of iatrogenic injuries. Vaginal access is achieved on the posterior vaginal wall, with a Veres needle attached to a dilator sheath. The abdominal cavity should be entered under direct vision provided by a laparoscope placed at the umbilicus, and with the uterus anteverted. The right hepatic artery is more clearly visualized in the NOTES cholecystectomy. Given the low position of the transvaginal camera, the critical view of safety is different from the standard laparoscopic technique: the cystic duct and artery present at a different angle, forming a configuration similar to the letter "V". However, different angulation of the camera allows visualization of these elements from the right side, thus achieving a "reverse critical view". This right side visualization of the duct and artery is rarely possible with the standard technique, given the position of the camera at the umbilicus. Lastly, some challenges are present when placing the gallbladder in a specimen

retrieval bag inserted through the vaginal port. Conclusion: Transvaginal NOTES cholecystectomy is an attractive alternative to laparoscopy in female patients. With adequate precautions

and mastery of the surgical technique, the procedures are safe, have good postoperative outcomes and improved cosmesis when compared with laparoscopy.

V067

DIAGNOSTIC GASTRO-DUODENOSCOPY VIA A GASTRO-GASTRIC FISTULA PRIOR TO OVERSTITCH CLOSURE Eric M Pauli, MD, Jeffrey M Marks, MD University Hospitals Case Medical Center, Cleveland, OH

Video Abstract Summary:

Most surgeons are aware of the challenge posed by Roux-en-Y Gastric Bypass (RYGB) anatomy on the endoscopic evaluation and treatment of foregut pathology. In this video, we describe the successful endoscopic and fluoroscopic evaluation of the bypassed foregut in a RYGB patient using an ultra slim endoscope to traverse a 3mm GG fistula prior to fistula closure with the Overstitch™ endoscopic suturing system.

V068

ENDOSCOPIC-GUIDED TRANSGASTRIC LAPAROSCOPIC RETRIEVAL OF A DUODENAL STENT Maureen M Tedesco, MD, Tonya Kaltenbach, MD MS, Roy Soetikno, MD, Dan Eisenberg, MD MS Stanford University Medical Center and Palo Alto VA HCS

Introduction: Endoscopic placement of expandable Nitinol stents have been used in the upper and lower gastrointestinal tract to palliate areas of malignant stricture or obstruction. They are designed to allow for endoscopic removal if necessary. Stent retrieval, however, can be difficult using endoscopic techniques, and may require an operation for removal. Here we describe a transgastric laparoscopic technique used to retrieve a duodenal stent, under endoscopic guidance.

Case: A 61 year-old man presented with duodenal obstruction which was thought to be due to an inoperable malignant neoplasm of the head of the pancreas. A Nitinol, uncovered stent was placed in the duodenum endoscopically, after which the mass was determined to be benign. Upper endoscopic attempts to retrieve the stent were unsuccessful, and the deformed stent was lodged at the pylorus, leading to a gastric outlet obstruction. He was brought to the operating room for an endoscopicguided transgastric laparoscopic retrieval of the stent.

Conclusion: Transgastric laparoscopy with endoscopic guidance is an effective approach to intralumenal stomach surgery. Simultaneous laparoscopic and endoscopic views allow for multiple concurrent views and a high degree of safety.

V069

INCISIONLESS GASTRIC CANCER RESECTION USING ENDOSCOPIC SUTURING WITH PULLEY RETRACTION Neil H Bhayani, MD MHS, Ashwin A Kurian, MBBS, Kevin M Reavis, MD, Christy M Dunst, MD, Lee L Swanstrom, MD The Oregon Clinic

This video demonstrates the resection of an early, T1a, gastric adenocarcinoma using endoscopic submucosal dissection. To facilitate dissection, we used endoscopic suturing to create a pulley system for retraction.

V070

PURE TRANSVAGINAL LAPAROSCOPIC UMBILICAL HERNIA REPAIR

Stephanie G Wood, MD, Lucian Panait, MD, Robert L Bell, MD, Andrew J Duffy, MD, Kurt E Roberts, MD Yale School of Medicine

Natural Orifice Transluminal Endoscopic Surgery (NOTES) has been at the forefront of minimally invasive surgery. Benefits include no visible scars, less pain and shorter recovery. We present a video of a 38 years old female with a BMI 36.4 kg/m2 who underwent a pure transvaginal umbilical hernia repair. This is one out of 2 successfully performed pure transvaginal ventral hernia repairs at Yale-New Haven Hospital. Appropriate Institutional Review Board was obtained preoperatively. The patient was positioned in steep Trendelenberg position at which time a weighted speculum was introduced into the vagina allowing exposure of the posterior vaginal fornix. The cervix was grasped with a single-toothed tenaculum on the posterior cervical lip and the posterior vaginal fornix visualized. Access to the peritoneum was achieved by electrocautery and then sharp dissection. Then a SILS port was introduced and pneumoperitoneum up to 15mmHg was achieved. Two 5mm trocars and one 12mm trocar were used. The 2cm umbilical hernia was then visualized, and the contained omentum was removed sharply and bluntly. A 12 cm Parietex™ mesh was introduced through the 12mm port and opened in peritoneal cavity. The mesh was approximated with hernia defect centered. A stitch was placed to abdominal fascia superiorly and an AbsorbaTack™ fixation device was used to tack the mesh to abdominal wall circumferentially using a double crown technique. The pneumoperitoneum was released and port was removed. The vagotomy incision was closed with a running Polysorb sutures. The patient was extubated, transferred to the recovery room and subsequently discharged home without any complications. We have successfully demonstrated the feasibility and safety of a pure transvaginal umbilical hernia repair without any abdominal incisions whatsoever. This video presents one of these 2 procedures. It is safe and well tolerated with only minimal need for postoperative pain control. It allows for rapid return to daily activities while providing a most favorable cosmetic outcome for women. More extensive studies evaluating the benefits and also identifying possible complications are necessary to confirm our promising early results.

REACHING THE UNREACHABLE: A NOVEL OVER THE SCOPE **DEPLOYMENT METHOD FOR ENTERAL STENTS** Eric M Pauli, MD, Steve J Schomisch, PhD, Jeffrey A Blatnik, MD, David M Krpata, MD, Juan S Sanabria, MD, Jeffrey M Marks, MD University Hospitals Case Medical Center, Cleveland, OH

Video Abstract Summary:

Over the last 2 decades, self-expanding enteral stents have gained popularity and shown therapeutic potential for strictures, obstructions, fistulae and perforations of the GI tract. Currently available stent delivery systems make deployment in many locations in the GI tract difficult, due to inability to traverse curves, or impossible due to deployment system limitations. In this video, we describe a novel over the scope deployment method for self-expanding enteral stents that permits delivery of a wide variety of stent to locations unreachable by currently available delivery methods.

SAGES Video Channel Loop Listing

- V072 LAPAROSCOPIC SEGMENTAL RESECTION OF BLEEDING NEUROFIBROMA IN THE FOURTH PORTION OF DUODENUM <u>Osama</u> <u>Hamed, MBBS</u>, Stephen Kavic, MD, University of Maryland School of Medicine
- V073 LAPAROSCOPIC MANAGEMENT OF INTERNAL HERNIA DUE TO ADJUSTABLE GASTRIC BAND TUBING <u>Osama Hamed, MBBS</u>, Lashondria Simpson, MD, Emanuel Lomenzo, MD PhD, Mark Kligman, MD, Department of Surgery University of Maryland School of Medicine Baltimore, MD
- V074 LAPAROSCOPIC EXCISION OF GASTROINTESTINAL STROMAL TUMOR OF THE STOMACH NEAR THE GASTROESOPHAGEAL JUNCTION Linda P Zhang, MD, Barry A Salky, MD, Mount Sinai School of Medicine
- V075 SLEEVE GASTRECTOMY AS A TREATMENT FOR HIGH RISK ELDERLY PATIENTS WITH GASTRIC NEOPLASMS José De Ribamar Saboia De Azevedo, MD, <u>Aureo Ludovico Depaula, MD</u>, Rafael Massao Da Silva Nagato, MD, Glória Maria Lucas Costa, MD, Leonardo Rocha Ferraz, MD, Private Clinic
- V076 REAL-TIME FLUORESCENT VIDEOANGIOGRAPHIC EVALUATION DEMONSTRATE PRESERVATION OF VASCULAR SUPPLY DURING TOTAL ENDOSCOPIC AND LAPAROSCOPIC COMPONENT SEPARATION J. Roberto Ramirez Gavidia, MD, Kalman Bencsath, MD, Matthew Kroh, MD, Bipan Chand, MD, Sricharan Chalikonda, MD, Cleveland Clinc Foundation
- V077 TRANSUMBILICAL SINGLE-ACCESS LAPAROSCOPIC PERFORATED GASTRIC ULCER REPAIR <u>Giovanni Dapri, MD FACS FASMBS</u>, Haicam El Mourad, MD, Luisa Marsili, MD, Jacques Himpens, MD, Guy Bernard Cadière, MD PhD, European School of Laparoscopic Surgery, Saint-Pierre University Hospital, Brussels, Belgium
- V078 POST-SUPRADRENALECTOMY DIAPHRAGMATIC HERNIA WITH COLONIC OCLUSION. A LAPAROSCOPIC REPAIR. Ramon Vilallonga, PhD, Enric Caubet, PhD, Oscar Gonzalez, PhD, Jose Manuel Fort, PhD, Manuel Armengol, Universitary Hospital Vall d'Hebron. Barcelona.
- V079 OPERATIVE TREATMENT OF GASTROJEJUNAL ANASTOMOTIC ULCERS AFTER LAPAROSCOPIC GASTRIC BYPASS <u>Esther M Bonrath, MD,</u> Christopher Daigel, MD, Teodor P Grantcharov, MD PhD, St. Michael's Hospital, Toronto, Canada
- V080 LAPAROSCOPIC VENTRAL HERNIA REPAIR WITH MESH POSITIONING SYSTEM <u>George Rossidis</u>, <u>MD</u>, Bo T Neichoy, MD, Angel M Caban, MD, University of Florida, Department of Surgery
- V081 LAPAROSCOPIC TAKEDOWN OF NISSEN FUNDOPLICATION: A STEP-BY-STEP APPROACH <u>Bernadette Laxa, MD</u>, Barry Salky, MD, The Mount Sinai Hospital, New York
- V082 DIFFICULT SPLENIC FLEXURE <u>George j Nassif, DO</u>, John H Marks, MD, Joseph Frenkel, MD, Lankenau
- V083 LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR IN A PATIENT WITH SITUS INVERSUS <u>Pradeep Pallati, MBBS</u>, Sumeet Mittal, MBBS FACS, Tommy Lee, MD FRCSC, Creighton University Medical Center
- V084 SINGLE INCISION LAPAROSCOPIC SPLEEN PRESERVING DISTAL PANCREATECTOMY– IS IT FEASIBLE? <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, P S Rajan, S Rajapandian, V Vaithiswaran, S Gobu, GEM Hospital & Research Centre
- V085 SINGLE INCISION LAPAROSCOPIC HELLERS CARDIOMYOTOMY WITH TOUPET FUNDOPLICATION: USING CONVENTIONAL TROCARS AND INSTRUMENTS <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, R Parthasarthi, P S Rajapandian, V Vaithiswaran, B Vijay, GEM Hospital & Research Centre
- V086 RE-THORACOSCOPY IN A CASE OF ANASTAMOTIC LEAK AFTER ESOPHAGO-GASTRECTOMY AND INTRA THORACIC ANASTOMOSIS <u>CPalanivelu</u>, P Senthilnathan, P Praveen Raj, R Parthasarthi, P S Rajan, V Vaithiswaran, GEM Hospital & Research Centre
- V087 LAPAROSCOPIC TRANSANAL POLYPECTOMY <u>Marco Scatizzi, MD</u>, Elisa Lenzi, MD, Maddalena Baraghini, MD, Katrin Kroning, MD, Andrea Vannucchi, MD, Stefano Cantafio, MD, Alessia Garzi, MD, Francesco Feroci, MD, Chirurgia Generale Ospedale Misericordia e Dolce Prato
- V088 LAPAROSCOPIC D1+ SUBTOTAL GASTRECTOMY FOR GASTRIC ADENOCARCINOMA <u>Ashkan Moazzez</u>, <u>MD FACS</u>, Rodney J Mason, MD PhD FACS, H. Cluade Hudson Comprehensive Health Center, University of Southern California
- V089 LAPAROSCOPIC CONVERSION OF NISSEN FUNDOPLICATION TO ROUX-EN-Y GASTRIC BYPASS <u>Jamie Loggins</u>, <u>MD FACS FASMBS</u>, Central Maine Medical Center

- V090 LAPAROSCOPIC MORGAGNI HERNIA REPAIR Hui Sen Chong, MD, Kevin D Helling, MD, University of Iowa Hospital and Clinics
- V091 LAPAROSCOPIC RESECTION OF BENIGN TUMOR LOCALIZED IN THE NECK OF THE PANCREAS WITH SPLEEN PRESERVATION <u>Yuedong Wang, MD PhD</u>, Yangwen Zhu, MD, Jia Wu, MD, Zhijie Xie, MD, Xiaoli Zhan, MD, Zhejiang Provincial People's Hospital
- V092 REVISIONAL BARIATRIC SURGERY: FROM GASTRIC BAND TO ROBOTIC ASSISTED-LAPAROSCOPIC SLEEVE GASTRECTOMY S Ayloo, MD FACS, F Gheza, MD, M Masrur, MD, D Calatayud, MD PhD, P C Giulianotti, MD FACS, Division of General, Minimally Invasive and Robotic Surgery, Department of Surgery, University of Illinois at Chicago, Chicago, Illinois, USA.
- V093 COMBINED ENDOSCOPIC AND TRANSGASTRIC RESECTION OF A GE JUNCTION MASS <u>Avishai Meyer, MD</u>, Abhijit Shaligram, MBBS, Pradeep Pallati, MBBS, Dmitry Oleynikov, MD, University of Nebraska Medical Center
- V094 HYBRID TRANSVAGINAL CHOLECYSTECTOMY: INITIAL CLINICAL EXPERIENCE AT A MILITARY INSTITUTION <u>Gordon Wisbach, MD</u>, Kyle Gadbois, MD, Kristin Stevens, MD, Amanda Simsiman, MD, Naval Medical Center San Diego
- V095 BILATERAL LAPAROSCOPIC ADRENALECTOMY FOR PHOCHROMOCYTOMA IN MEN2A: TIPS AND TRICKS IN DIFFICULT GLAND DISSECTION. <u>Andrea T Costanzi, MD</u>, Dario Maggioni, MD, Valter Berardi, MD, Paola Sartori, MD, Angelo Miranda, MD, Ospedale di Desio
- V096 LAPAROSCOPIC REPAIR OF A MORGAGNI HERNIA IN AN ADULT P D Colavita, MD, M E Studstill, BS, V B Tsirline, MD, B T Heniford, MD, Carolinas Medical Center, Charlotte, NC
- V097 LAPAROSCOPIC PROXIMAL GASTRECTOMY WITH LATERO-LATERAL ESOPHAGO-JEJUNOSTOMY AND ROUX EN Y RECONSTRUCTION FOR GASTROINTESTINAL STROMAL TUMOR OF THE GE JUNCTION. <u>Karan Bath, MD</u>, Rena Moon, MD, Carolina Ampudia, MD, Samuel Szomstein, MD FACS FASMBS, Raul Rosenthal, MD FACS FASMBS, Cleveland Clinic Florida
- V098 LAPAROSCOPIC TAKE-DOWN OF FUNDOPLICATION, CLOSURE OF CRURAL DEFECT AND RESECTION OF GASTRIC FUNDUS IN A PATIENT WITH RECURRENT HIATAL HERNIA FOR SLIPPED NISSEN FUNDOPLICATION Carolina Ampudia, MD, <u>Andre Teixeira</u>, <u>MD</u>, Rena Moon, MD, Samuel Szomstein, MD FACS FASMBS, Raul Rosenthal, MD FACS FASMBS, Cleveland Clinic Florida
- V099 LAPAROSCOPIC LUMBAR HERNIA REPAIR <u>Edward D Auyang, MD MS</u>, Andrew S Wright, MD, Department of Surgery, University of Washington
- V100 LAPAROSCOPIC DISTAL ESOPHAGECTOMY AND POUCH GASTRECTOMY FOR HIGH GRADE DYSPLASIA AFTER GASTRIC BYPASS Konstantinos Spaniolas, MD, William E O'malley, MD, Thomas J Watson, MD, University of Rochester Medical Center
- V101 TRANSANAL ENDOSCOPIC MICROSURGERY FOR RECURRENT LOWER GASTROINTESTINAL BLEEDING <u>Alessandro Fichera</u>, <u>MD FACS</u> <u>FASCRS</u>, Marco Zoccali, MD, Departement of Surgery – University of Chicago Medical Center – Chicago, IL
- V102 LAPAROSCOPIC MEDIAN ARCUATE LIGAMENT RELEASE FOR CELIAC ARTERY COMPRESSION SYNDROME <u>Michael Hill, MD</u>, Dawn Barclay, MD, Neil Ghushe, MD, Daniel Mckenna, MD, Thadeus Trus, MD, Dartmouth-Hitchcock Medical Center, Hanover, NH, USA
- V103 INITIAL EXPERIENCE WITH A NEW FLEXIBLE LAPARO-ENDOSCOPIC ANASTOMOTIC DEVICE Parambir S Dulai, MD, Neil Ghushe, MD, Thadeus Trus, MD, Charles Alexander Mosse, PhD, Per Ola Park, MD, Maria Bergstrom, MD, Margherita Cadeddu, MD, Richard I Rothstein, MD, Paul Swain, MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA, Imperial College, London, UK, University College, London, UK, Boras General Hospital, Boras, Sweden, McMaster University, Hamilton, ON, Canada
- V104 LAPAROSCOPIC REMOVAL OF INFECTED HERNIA MESH WITH BOWEL REPAIR <u>Nicholas Gaudet</u>, John Hagen, Laz Klein, University of Toronto
- V105 PARAESOPHAGEAL HERNIA REPAIR WITH GASTRIC BYPASS AS A PARIETAL CELL SEPARATING PROCEDURE: A NOVEL TREATMENT FOR IDIOPATHIC PULMONARY FIBROSIS <u>Kalman P Bencsath</u>, MD, Roberto Ramirez, MD, Philip Schauer, MD, Stacy Brethauer, MD, Bipan Chand, MD, Steven Shay, MD, Matthew Kroh, MD, Cleveland Clinic

SAGES Video Channel Loop Listing

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- V107 A RARE CASE OF BILATERAL EPIPHRENIC DIVERTICULA <u>Amy Neville, MD</u>, Melina C Vassiliou, MD, Liane S Feldman, MD, Gerald M Fried, MD, Lorenzo E Ferri, MD, McGill University Health Center
- V108 SINGLE INCISION TOTAL PROCTOCOLECTOMY WITH ILEOSTOMY <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, R Parthasarthi, S Rajapandian, Anand Vijai, Anirudh Vij, GEM Hospital & Research Centre
- V109 ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) USING SPACE MAKING BALLOONS AND MAGNETICALLY COUPLED INSTRUMENTS-THE NEXT FRONTIER <u>Rohan A Joseph</u>, <u>MD</u>, Calvin L Lyons, MD, Barbara L Bass, MD, Brian J Dunkin, MD, Department of Surgery, The Methodist Hospital and Methodist Institute for Technology, Innovation and Education (MITIE)
- V110 LAPARO-ENDOSCOPIC SINGLE SITE (LESS) CHOLECYSTECTOMY WITH CONCOMITANT SUPRACERVICAL HYSTERECTOMY WITHOUT GENERAL ANESTHESIA Alexander S Rosemurgy, MD, Larry Glazerman, MD, Harold Paul, BS, Kenneth Luberice, BS, Edward Choung, MD, Sharona B Ross, MD, University of South Florida & Tampa General Medical Group
- V111 TRANSANAL MINIMALLY INVASIVE SURGERY (TAMIS): FIRST CANCER RESECTION WITH TWO YEAR FOLLOW-UP ENDOSCOPY <u>Sam Atallah</u>, <u>MD FACS FASCRS</u>, Matthew Albert, MD FACS FASCRS, Teresa Debecheadams, MD, Seema Izfar, MD, Sergio Larach, MD FACS FASCRS, Florida Hospital
- V112 THE CURIOUS CASE OF BENJAMIN BOERHAAVE: LAPAROSCOPIC PRIMARY REPAIR OF ESOPHAGEAL PERFORATION WITH ANTERIOR DOR FUNDOPLICATION Rebecca Kowalski, MD, Niket Sonpal, MD, Jennifer Montes, MD, Paresh C Shah, MD FACS, Lenox Hill Hospital, Northshore-LIJ Health System, Hofstra Medical School, New York, NY
- V113 TRANSAXILLARY ENDOSCOPIC THYROID LOBECTOMY USING THE SPIDER SURGICAL SYSTEM <u>Barnard J Palmer</u>, <u>MD</u>, Bernadette U Laxa, MD, William B Inabnet, MD, Mount Sinai School of Medicine
- V114 PARAESOPHAGEAL HERNIA WITH MIGRATION OF THE ADJUSTABLE GASTRIC BAND TOWARDS THE GASTROESOPHAGEAL JUNCTION S Ayloo, MD FACS, F Gheza, MD, M Masrur, MD, S D'ugo, MD, L Milone, MD, P C Giulianotti, MD FACS, Division of General, Minimally Invasive and Robotic Surgery, Department of Surgery, University of Illinois at Chicago, Chicago, IL, USA
- V115 LAPARO-ENDOSCOPIC SINGLE SITE (LESS) ADRENALECTOMY FOR RESECTION OF PHEOCHROMOCYTOMA <u>Alexander S Rosemurgy, MD</u>, Edward Choung, MD, Rita S Patel, MD, Harold Paul, BS, Sharona B Ross, MD, University of South Florida & Tampa General Medical Group
- V116 INTRA-OPERATIVE FLUORESCENT CHOLANGIOGRAPHY USING INDOCYANIN GREEN FOR ROBOTIC SINGLE SITE CHOLECYSTECTOMY Nicolas N Buchs, MD, Francois Pugin, MD, Franceso Volonte, MD, Pascal Bucher, MD, Eduardo Schiffer, MD, Philippe Morel, MD PhD, Clinic for Visceral and Transplantation Surgery, Department of Surgery, University Hospital of Geneva, Switzerland, Department of Anesthesiology, University Hospital of Geneva, Switzerland
- V117 SAFE CHOLECISTECTOMY. FLUORESCENT CHOLANGIOGRAPHY <u>Pedro Ferraina</u>, <u>PHD</u>, Fernando Dip, MD, Alle Lisandro, MD, Mario Nahmod, Luis Sarotto, MD, Sanatorio Anchorena
- V118 CECAL VOLVULUS A DEMONSTRATION OF SURGICAL MANAGEMENT AND REVIEW OF THE LITERATURE <u>Vid Fikfak, MD</u>, Calvin Lyons, MD, Patrick Reardon, MD FACS, Vadim Sherman, MD FACS FRCSC, Brian J Dunkin, MD FACS, METHODIST INSTITUTE OF TECHNOLOGY INNOVATION AND EDUCATION (MITIE)
- V119 LAPAROSCOPIC REPAIR OF A LARGER DIAPHRAGMATIC HERNIA MIMICKING A TYPE II PARAESOPHAGEAL HERNIA <u>Marcelo W Hinojosa, MD</u>, Maximiliano Loviscek, MD, Brant K Oelschlager, MD, University of Washington
- V120 LAPAROSCOPIC REPAIR OF INCARCERATED BILATERAL MORGAGNI HERNIA <u>Kristin Stevens, MD</u>, Gordon Wisbach, MD, Karen Hanna, MD, Brian Barbick, MD MPH, Naval Medical Center San Diego
- V121 MINIMALLY INVASIVE IVOR LEWIS ESOPHAGECTOMY AFTER ROUX-EN-Y GASTRIC BYPASS <u>Jason F Richardson, MD</u>, Ninh T Nguyen, MD, University of California Irvine Medical Center
- V122 LAPAROSCOPIC APPROACH AND TREATMENT OF CELIAC ARTERY SYNDROME <u>C L Nelson, MD</u>, P D Colavita, MD, I Belyansky, MD, K W Kercher, MD, Carolinas Medical Center, Charlotte, NC

- V123 LAPAROSCOPIC MANAGEMENT OF CHRONIC INGUINAL PAIN; MESH PLUG REMOVAL <u>Nikolai R Bildzukewicz, MD</u>, Marcos Michelotti, MD, Alisa Coker, MD, Bryan Sandler, MD, Takayuki Dotai, MD, Mark Talamini, MD, Santiago Horgan, MD, Garth Jacobsen, MD, University of California at San Diego
- V124 LAPAROSCOPIC TAPP REPAIR OF GRYNFELTT HERNIA <u>Christian G</u> <u>Massier, MD</u>, Carl Yood, MD, Cleveland Clinic, Cleveland, Ohio
- V125 LAPAROSCOPIC RESECTION OF A DISTAL ESOPHAGEAL DIVERTICULUM WITH ASSOCIATED LEIOMYOMA <u>Kathleen M Lamb, MD</u>, David Tichansky, MD, Karen Chojnacki, MD, Ernest Rosato, MD, Thomas Jefferson University Hospital
- V126 ROBOTIC ASSISTED SINGLE INCISION LAPAROSCOPIC RIGHT HEMICOLECTOMY. ONCOLOGIC RESECTION <u>Luca Giordano</u>, <u>MD FACS</u>, Aria Health, Philadelphia, PA, USA
- V127 LAPAROSCOPIC REPAIR OF A GIANT HERNIA OF MORGAGNI John R Frederick, MD, <u>Kenric Murayama</u>, <u>MD</u>, University of Pennsylvania School of Medicine
- V128 SINGLE-INCISION TRANSUMBILICAL LAPAROSCOPIC LEFT HEPATIC LOBECTOMY AND NISSEN FUNDOPLICATION <u>Giovanni Dapri, MD-FACS FASMBS</u>, Vincent Donckier, MD PhD, Jacques Himpens, MD, Guy Bernard Cadière, MD PhD, European School of Laparoscopic Surgery, Saint-Pierre University Hospital, Brussels, Belgium
- V129 SLEEVE GASTRECTOMY LEAK: LAPAROSCOPIC DRAINAGE AND ENDOSCOPIC STENTING <u>Jason F Richardson, MD</u>, Ninh T Nguyen, MD, University of California Irvine Medical Center
- V130 LAPAROSCOPIC DISTAL GASTRECTOMY WITH D2 LYMPHADENECTOMY AND TOTAL OMENTOBURSECTOMY FOR ADVANCED GASTRIC CANCER <u>Young-kyu Park, MD PhD</u>, Oh Jeong, MD, Mi-ran Jung, MD, Jang-won Sun, MD, Kwang-yong Kim, Seong-yeob Ryu, MD PhD, Chonnam National University Hwasun Hospital
- V131 STAPLED TRANSRECTAL NOTES® CLOSURE TECHNIQUE <u>Byron F</u> <u>Santos, MD</u>, Eric S Hungness, MD, Anne-marie Boller, MD, Northwestern University Department of Surgery
- V132 SINGLE INCISION SPLENECTOMY Nicholas E Williams, FRACS, <u>Hector Romero, MD</u>, Juan Pablo Pantoja, MD FACS, National Institute of Medical Sciences and Nutrition Salvador Zubiran
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P001

TRIMODAL PREHABILITATION PROGRAM IMPROVES FUNCTIONAL RECOVERY IN COLORECTAL CANCER SURGERY: A PILOT STUDY Chao

<u>Li, MD</u>, Francesco Carli, MD MPhil, Patrick Charlebois, MD, Barry Stein, MD, Alexander S Liberman, MD, Berson Augustin, BSc, Pepa Kaneva, MSc, Ann Gamsa, PhD, Do J Kim, MSc, Gerald M Fried, MD, Melina C Vassiliou, MD MEd, Liane S Feldman, MD McGill Unversity Health Centre

Introduction: Patients undergoing colorectal cancer resections are at risk for delayed recovery. Prehabilitation aims to enhance functional capacity preoperatively in order to better tolerate surgery and accelerate recovery. We previously demonstrated the limited impact of a prehabilitation program based on exercise alone. We therefore propose an expanded trimodal prehabilitation program that adds nutritional counseling, whey-protein supplementation and anxiety reduction strategies to a moderate aerobic and resistance exercise program. The purpose of this study was to estimate the impact of this trimodal program on recovery of functional exercise capacity compared to standard surgical care.

Methods: Between September 2010 and June 2011, 42 consecutive patients with colorectal cancer were enrolled in the trimodal prehabilitation program. The primary outcome was functional walking capacity as measured by the Six-minute walk test (6MWT) at baseline and preoperatively after the 4-week prehabilitation program, then at 4 and 8 weeks after surgery. Secondary outcomes included self-reported physical activity (CHAMPS questionnaire) and health-related quality of life (SF-36). Comparison was made to a similarly assessed cohort of 45 consecutive patients with colorectal cancer admitted between July 2009 and Sep 2010 receiving standard care. Patients in both groups followed an enhanced recovery program after surgery. Data are expressed as mean(SD) or median[IQR], and analyzed using χ^2 , Student's t, and Wilcoxon's rank-sum tests.

Results: The prehabilitation and control groups were comparable in age, gender, BMI and ASA class. More patients in the control group underwent laparoscopic colon resection (93% vs 81%). Complication rates (44% vs 36%) and length of stay (4[3-6]d vs 4[3-6]d) were not significantly different. During the prehabilitation period (median 33.5[21-45]d), functional walking capacity improved by 40(40) meters from a baseline value of 422(87)m to a preoperative value of 464(93)m. There was no difference between the baseline 6MWT in the prehabilitation group and the first value obtained in the control group immediately before surgery (422(87)m vs 402(57)m). Postoperatively, patients in the prehabilitation program had better functional walking capacity compared to control both at 4 weeks (408(112)m vs 356(71m), p=0.01) and 8 weeks (465(103)m vs 375(58)m, p<0.01). At 8 weeks, 75% of prehabilitated patients were improved from their baseline compared to 0% in the control group (p<0.01). The prehabilitation group also reported higher levels of physical activity (CHAMPS questionnaire, kcal/kg/week) preoperatively (32[19-75] vs 20[9-32], p<0.01), at 4 weeks (20[7-57] vs 3[0-7], p<0.01), and at 8 weeks (23[9-51] vs 7[0-17], p<0.01). There were no differences in SF-36 mental and physical component scores. **Conclusion:** In this pilot project, a one-month trimodal prehabilitation program resulted in increases in functional walking capacity and selfreported physical activity in patients awaiting resection for colorectal cancer. Compared to a previously assessed control group, prehabilitation was associated with improved functional walking capacity preoperatively and substantial improvement in walking capacity after surgery. Moreover, increases in self-reported physical activity were maintained in the postoperative period. Prehabilitation may be a valuable component of an enhanced recovery program.

P002

NATURAL ORIFICE SPECIMEN EXTRACTION VERSUS CONVENTIONAL LAPAROSCOPICALLY ASSISTED ANTERIOR RESECTION: A CASE-MATCHED STUDY IN 104 PATIETNS Won Ho Choi, MD, Gyu-seog Choi, MD, Jun Seok Park, MD, Soo Yeun Park, MD, Hye Jin Kim, MD, Jong Pil Ryuk, MD Colorectal Cancer Center, Kyungpook National University Medical Center, Daegu, Korea

Introduction: This case–control study compared the clinical outcomes of laparoscopic anterior resection with natural orifice specimen extraction (NOSE) and the conventional laparoscopically assisted approach (LAP) for colorectal cancer.

Methods: Consecutive 52 patients who underwent totally laparoscopic resection with NOSE for distal sigmoid and rectal cancer between October 2006 and July 2011 were matched by age, gender, body mass index, date of surgery, tumor location, and clinical stage with patients who had conventional LAP.

Results: The number of lymph nodes harvested and the resection margin status were similar in the two groups. The NOSE group showed lower pain score than the LAP group (POD 1: 3.7 versus 5.6; P=0.078) and fewer patients in the NOSE group required additional parenteral analgesia (17% versus 30%; P = 0.050). The mean time to first passage of flatus was shorter in the NOSE group (P=0.001), but the hospital stay was similar in two groups. The NOSE group had less surgical morbidity than the LAP group, but the difference was not significant (P = 0.228). NOSE was associated with significantly better cosmetic results than LAP (mean numerical rating scale 9.3 versus 7.0; P = 0.016). After a median followup of 30 (range 2–55) months, there was no transvaginal access-site recurrence or posterior colpotomy-related complications.

Conclusion: the NOSE approach is feasible with favorable short and median-term surgical outcomes.

P003

TRANSANAL ENDOSCOPIC VIDEO-ASSISTED (TEVA) EXCISION

Madhu Ragupathi, MD, Dominique Vande Maele, MD, Javier Nieto, MD, T. Bartley Pickron, MD, Eric M Haas, MD FACS FASCRS 1. Colorectal Surgical Associates, Ltd LLP, Houston, TX; 2. Division of Elective General Surgery, Department of Surgery, The University of Texas Medical School at Houston, TX

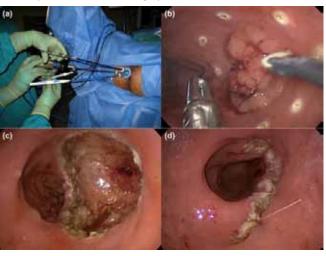
Introduction: Transanal endoscopic video-assisted (TEVA) excision represents an alternative approach for the surgical treatment of middle and upper rectal lesions not amenable to colonoscopic removal. By utilizing principles of single-incision laparoscopic surgery, TEVA excision optimizes access for safe and complete removal of these lesions without the need for a formal rectal resection. We describe our technique for TEVA excision and our early outcomes with this novel minimally invasive surgical approach.

Methods and Procedures: Between March 2010 and September 2011, TEVA excision was performed for patients presenting for management of benign and malignant rectal lesions not amenable to colonoscopic or standard transanal removal. Patients were selected for TEVA excision if the proximal extent of the lesion extended beyond 8 cm from the anal verge. Early-stage adenocarcinomas (ultrasound stage: uT1N0) were also considered for TEVA excision. Demographic, intraoperative and postoperative data were assessed. A SILS™ port (Covidien, Mansfield, MA, USA) was placed in the anal canal for access in all cases (Fig. 1a). The port contains three cannulae for introduction of instrumentation into the rectal lumen and a supplementary cannula that facilitates carbon dioxide insufflation for creation of pneumorectum. Standard laparoscopic instruments were utilized for visualization, demarcation or scoring (Fig. 1b), and full-thickness transanal excision of the rectal lesion (Fig. 1c). The resulting wall defect was primarily closed with interrupted intra-luminal sutures (Fig. 1d).

Results: Twenty patients (50% male) with a mean age of 64.6 ± 10.9 years (range: 40-86 years), mean BMI of 28.4 ± 4.9 kg/m² (range: 20.2-39.0 kg/m²), and median ASA of 2 (range: 1-3) underwent TEVA excision. Fourteen patients (70%) presented with benign disease (adenomas) and six patients (30%) presented with malignant disease (adenocarcinomas or carcinoids). The mean size of the lesions was 3.0 ± 1.4 cm (range: 1.3-5.5 cm) and the mean distance from the anal verge was 10.6 ± 2.4 cm (range: 6-15 cm). All TEVA excisions were successfully completed with a mean operative time of 80.1 ± 21.0 min (range: 45-112 min). There were no intraoperative complications or conversions to another surgical approach. The mean length of hospital stay was 1.1 ± 0.7 days (range: 0-3 days). One postoperative complication (5%) was encountered; a patient

developed a rectovaginal fistula that spontaneously resolved without further intervention. Two patients (10%) underwent repeat interval TEVA excision, one for close surgical margins (within 1 mm) in a malignant case and another for recurrence of a villous adenoma 7 months after the initial procedure. One patient underwent a formal oncologic low anterior resection after TEVA excision revealed a T2 lesion.

Conclusions: Transanal endoscopic video-assisted excision is a safe and feasible approach for local excision of benign and superficial malignant rectal lesions. The approach facilitates exposure and access to pathologies of the middle and upper rectum and averts the need for formal rectal resection. Continued investigation and development of this novel and innovative modality will be important in establishing its role in minimally invasive colorectal surgery.



P004

SURGICAL MANAGEMENT OF GASTROINTESTINAL STROMAL TUMORS (GIST) OF THE STOMACH. COMPARISON OF OUTCOMES AFTER LAPAROSCOPIC VERSUS OPEN SURGERY. THE MOST RECENT NSQIP ACS DATABASE Omar Bellorin, MD, Mingwei Ni, MD, Frank Zheng, Turner James, MD, Du Litong, MD New York Hospital Queens. Flushing.

Introduction: Laparoscopic gastrectomy for gastric GIST is emerging in the West as a technique that may offer benefits for patients, although large-scale studies are lacking. The goal of this project is to assess the outcomes with respect to 30-day morbidity and mortality rates, using multi-institutional, prospective, risk-adjusted data after laparoscopic versus open partial gastrectomies employed in the management of gastrointestinal stromal tumors of the stomach.

Methods and procedures: Using the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database (2006-2009), patients who underwent laparoscopic and open partial gastrectomy as a treatment option for gastric GIST were identified. Models assessed the association between surgical approach (Laparoscopic vs Open) and risk-adjusted overall morbidity and mortality. The relationships between, anesthesia time, operative duration, surgical site infection (SSI), and extended duration of hospital stay were also examined. Two-sample T-test was used as statistical method of analysis. Statistics for each analysis was based on the cases with no missing or out-of-range data for any variable in the analysis.

Results: Of 486 patients, 146 (30%) underwent laparoscopic resection (LR) and 340 (70%) underwent open resection (OR). Patients who underwent LP were older (mean: 65.08 years) compared with those who underwent OR (mean: 62.59 years) although there was no difference statistically (P:0.062). Patients treated with LR experienced shorter anesthesia time (mean: 183 vs 212 minutes; P<0.005; 95% confidence of interval [CI], 48.14-9.56) as well as an operative time (mean: 119 vs 149 minutes, P<0.005; 95% CI, 47.05-12.70) compared to those who

underwent OR. All patients treated with LR were significantly less likely to develop SSI compared to those who underwent OR (0.68% vs 6.7%; P<0.005). Patients treated with LR were less likely to experience an overall morbidity (mean: 3.9% vs 11.7%; P<0.005; 95% CI, 0.096-0.059) or mortality (mean: 0.23% vs 0.72%; P<0.005; 95% CI, 0.066-0.031) and less length of total hospital stay (mean: 3.17 vs 7.50 days; P:<0.005; 95% CI, 5.29-3.36) compared with those who underwent OR.

Conclusion: Within ACS NSQIP hospitals, laparoscopic resection of gastric GIST is associated with lower overall morbidity and mortality, less operative time, less risk of SSI and less length of total hospital stay compared to those who underwent open resection.

P005

A PROSPECTIVE RANDOMIZED TRIAL COMPARING 9-YEAR FOLLOW UP RESULTS BETWEEN OPEN VS. LAPAROSCOPY-ASSISTED DISTAL GASTRECTOMY FOR EARLY GASTRIC CANCER Lee Joo-ho, MD PhD, Chae Sumin, MD, Han Ho-seong, MD PhD Ewha Womans University School of Medicine, Seoul National University Bundang Hospital

Introduction Application of laparoscopy-assisted distal gastrectomy (LADG) for early gastric cancer (EGC) is still controversial because of scant evidence of long-term follow up results and feasibility from prospective randomized trial. We conducted a prospective randomized trial to compare LADG including D2 lymphadenectomy with open distal gastrectomy for EGC.

Methods and procedures Forty-seven patients of EGC were enrolled in this study from November 2001 to August 2003. With the aid of random number table, 23 patients were assigned to the open group (group O) and 24 patients were assigned to the LADG group (group L). Clinicopathologic characteristics, postoperative hospital course, postoperative morbidity & mortality, and long-term outcomes including cancer recurrence and survival, were compared between the two groups. **Results** There was no conversion to open surgery from laparoscopic surgery. Postoperative recovery was faster and the duration of analgesic administration was shorter in group L; the first passing flatus occurred earlier, starting a liquid diet began sooner, and postoperative hospital stay was shorter, but not statistically significantly so. Estimated blood loss and transfusion amounts were similar. Mean operation time was significantly longer in group L, but postoperative pulmonary complications occurred less frequently in group L. (p = 0.043). Although total 4 patients were died (The cause of death were 2 other malignancies, 1 heart problem, 1 pulmonary problem, all of them were unexpectedly in group O), we could not find any gastric cancer related death or gastric cancer recurrence in either group at a median follow up of 109 months. The overall 9-year survival rates of the group L and O were 100% 82.6%, respectively, however, the disease free survival rates were equal. Conclusion LADG has clear advantages over its open counterpart in terms of faster postoperative recovery, less pain, and fewer postoperative complications while maintaining the curability in long-term follow up.

P006

PATTERNS OF DETERIORATION AND IMPROVEMENT IN ABDOMINAL WALL FUNCTION AFTER VENTRAL INCISIONAL HERNIA REPAIR: RESULTS OF A PROSPECTIVE STUDY Ross F Goldberg, MD, Armando Rosales-velderrain, MD, Tatyan M Clarke, MD, Michael Parker, MD, Madi Dinkins, Mauricia A Buchanan, RN, John A Stauffer, MD, Horacio J Asbun, MD FACS, C Daniel Smith, MD FACS, Steven P Bowers, MD FACS Mayo Clinic - Florida

Introduction: Using our previously validated and reported abdominal wall strength score (AWSS), our aim was to objectively measure improvement in abdominal wall function after ventral incisional hernia (VIH) repair.

Methods and Procedures: Between December 2009 and September 2011 56 patients undergoing VIH repair were enrolled in a prospective study assessing AWSS preoperatively and at 4 month intervals postoperatively for up to 12 months. The AWSS is a physical exam-based measure of double leg lowering and trunk raising. Each movement was graded on a 5-point scale, with a maximum score of 10. A significant AWSS

change was considered any change of 2 points or more, and higher scores indicate better abdominal wall function. Thirty-three patients were eligible for 8-12 month follow-up; 4 patients did not complete the follow-up assessments, yielding an 88% retention rate (n=29). Average patient age was 63.0 + /- 13.3 years and the majority of patients were male (n=18). Nineteen patients underwent laparoscopic repair and 10 open repair.

Results: No patient developed a hernia recurrence. The median and interquartile range (IQR) of AWSS for the 29 patients are: preoperative, 4 (IQR: 4-6); 4-month, 4 (IQR: 4-6); 8-month, 5 (IQR: 5-7); and 12-month, 7 (IQR: 6-8, p=0.0014 compared to preoperative, Mann-Whitney U test). At four months after repair, 8 of 29 patients (28%) had ≥ 2 point reduction of AWSS when compared to their preoperative score. After 8-12 months, 15 patients (51.7%) had ≥ 2 point increase of AWSS when compared to their preoperative score, 12 (41.4%) were unchanged and 2 (6.9%) had ≥ 2 point reduction. There was no statistical difference between laparoscopic and open approaches in overall AWSS improvement or in number of patients with deterioration at 4 months.

Conclusion: There is a measurable improvement in abdominal wall strength in patients undergoing VIH repair. In many patients, there is a considerable decrease in abdominal wall function at 4 months after operation. The AWSS score shows promise for comparing outcomes using different VIH repair techniques.

P007

LONG TERM FOLLOW UP OF LAPAROSCOPIC TEP HERNIA REPAIR USING SLIT MEDIUM SIZE POLYPROPYLENE MESH Sugandi Hardjanto, MD Kasih Ibu Hospital

Objectives: Concerning shrinkage of polypropylene mesh about 40% after 6 weeks (invitro), so the size of mesh graft is very important to avoid the development of recurrence. The objectives of the study is to determine whether medium (12x8 cm) slit polypropylene mesh is an adequate size for reinforcement inguinal hernia (Gilbert type 2 classification which the defect ≤ cm) for Asian people.

Methods: A retrospective review over eight and a half years period from January 2002 to June 2009, 235 consecutive patients of inguinal hernia Gilbert type 2 classification underwent totally extraperitoneal (TEP) inguinal hernia repair and were performed by a single surgeon. These surgery cases consisted of 226 male patients (age range 32-79 years old) and 9 female patients (age range 45-56 years old). After reduction of hernia's sac and appropriate dissection of the pre-peritoneal space, followed by placement of a medium (12x8 cm) slit polypropylene micropore heavy weight mesh with 2 sutures (vicryl 2-0) were already placed at the upper border adjacent to the slit on the mesh. The two sutures were retrieved with 14 gauge injection needle one by one via the same point on the abdominal wall and adequately tied externally to secure the mesh to abdominal wall and the knot is buried subcutaneously.

Result: The follow up was complete (telephone interview) in 92%, partial (interview & physical examination) in further 6%, there were 1,3% cases of hernia recurrence. The operating time averaged between 55 to 110 minutes. There was no chronic pain so far. There were 1,7% cases that required conversion to Stoppa method.

Conclusion: The use of slit medium size mesh graft with single fixation in laparoscopic TEP Hernia repair for inguinal hernia Gilbert type 2 classification is quite effective & simple for Asian people. However its long term result must be evaluated more fully.

P008

PREDICTORS OF POOR OUTCOMES IN FUNCTIONALLY DEPENDENT PATIENTS UNDERGOING ELECTIVE VENTRAL HERNIA REPAIR <u>Drew Reynolds</u>, MD, Daniel Davenport, PhD, J. Scott Roth, MD University of Kentucky

INTRODUCTION: Pre-operative functional health status has previously been shown to affect outcomes following ventral hernia repair. As the patient population ages, there is an associated increase in comorbidities

and concomitant decrease in patients' autonomy. Within the ACS NSQIP database, progressive lack of autonomy is defined as either partial or total dependence based on the degree to which patients are able to perform acitivities of daily living. Given the trend of increasing complications in those with limited functional health status, the decision to proceed with elective hernia repair can be challenging. The objective of this study is to identify specific factors contributing to morbidity and mortality in functionally dependent patients undergoing elective ventral hernia repair.

METHODS AND PROCEDURES: We reviewed all patients in the ACS NSQIP database that underwent elective ventral hernia repair from 2005-2009. Patients were selected based on the following CPT codes: 49560, 49561, 49565, 49566, 49568, 49570, 49572, 49585, 49587, 49652, 49653, 49654, 49655, 49656, and 49657. Only patients classified as partially or totally dependent were included in the study. Thirty-day outcome measures included mortality, wound complications (superficial, deep, or organ/space surgical site infection, dehiscence), pulmonary occurrences (pneumonia, ventilation >48 hours, unplanned intubation), venous thromboembolism, and the development of sepsis/shock. We analyzed risk factors using chi-square univariate testing and multivariable logistic regression.

RESULTS: We identified 75,865 patients who underwent elective ventral hernia repair. 1,114 functionally dependent patients were identified, 979 of which (85.6%) were classified as partially dependent and 165 (14.4%) as totally dependent. Adverse outcomes included 115 wound complications (10.1%), 122 pulmonary occurrences (11%), and 26 cases of venous thromboembolism (2.3%). Postoperative sepsis was seen in 104 cases (9.1%). Post-operative mortality occurred in 43 functionally dependent patients (3.8%). Amongst functionally dependent patients, there was no significant difference in any mortality between laparoscopic and open hernia repairs nor were there any differences in mortality between incarcerated or reducible hernias. Operative duration did not impact mortality rates. Multivariate logistic regression demonstrated increasing age to be an independent predictor of mortality (age 70-79, Odds ratio =15.8; age 80+, Odds ratio =19.3). Similarly, the presence of ascites and preoperative renal failure were also identified as independent predictors of mortality, odds ratio 9 and 13.2, respectively.

CONCLUSIONS: Elective hernia repair in the functionally dependent patient population carries significant morbidity and mortality. Laparoscopic ventral hernia repair offers no survival advantage over open hernia repair in this patient group. Increasing age, ascites, and preoperative renal failure are independent predictors of mortality, and nonoperative management should be strongly considered in functionally dependent patients with these risk factors.

P009

ERCP AND LAPAROSCOPIC CHOLECYSTECTOMY IN A COMBINED(ONE-STEP) PROCEDURE: A RANDOM COMPARISON TO THE STANDARD(TWO-STEP) PROCEDURE. Matthew Johnson, MD, Edward Samourjian, MD, Nathan Ozobia, MD FACS University of Nevada School of Medicine

INTRODUCTION: The gold standard for treating acute/chronic cholecystitis is by laparoscopic cholecystectomy with or without intraoperative cholangiogram(IOC). Currently, no one method can be said to be the gold standard for the treatment of obstructing complications of calculous biliary disease including biliary pancreatitis, cholangitis, or (a)symptomatic choledocholithiasis. Since 1997, one of the authors of this paper has been performing the One Step procedure for some selected cases of obstructing biliary disease. For the first time, a randomized retrospective comparison is being made of the One Step and Two Step procedure which demonstrates both the efficacy and a clear benefit of the One Step procedure.

METHODS: One Step defined: In the One Step procedure a laparoscopic cholecystectomy is first performed and an IOC is obtained. If the cholangiogram is positive for common bile duct stones or if for technical reasons a cholangiogram is not possible, an INOPERC(Intraoperative ERCP) is obtained if indications for ERCP were present at admission.

Depending on the ERCP findings, a sphincterotomy, balloon exploration of the common bile duct with stone extraction and/or bile duct stenting is performed. Two Step defined: In the Two Step procedure, preoperative ERCP is usually completed by the Gastroenterology(GI) service after consultation by the admitting team. Depending on the ERCP findings, therapeutic procedures are performed by the GI team as indicated. Laparoscopic cholecystectomy is then scheduled at a later time usually within 24-48 hours of completion of the pre-operative ERCP. Laparoscopic cholecystectomy is usually performed without IOC. Ten One Step and ten Two Step procedures were randomly selected. Total operative time was compared along with total hospital charges. The data was collected from medical records retrospectively. Operative time, hospital days, and hospital charges were then tallied and individually and collectively compared using a Mann-Whitney statistical analysis. RESULTS:

Measures (avg.)	Number of Patients	Days in Hos- pital	Pre-op Days	Additional Procedures	Type of Additional Procedures	Total Opera- tive Time	Compli- cations	Type of Compli- cations	Total Hospital Charges
One Step		3.8	2.3	1	ERCP	108.1	0	N/A	\$58,145
Two Step	10	5.3	3.1	0	N/A	117.6	0	N/A	\$78,895

CONCLUSIONS: Obstructing calculous biliary disease can effectively be treated by surgeons in a One Step fashion. By limiting the number of operative procedures and hospital days, patients can be safely and more efficiently treated using this method. We found a significant difference in total hospital charges. Although there was no significant difference in total operative time or hospital days, there was a trend toward a decrease in both with the One Step procedure. There were no complications in either of the two study groups and operative times were similar. In addition, a large, randomized prospective study is currently underway to further compare these two standard methods for treating obstructing calculous biliary disease.

P010

LAPAROSCOPIC LIVER RESECTION FOR T1 AND T2 HEPATOCELLULAR

CARCINOMA Sanghyun Song, MD, <u>Chood Hyuck David Kwon, MD</u>, Jae Won Joh, MD, Milljae Shin, MD, Jong Man Kim, MD, Sung Joo Kim, MD, Suk Koo Lee, MD, Young Nam Roh, MD, Hyung Hwan Moon, MD, Sanghoon Lee, MD, Tae Seok Kim, MD Department of surgery, Samsung Medical Center, Sungkyunkwan university school of medicine

Purpose: Laparoscopic liver resection has gained much popularity in recent years, but relatively few centers have performed hepatectomies in hepatocellular carcinoma (HCC) patients due to the technical difficulties. We now present our early experience

with laparoscopic liver resection in HCC performed in a single institution Methods: From January 2008 until February 2011, total 251 patients of hepatectomy was done and we excluded 20 stage 3 patients. Among 231 patients, 71 laparoscopic liver resections were performed. Open conversion was 13 cases (15.4%).

Results: The cause of open conversion were bleeding for 7 cases, inability to find a mass for 3 cases, severe adhesion for 2 cases and tumor margin for 1 case. In open resection group, T2 stage(60.9% vs 36.6%) and major operation(45.6% vs 16.9%) was more than in laparoscopic resection group. In laparoscopic resection group, admission duration(8.9 days vs 15.3 days, p=0.000), operation time(225.4min vs 299.4min, p=0.000), transfusion amount (0.06 unit vs 0.36 unit, p=0.005) were less than open resection group. When we analyzed stage 1 cases, cumulative disease free survival was comparable in both group. Median disease free survival was 18.9 months(range 1-39.8month) in open resection group and 19.4 months(range 1-39.4month) in laparoscopic resection group.(p=0.470) In stage 2 cases, median disease free survival was 14.23months(range 1-39.8month) in open resection group and 19.40months(range 1-37.9month) in laparoscopic resection group.(p=0.980) Conclusion: Laparoscopic liver resection for HCC can be a feasible and safe operative method. Randomized control study is needed.

P011

OPEN VERSUS LAPAROSCOPIC LIVER RESECTION FOR T1 AND T2 HEPATOCELLULAR CARCINOMA: A MIDTERM RESULT Choon Hyuck

<u>D Kwon, MD PhD</u>, Sanghyun Song, MD, Jae-won Joh, MD PhD Samsung Medical Center, Sungkyunkwan University School of Medicine

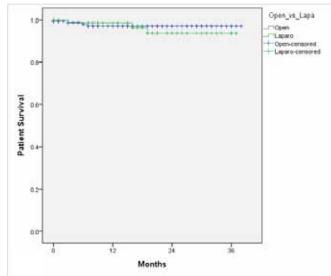
Introduction: Laparoscopic liver resection (LLR) has gained much popularity in the recent years, and hepatocellular carcinoma (HCC) has increasingly become an indication for LLR. However due to the technical difficulties faced with underlying liver cirrhosis and the fear for increased recurrence, it is performed relatively restrictively. We herein present the midterm results of LLR in HCC performed in our institution and compared its results with those of open resection (OR).

Method: Retrospective analyses of 232 patients with T1 or T2 HCC that receive liver resection (OR 261, LLR 71) from January 2008 until February 2011 were analyzed. Indication for LLR was tumor size less than 5cm except in peripheral protruding masses, and restricted to tumors located at anterolateral segments including both segments 4a and 4b and segment 1. Preclinical data, disease free survival and patient survival was analyzed according to T stage.

Results: More female patients received LLR (25.4% vs. 14.3%, p=0.042). There were more T2 patients in OR (60.9% vs. 36.6%, p=0.001) but background cirrhosis was more frequent in LLR (56.3% vs. 41.6%, p=0.038). In subgroup analysis of T1 (OR 63, LLR 45), estimated blood loss, transfusion rate, preop PIVKA-II, preop WBC was higher, admission days and op time longer and tumor size larger in OR group (p<0.05), but preop AFP, tumor grade, and ICG15min, and safety resection margin was not different. Recurrence free survival (OR 78.5% vs. LLR 80.4%, p=0.67) and patient survival (98.2% vs. 100%, p=0.38) at 3 years were not different. In T2 analysis, OR group had larger tumor size, higher preop AFP and PIVKA-II and longer op time (p<0.05), but the estimated blood loss, transfusion rate, tumor grade, ICG15min and resection margin was not different. Recurrence free survival (OR 64.6% vs. LLR 59.5%, p=0.98) and patient survival (96.3% vs. 83.4%, p=0.13) at 3 years were not different.

Conclusion: Laparoscopic liver resection in HCC with T1 or T2 stage seems to be feasible with equal midterm survival compared to open resection.

Figure: Overall patients survival and recurrence free survival of OR(n=161) and LLR(n=71) does not differ between groups (p=0.60 and 0.39 respectively). The percentage shows the 3 year survival rate.





MANAGEMENT OPTIONS FOR OBESITY AFTER BARIATRIC SURGERY

<u>Kristen Buttelmann, PAC MMS</u>, Amy Yetasook, Melissa Ruiz, MD, John Linn, MD, Ervin Denham, MD, Michael Ujiki, MD NorthShore University HealthSystem

Introduction: Bariatric surgery results in significant and life-changing weight loss for a majority of patients. However, a significant minority of individuals fail to reach their target weight or have significant weight regain after surgery at long-term follow up. Revisional surgery for obesity carries significantly higher morbidity compared to primary operations. Other treatments, such as endoscopic therapies are still investigational. We sought to compare the excess weight loss (EWL) achieved by patients undergoing four treatment options for reweight gain: supervised diet and exercise, Restorative Obesity Surgery, Endolumenal (ROSE), and Gastric Banding Over Bypass (BOB), and Endoscopic Closure of Gastric-Gastric Fistulas (ECF).

Methods and Procedures: A retrospective analysis was performed on patients who had undergone prior bariatric operations who were seen for either weight re-gain or failure to lose weight from 2003 to 2011. Data was reviewed from the electronic medical records of patients with body mass index (BMI) > 25 at the time of follow up. Patient records were reevaluated at 3 months, 6 months, and annually after intervention to determine estimated weight loss and change in BMI. These endpoints were the primary outcome measures.

Results: Eighty patients were identified and comprised the study population. Mean BMI was 41.2 kg/m2, mean weight 116.5 kg, and 50% of patients qualified as morbidly obese at that time. Twenty one patients failed to follow up after first presentation. Forty-two patients underwent supervised medical weight loss, diet, and exercise management, while 17 patients underwent operative management for their weight gain, based on surgeon's recommendations and patient preference. ROSE was performed on eight patients, BOB on seven, and ECF on two. At one-year follow up, mean BMI decreased by 4.7kg/m2 (±3.8 SD) for the patients who underwent surgical intervention (ROSE, BOB, or ECF), compared with a 0.3kg/m2 increase (±2.2 SD) in mean BMI for the supervised weight loss group (p 0.001). The occurrence of diabetes, hypertension, and obstructive sleep apnea decreased when patients were re-introduced to bariatric treatment of any type. The mean number of comorbidities per patient decreased for both treatment groups, and was not significantly different between the diet and exercise and the surgical intervention group.

Conclusion: Weight regain does occur in patients who undergo bariatric surgery, and is often accompanied by recurrence of associated comorbidities. Patients who underwent either ROSE, BOB, or ECF had significantly greater weight loss compared to all patients who received recommendations for diet and exercise alone. These surgical and procedural interventions can result in greater decreases in BMI for patients compared to supervised diet and exercise.

P013

LEAK AFTER SLEEVE GASTRECTOMY: PRELIMINARY RESULTS FROM BARIATRIC OUTCOME LONGITUDINAL DATABASE (BOLD) <u>Ashutosh Kaul, MD FRCS FACS</u>, Jyoti Sharma, MD, Debbie Winegar, PhD, Donald Risucci, PhD, Anthony Maffei, MD FACS, Thomas Cerabona, MD FACS New York Medical College

INTRODUCTION: Laparoscopic SG (LSG) is gaining popularity as a definite, isolated bariatric procedure for morbid obesity due to satisfactory weight loss and resolution of co-morbidities. This study examines factors affecting leak rates after LSG in the largest longitudinal bariatric database in the world, the Bariatric Outcomes Longitudinal Database (BOLD).

METHODS: BOLD was queried for data on adult patients (age > 18 years) who had SG between June 2007 and March 2, 2010. Variables of interest included demographic characteristics, co-morbidities, medications, functional status, additional procedures performed, operative/anesthesia length, estimated blood loss, blood transfusions, American

Society of Anesthesiologists (ASA) class, intra-operative complications, postoperative complications, intervention for postoperative complication and length of stay. Data were analyzed using the Statistical Package for the Social Sciences (SPSS®) Version 19.

RESULTS: Of the 112,337 research-consented bariatric surgery patients with data entered into BOLD, 3448 (3.1%) had undergone SG. With an average age (Mean + Standard Deviation) of 46.0 \pm 11.8 and a body mass index (BMI) of 48.2 kg/m2 \pm 10.2, most patients were female (72.7%), white (80.7%), worked full time (54.6%), and had no functional status impairments (94.8%). 28 cases (0.8%) of leakage or intra-abdominal abscess were reported in the postoperative period. When compared to those without leaks or abscesses, these patients had a statistically significant higher body weight (333.3 lbs vs. 302.5 lbs, p=0.03), and were more likely to be characterized preoperatively as having an ASA Class of II or III (5.1% and 2.1% respectively) than ASA Class IV or V (0.1% and 0% respectively). Though not statistically significant patients with leak were also younger (42.1 yrs vs. 46.1 yrs, p=0.07), had higher BMI (51.3 kg/ m2 vs. 48.3 kg/m2, p=0.12) and more likely to be male (35.7% vs. 27.5%, p=0.39). Of the patients who had a leak 21.4% were ASA class II, 71.4% were class III, 7.1% were class IV and no patient with class V had a leak.

CONCLUSION: SG is an increasingly performed bariatric procedure with significant weight loss at 1 year follow up and low mortality and morbidity. In this large series of 3,448 cases, leak rate after LSG was 0.8%. Significantly higher leak rates were found in heavier patients with lower ASA score. Factors which could have lead to higher leak rates in lower ASA score patients will be discussed in the presentation with a view to improve outcomes and decrease further leaks.

P014

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: LONG TERM CLINICAL

OUTCOMES Ayman Obeid, MD, Joshua W Long, MD, Manasi Kakade, MPH, Clements H Ronald, MD, Stahl Richard, MD, Jayleen Grams, MD PhD Department of Surgery, University of Alabama at Birmingham; Department of Surgery, Vanderbilt University

INTRODUCTION: Bariatric surgery remains the most effective treatment for morbid obesity, and laparoscopic Roux-en-Y gastric bypass (LRYGB) continues to be the preferred operation. However, data on long term outcomes is lacking, especially regarding the durability of the improvement or resolution of obesity-associated comorbidities. The aim of this study was to determine the long term outcomes after LRYGB in terms of weight reduction, complications, and progress of obesity-associated comorbidities.

METHODS AND PROCEDURES: An Institutional Review Board-approved retrospective review of a prospectively maintained database was conducted of all patients who had LRYGB between 2001 and 2006. Only patients who had a postoperative clinic visit at ≤ 2 years and at ≥ 5 years were included in the study. Data collected included demographics, % excess weight loss (%EWL), complications, and improvement or resolution of comorbidities [diabetes mellitus (T2DM), hypertension (HTN), obstructive sleep apnea (OSA), and dyslipidemia (Lipids)]. Data were analyzed using SAS (version 9.2) and SPSS (version 16) statistical software.

RESULTS: There were 770 patients who underwent LRYGB at UAB from 2001-2006. Of these, 172 patients met inclusion criteria (148 females and 24 males) with a median age of 41.5 years (range, 19-34 years) and median preoperative BMI of 46 kg/m² (range, 34-71 kg/m²). Median short and long term follow up was 14 months (range, 6-27 months) and 75 months (range, 55-119 months), respectively. Short term %EWL was 71% vs a long term %EWL of 65% (p <0.005). Of the 172 patients, 77 patients experienced 103 complications [internal hernia, n=33 (19%); cholecystectomy, n=22 (18%); marginal ulcer, n=22 (13%); anastomotic stricture, n=19 (11%); and others, n=7 (4%)]. Median time to develop a complication was 29 months (range, 0.1-101 months). Clinical outcomes with regard to obesity-associated comorbidities are listed in the table below. There was no significant difference in improvement or resolution of comorbid conditions in the short vs long term follow up.



Comorbidity	Sho	rt Term	Long Term					
(N)	N	Same	Improved	Resolved	N	Same	Improved	Resolved
T2DM (77)	65	2 (3%)	2 (3%)	61 (94%)	77	4 (5%)	12 (9%)	63 (82%)
HTN (110)	88	3 (3%)	22 (25%)	63 (72%)	110	7 (6%)	31 (28%)	72 (66%)
OSA (123)	85	5 (6%)	8 (9%)	72 (85%)	103	13 (7%)	10 (10%)	85 (83%)
Lipids (65)	51	2 (3%)	12 (24%)	37 (73%)	65	6 (9%)	19 (29%)	40 (62%)

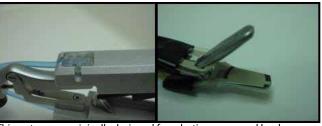
CONCLUSIONS: Although there was a statistically significant difference in %EWL between short and long term follow up, both arms showed a clinically relevant %EWL and both results were statistically significant when compared to preoperative values. The improvement and resolution of comorbidities was also sustained in long-term follow up. Thus, LRYGB resulted in significant improvement in clinical outcomes that were durable in long term follow up.

P015

THE ROLE OF TACTILE FEEDBACK ON GRIP FORCE DURING

LAPAROSCOPIC TRAINING TASKS <u>Christopher R Wottawa, MS</u>, Jeremiah R Cohen, Richard E Fan, PhD, Warren S Grundfest, MD FACS, Martin O Culjat, PhD, Erik P Dutson, MD SAGES University of California, Los Angeles

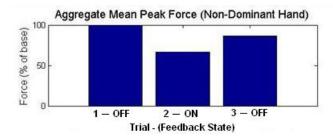
Introduction: The objective of this study was to determine the effect of supplemental tactile feedback on grip force during peg transfer training tasks using a laparoscopic grasper. A tactile feedback system was developed and integrated into existing laparoscopic graspers (Figure 1), allowing forces applied at the grasper tips to be felt by the surgeon's hands on the handle.

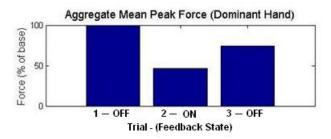


This system was originally designed for robotic surgery and has been integrated into the da Vinci Surgical System, where tactile feedback is entirely absent. In a similar robotic surgery study we determined that adding supplemental tactile feedback significantly reduced the applied grip force when performing various tasks. The purpose of this research was to determine if that same effect was present in non-robotic laparoscopic surgery.

Methods and Procedures: Eleven novice subjects were asked to perform single-handed peg transfers using these laparoscopic graspers in three trials. (Feedback OFF, ON, OFF). The peak grip force (Newtons) during each grip event was measured using the grasper-mounted force sensors and averaged across the trial. Trials were compared using a Wilcoxon signed rank T-test, where each subject served as his or her own control. For each subject, grip force during the first trial (Feedback OFF) served as a baseline, and all other values are reported as a normalized percentage of this baseline.

Results: There was a marked decrease in grip force between the first and second trials (dominant hand: to 47%, p=0.0010; non-dominant hand: to 66%, p=0.0020), indicating that tactile feedback helped subjects reduce their applied grip force. Subsequently deactivating the system in the third trial resulted in significantly increased grip force (dominant hand: to 75%, p=0.0010; non-dominant hand: to 86%, p=0.0010), in spite of potential learning effects. Compared to the baseline, the mean peak force during the third trial was significantly lower for the dominant hand (p=0.0244), but showed no significant difference for the non-dominant hand (p=0.0674). This indicates that while not all grip reduction was retained, the dominant hand still exhibited a learning effect. These results are summarized in the following figure.





Conclusion: Laparoscopic surgery offers advantages over open procedures, such as increased recovery time, and decreased trauma and hospital expenses. However, the attenuated tactile feedback provided to the surgeon's hands is a significant drawback. In this study, we found that supplemental tactile feedback can significantly reduce the grip force during laparoscopic training, a comparative finding to our previous study involving robotic surgery.

P016

THE EFFECT OF LAPAROSCOPIC STAPLERS ON SMALL BOWEL PERFUSION AND LEAK RATES <u>Bilal M Shafi, MD</u>, Parth K Shah, MD,
Harveen Bal, MD, Douglas L Fraker, MD Hospital of University of
Pennsylvania

Introduction: Few studies have been designed to assess the performance of laparoscopic surgical staplers, especially when it comes to their contribution to leak. This study analyzes the effect of staples and staple height on tissue perfusion in an acute as well as chronic study. Methods: Staple lines created on live porcine small bowel segments using laparoscopic surgical staplers were tested for perfusion using visible light spectroscopy to assess tissue oxygenation. Previously reported perfusion measurements taken on both the serosal surface (SS) and mucosal surface (MS) of the staple lines are reported as percentage of oxygen saturation. Three separate experiments were performed comparing: (1) measurements at the staple line (n=24) and 4cm away (n=24); (2) staple height: white (2.5mm, n=9), blue (3.5mm, n=9), green (4.1mm, n=6) staple loads; and (3) position along the staple line in reference to the hinge of the stapler: proximal (n=8), mid (n=8), and distal (n=8). We continue to collect data in the acute study. In addition to this a set of animals will be survived for a period of 1, 3, and 6 weeks to evaluate perfusion and histology with various staple heights. Data are reported as means; parametric tests were used for analysis. Results: Preliminary data suggests tissue perfusion was significantly reduced at the staple line (SS -63%, MS -25%) when compared to measurements away from it (SS - 77%, MS - 41%) (p<0.001). Perfusion was also related to staple height on both the SS and MS; white loads had the worst profile (SS - 57%, MS -18%) when compared to blue (SS -65%, MS -28%) (SS -p<0.07, MS -p< 0.1) and an even worse profile when compared to green (SS - 70%, MS - 32%) (SS - p<0.01, MS - p < 0.08). The proximal end (MS - 34%) of all staple lines showed a trend of improved perfusion when compared to the mid portion (MS - 23%) and the distal end (MS – 17%) on the MS.

No difference was seen on the SS. We are continuing to collect data to increase the power in the acute study and will correlate this data to the chronic study. Conclusions: Laparoscopic surgical stapling significantly impacts tissue perfusion in small bowel. Previously presented data indicates, staple height is an important determinant of tissue perfusion where decreasing staple height leads to decreased tissue perfusion. This effect is seen more so on the serosal side than on the mucosal side of the staple line. Within the same staple line there is a trend toward decreased perfusion when moving distally along the staple line away from the hinge of the stapler. At the completion of this study, we continue to validate ths preliminary data and will correlate it with long term data on tissue perfusion and histology giving some insight into leaks.



- P017 ECREASE POST LAPAROSCOPIC SHOULDERS PAIN WITH SLOW DEFLATION OF ABDOMINAL GAS Amir Vejdan, MD, <u>Kataneh Dadashi</u>, <u>RN</u>, Immam Reza Hopsital
- PO18 OPTIMIZING WORKING SPACE IN PORCINE LAPAROSCOPY: COMPUTED TOMOGRAPHY MEASUREMENTS OF THE EFFECTS OF INTRA-ABDOMINAL PRESSURE <u>John Vlot</u>, MD, Rene Wijnen, PhD, Robert Jan Stolker, PhD, Klaas(n) M.a. Bax, PhD, Erasmus Medical Centre Rotterdam, Department of Pediatric Surgery and Department of Anesthsiology (R.J. Stolker), PO Box 2060 3000 CB Rotterdam, The Netherlands
- P019 INVESTIGATING THE EFFECTS OF TENSION ON A STAPLED ANASTOMOSIS <u>Andrew M Miesse</u>, MS, Michael A Stellon, Ross Segan, MD MBA FACS, Emily Miesse, RN, Dwight G Bronson, MS, Covidien, Surgical Solutions
- PO20 METABOLIC PROFILING OF URINE REVEALS DISTINCT PHENOTYPIC CHANGES IN PATIENTS UNDERGOING COLORECTAL EXCISION <u>Sunreet Randhawa</u>, Reza Mirnezami, Beatriz Jimenez, James Kinross, Olaf Beckonert, Claire Merrifield, Elaine Holmes, Jeremy Nicholson, Ara Darzi, Section of Biomolecular Medicine and Section of Biosurgery and Surgical Technology, Department of Surgery and Cancer, Faculty of Medicine, Imperial College London, London SW7 2AZ, UK.
- P021 FACTORS ASSOCIATED WITH REOPERATION, POSTOPERATIVE MORBIDITY AND READMISSION RATES AFTER LAPAROSCOPIC TOTAL ABDOMINAL COLECTOMY FOR ULCERATIVE COLITIS Jinyu Gu, MD, Luca Stocchi, MD, Feza Remzi, MD, Ravi Kiran, Cleveland Clinic Foundation
- P022 A CASE OF PORTAL VEIN THROMBOSIS AFTER LAPAROSCOPIC LOW ANTERIOR RESECTION OF THE RECTUM. Noritsugu Naito, MD, Nobuyasu Kano, MD PhD, KAMEDA MEDICAL CENTER
- P023 OUTCOMES OF LAPAROSCOPIC COLORECTAL SURGERY IN THE ELDERLY <u>Giancarlo Basili, MD</u>, Nicola Romano, MD, Dario Pietrasanta, MD, Graziano Biondi, MD, Irene Mosca, MD, Valerio Prosperi, MD, Orlando Goletti, MD, Health Unit 5 Pisa, Pontedera Hospital, General Surgery Unit
- P024 A SYSTEMATIC REVIEW AND POOLED ANALYSIS OF SINGLE INCISION LAPAROSCOPIC APPENDECTOMY <u>Richdeep S Gill, MD</u>, Xinzhe Shi, MPH, David P Al-adra, MD, Daniel W Birch, MD MSc FRCPS, Shahzeer Karmali, MD FRCPS, University of Alberta; Royal Alexandria Hospital
- P025 METASTATIC SIGMOID DIVERTICULITIS IN THE ERA OF ADVANCED IMAGING AND HEALTH CARE A CASE REPORT <u>Arunkumar Baskara</u>, <u>MRCS MD</u>, Stefanie L Saunders, MS Medical Student, Prashanth Ramachandra, MD, Mercy Catholic Medical Center
- P026 LAPAROSCOPIC COLECTOMY IN AN EMERGENCY SETTING: A CASE-CONTROLLED STUDY COMPARING LAPAROSCOPIC AND OPEN TECHNIQUES. <u>Ker-kan Tan, MBBS FRCSEdin</u>, Frederick H Koh, MBBS, Charles B Tsang, FRCS Edin FRCS Glasg, Dean C Koh, FRCS Edin FRCS Glasg, National University Health System, Singapore
- P027 ECONOMIC IMPACT OF ANASTOMOTIC LEAKS IN COLECTOMY PROCEDURES IN THE USA: 2005-2009 <u>Lobat Hashemi, MS</u>, Nilay Mukherjee, PhD, Michael Morseon, MS, Rhea Sirkar, Covidien
- PO28 LAPAROSCOPIC SURGERY AFTER PREOPERATIVE CHEMORADIATION FOR ADVANCED LOWER RECTAL CANCER Shinya Morimoto, MD, Mitsuo Shimada, MD PhD, Nobuhiro Kurita, MD PhD, Hirohiko Sato, MD, Takashi Iwata, MD, Masanori Nishioka, MD, Tomohiko Miyatani, MD, Kozo Yoshikawa, MD, Masakazu Goto, Dr, Hideya Kashihara, Dr, Chie Mikami, Dr, University of Tokushima
- P029 LAPAROSCOPIC COLECTOMY IN THE ELDERLY (>70 YRS):
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 PATIENTS CAN BE ACHIEVED Keith M Baldwin, DO, <u>Luis Suarez, MD</u>,
 Steven C Katz, MD, Ponnandai Somasundar, MD MPH, Roger Williams
 Medical Center
- P030 SINGLE-INCISION VERSUS CONVENTIONAL LAPAROSCOPIC COLECTOMY: A CASE MATCHED SERIES OF 90 CASES <u>Goutaro Katsuno, MD PhD</u>, Masaki Fukunaga, MD PhD, Yoshifumi Lee, MD PhD, Masahiko Sugano, MD PhD, Kunihiko Nagakari, MD PhD, Shuichi Sakamoto, MD PhD, Yoshito lida, MD PhD, Seiichiro Yoshikawa, MD PhD, Yoshitomo Ito, MD PhD, Masakazu Ouchi, MD PhD, Yoshin, Department of Surgery, Juntendo Urayasu Hospital, Juntendo University
- P031 SINGLE INCISION LAPAROSCOPIC OSTOMY SURGERY-OUR INITIAL EXPERIENCE Jonathan D Svahn, MD FACS, <u>Dixon R Matthew, MD</u>, Kaiser Permanente East Bay-Oakland Campus
- P032 SINGLE INCISION LAPAROSCOPIC COLECTOMY USING NEW ACCESS PORT DEVICE (EZ ACCESS) WITH NEEDLESCOPIC INSTRUMENTS FOR CT1 OR CT2 RIGHT-SIDED COLON CANCER: A CASE CONTROL ANALYSIS

- FOR CONVENTIONAL LAPAROSCOPIC COLECTOMY AND REVIEW OF THEIR TECHNICAL ASPECTS. <u>Toshimasa Yatsuoka, MD</u>, Yoji Nishimura, MD, Hirohiko Sakamoto, MD, Yoichi Tanaka, MD, Saitama Cancer Center
- PO33 THE FEASIBLE TECHNIQUE OF MOBILIZING INTERSPHINCTERIC PLANE USING THE PERMEATED HEAD LIGHT THROUGH THE ANAL PROCEDURE IN LAPAROSCOPIC-ASSISTED PER ANUM INTERSPHINCTERIC RECTAL DISSECTION Akiyo Matsumoto, MD, Kaida Arita, MD, Masaki Tashiro, MD, Shigeo Haruki, MD, Shinsuke Usui, MD, Susumu Hiranuma, MD, Department of Surgery, Tsuchiura Kyodo General Hospital
- P034 PROGNOSTIC FACTORS FOR STAGE IV COLORECTAL CANCER
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 Yoshimura, PhD, Masafumi Inomata, MD PhD, Masaaki Ito, MD PhD,
 Yosuke Fukunaga, MD PhD, Akiyoshi Kanazawa, MD PhD, Hitoshi Idani,
 MD FACS PhD, Yoshiharu Sakai, MD FACS PhD, Masahiko Wa, Nishikobe Medical Center, Kyoto University, Japan Society of Laparoscopic
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- P035 INTRAVENOUS PHENYTOIN: POSSIBLE NEW THERAPY FOR GASTRO-INTESTINAL FISTLAE Saed A Jaber, MD, <u>Hasan A Yami, MD</u>, Basma M Fallatah, MD, Mahmoud Abdelmoeti, MD, KING FAHD MEDICAL MILITARY COMPLEX
- P036 A NOVEL ANVIL GRASPER "EAGLE" IS USEFUL FOR LAPAROSCOPIC INTRA-CORPOREAL CIRCULAR STAPLED ANASTOMOSIS <u>Yuen Nakase, MD PhD</u>, Tsuyoshi Takagi, MD PhD, Kanehisa Fukumoto, MD PhD, Takuya Miyagaki, MD PhD, Department of Surgery, Nishijin Hospital, Kyoto, Japan
- P037 SIMULTANEOUS LAPAROSCOPIC RESECTION OF PRIMARY COLORECTAL CANCER AND METASTATIC LIVER TUMOR Chie Takasu, MD, Mitsuo Shimada, Nobuhiro Kurita, Takashi Iwata, Hirihiko Sato, Masanori Nishioka, Shinya Morimoto, Kozo Yoshikawa, Tomohiko Miyatani, Masakazu Goto, Hideya Kashihara, Tohru Utsunomiya, Department of Surgery, The University of Tokushima
- PO38 PREOPERATIVE SIMULATION OF LAPAROSCOPIC LOW ANTERIOR RESECTION FOR RECTAL CANCER BY CT COLONOGRAPHY <u>Hiroyuki Fukuda, MD PhD</u>, Kotaro Yoshimura, MD, Hidehito Shibasaki, MD PhD, Takaaki Kaneko, MD PhD, Koya Fushimi, MD PhD, Takashi Senda, MD, Takahito Masuda, MD, Shintaro Kohama, MD, Yangi Mun, MD, Akira Ogata, MD PhD, matsudo city hospital
- P039 URINARY CONSEQUENCES AND PELVIC FLOOR STABILITY IN WOMEN UNDERGOING STAPLED HEMORRHOIDOPEXY FOR PROLAPSE: IS THIS STILL THE RIGHT PROCEDURE? F. A. Morfesis, MD FACS, Brian P. Rose, BS, Francesca N. Morfesis, MA, Owen Drive Surgical Clinic of Fayetteville, East Carolina University, Duke University Medical Center
- PO40 LAPAROSCOPIC RIGHT HEMICOLECTOMY WITH MEDIALLY APPROACHED LYMPH NODE DISSECTION ALONG THE SURGICAL TRUNK FOR T3 OR T4 COLON CANCER <u>Kazuteru Watanabe</u>, <u>Dr PhD</u>, Shoichi Fujii, Dr PhD, Jun Watanabe, Dr PhD, Teni Godai, Dr PhD, Mitsuyoshi Ota, Dr PhD, Chikara Kunisaki, Dr PhD, Yasushi Ichikawa, Dr PhD, Itaru Endo, Dr PhD, Yokohama City University Medical Center, Gastroenterological Center, Yokohama, Japan
- P041 ADEQUATE MARGINS OF RESECTION FOR RECTAL AND ANAL CANCERS CAN BE ACHIEVED THROUGH A SINGLE-SITE LAPAROSCOPIC APPROACH <u>David B Stewart</u>, <u>MD</u>, Evangelos Messaris, MDPhD, Penn State Hershey Medical Center
- PO42 ADAPTATION OF LAPAROSCOPIC SURGERY FOR RIGHT SIDE COLON CANCER LEARN FROM OPEN COLECTOMY CASES <u>Atsushi Ikeda, title</u>, Atsuko Tsutsui, title, Hirohisa Miura, title, Naoto Ogura, MD, Masanori Naito, MD PhD, Takatoshi Nakamura, MD PhD, Takeo Sato, MD PhD, Masahiko Watanabe, MD PhD, Depertment of Surgery, Kitasato University School of Medicine
- PO43 IS SEPRAFILM® SLURRY EFFICACIOUS IN PREVENTING SMALL BOWEL OBSTRUCTION? <u>Adit Suresh, MD</u>, Brian G Celso, PhD, Ziad T Awad, MD, University of Florida College of Medicine- Jacksonville
- P044 SINGLE PORT ACCESS LAPAROSCOPIC APPENDECTOMY BY USING MICRO-INSTRUMENTS FOR COMPLICATED ACUTE PERFORATED APPENDICITIS WITH ABSCESS FORMATION: REPORT OF 6 CASE SERIES Yoshiyuki Kawakami, MD PhD, Hidenori Fujii, MD PhD, Toshiharu Aotake, MD PhD, Koji Doi, MD PhD, Makoto Yoshida, MD PhD, Kei Hirose, MD, Riki Ganeko, MD, Hisaya Shirai, MD, Fumie Tanaka, MD, Yuki Hirose, MD PhD, Department of Surgery, Japanese Red Cross Fukui Hospital, Fukui, Japan

- P045 PATTERND OF THE INFERIOR MESENTERIC ARTERY AND THOSE BRANCHES AND THE CORRELATION OF OTHER MARKS <u>Takuya</u> <u>Sugimoto, title</u>, Makio Mike, title, Nobuyasu Kano, title, Kameda Medical Center
- PO46 SINGLE-INCISION LAPAROSCOPIC SURGERY USED TO PERFORM TRANSANAL ENDOSCOPIC MICROSURGERY (SILSTEM): A NEW TECHNIQUE IN THREE CASES <u>Shigeoki Hayashi, PhD MD</u>, Minoru Matsuda, FACS MD, Motoo Yamagata, PhD MD, Ken Hagiwara, MD, Masahito Ikarashi, MD, Tadatoshi Takayama, PhD MD, Department of Digestive Surgery, Nihon University School of Medicine, Tokyo, Japan
- P047 DOES THE NEOADJUVANT CHEMORADIOTHERAPY INCREASE POSTOPERATIVE COMPLICATIONS IN LAPAROSCOPIC LOW ANTERIOR RESECTION? Alejandro G Canelas, MD, Maximiliano E Bun, MD, Esteban E Grzona, MD, Mariano Laporte, MD, Federico Carballo, MD, Nicolás A Rotholtz, MD, Hospital Alemán, Buenos Aires, Argentina
- P048 PERFORATION RISK AND IN-HOSPITAL DELAYS Ck Chang, title, <u>K</u> Cho, title, P Fuchshuber, title, B Eklund, Walnut Creek Kaiser
- PO49 SHORT-TERM SURGICAL RESULTS OF LAPAROSCOPIC INTERSPHINCTERIC RESECTION FOR LOWER RECTAL MALIGNANT TUMORS <u>Seiichiro Yamamoto, MD</u>, Shin Fujita, MD, Takayuki Akasu, MD, Masashi Takawa, MD, Ryo Inada, MD, Yoshihiro Moriya, MD, National Cancer Center Hospital
- P050 SHORT-TERM ASSESSMENT OF CONVERTED CASES IN LAPAROSCOPIC COLORECTAL SURGERY FOR MALIGNANCIES <u>Kazuki Ueda, MD</u>, Fumiaki Sugiura, MD, Koji Daito, MD, Masako Takemoto, MD, Eizaburo Ishimaru, MD, Tadao Tokoro, MD, Jin-ichi Hida, MD, Haruhiko Imamoto, MD, Hitoshi Shiozaki, MD, Kiyotaka Okuno, MD, Kinki University School of Medicine
- P051 DISCONTINUATION OF ANTIPLATELET THERAPY FOR COLONOSCOPY AND THE ASSOCIATED THROMBOEMBOLIC RISK <u>Izi DObokhare, MD</u>, Jose Cordova, MD, David E Beck, MD FACS, Charles B Whitlow, MD FACS, David, A Margolin, MD FACS, Department of Colon and Rectal Surgery Ochsner Medical Center
- P052 DELAYED ANASTOMOTIC LEAKS FOLLOWING RIGHT COLECTOMY: A RETROSPECTIVE REVIEW AND CASE SERIES J Koury, MD, P Maxwell, MD, G Isenberg, MD, S Goldstein, MD, Thomas Jefferson University
- P053 COMPARATIVE STUDY BETWEEN INTRACORPOREAL AND EXTRACORPOREAL ANASTOMOSES IN RIGHT HEMICOLECTOMY.

 <u>Christopher W Salzmann, MD</u>, Morris E Franklin, MD FACS, Karla Russek, MD, Ulises Garza, MD, Texas Endosurgery Institute
- P054 LAPAROSCOPIC TREATMENT OF DIVERTICULITIS. HAVE WE LEARNED SOMETHING? christopher W Salzmann, MD, Morris E Franklin, MD FACS, Karla Russek, MD, Texas Endosurgery Institute
- P055 WOUND INFECTION AFTER COLORECTAL SURGERY IN THE LAPAROSCOPIC ERA. <u>George Nassif, DO</u>, Diana Ortiz, MD, Joseph Frenkel, MD, Sara Berman, BS, Deborah Keller, MD, Gerald Marks, MD, John Marks, MD, Lankenau Medical Center
- P056 COMPARISON OF FOUR METHODS OF TRANSECTION AND ANASTOMOSIS IN THE LAPAROSCOPE-ASSISTED ANTERIOR RESECTION OF THE RECTUM <u>Fumihiro Uchikoshi, MD PhD</u>, Tsukasa Oyama, MD PhD, Takahiko Tatsumi, MD PhD, Department of Surgery, Tatsumi clinic & Hospital
- P057 LAPAROSCOPY IMPACTS OUTCOMES FAVORABLY FOLLOWING COLECTOMY FOR ULCERATIVE COLITIS: A CRITICAL ANALYSIS OF THE ACS-NSQIP DATABASE Marlin W Causey, MD, Derek P Mcvay, MD, Eric K Johnson, MD, Justin A Maykel, MD, Matthew J Martin, MD, David Rivadeneira, MD, Scott R Steele, MD, Madigan Healthcare System; University of Massachusetts; St. Catherine of Siena Medical Center
- P058 THE GLOVE TEM PORT <u>Roel Hompes, MD</u>, Frederic Ris, MD, Christopher Cunningham, FRCS, Neil Mortensen, FRCS, Ronan Cahill, MD, Department of colorectal surgery, John radcliffe hospitals, Oxford
- P059 A RETROSPECTIVE STUDY OF PROPHYLACTIC DRAINAGE AFTER LAPAROSCOPIC COLECTOMY <u>Hirokazu Suwa</u>, <u>MD</u>, Shigeki Yamaguchi, MD PhD, Takuya Kato, MD, Hiroka Kondou, MD, Ichiro Okada, MD, Jo Tashiro, MD, Toshimasa Ishii, MD PhD, Mitsuo Miyazawa, MD PhD, Isamu Koyama, MD PhD, Nozomi Shinozuka, MD PhD, Saitama Medical University International Medical Center, Gastroenterological Surgery
- P060 INTRACORPOREAL ANASTOMOSIS FOR TRANSVERSE COLON TUMORS <u>Nobuhiro Ito, PhD</u>, Hiroshi Nagata, PhD, Noiku Nakao, PhD, Toshiaki Nonami, PhD, Aichi Medical University
- P061 LAPAROSCOPIC COMPLETE MESOCOLIC EXCISION FOR RIGHT COLON CANCER TECHNICAL ASPECT AND CLINICAL RESULTS Shigeki

- <u>Yamaguchi, MD</u>, Toshimasa Ishii, MD, Jo Tashiro, MD, Hirokazu Suwa, MD, Ichiro Okada, MD, Hiroka Kondo, MD, Mitsuo Miyazawa, MD, Nozomi Shinozuka, MD, Saitama Medical University International Medical Center
- P062 THE IMPACT OF COMPLIANCE TO COLONOSCOPY SCREENING GUIDELINES ON THE DIAGNOSIS OF COLON AND RECTAL CANCER Rebekah Kim, MD, Joseph T Gallagher, MD, Francisco Itriago, MD, Andrea Ferrara, MD, Jay Macgregor, MD, Kiyanda Baldwin, MD, Paul Williamson, MD, Samuel Dejesus, MD, Renee Mueller, MD, Orlando Health, Colon and Rectal Clinic of Orlando
- P063 SEX AND BMI ALONE ARE NOT ADEQUATE PREDICTORS OF OUTCOMES FOLLOWING CURATIVE PROCTECTOMY FOR RECTAL CANCER <u>Anjali Kumar</u>, <u>MD MPH</u>, Kirthi Kolli, MBBS, Katherine Khalifeh, MD, James F Fitzgerald, MD, Washington Hospital Center
- P064 HOW DO COMMUNITY HOSPITALS COMPARE TO UNIVERSITY HOSPITALS IN THE SURGICAL MANAGEMENT OF PERFORATED APPENDICITIS? <u>Anna L Goldenberg, DO</u>, Robert A Ramirez, DO, Marc Rosen, DO FACOS, James Weese, MD FACS, Roy L Sandau, DO, Kennedy University Hospital, NJ
- P065 FACTORS AFFECTING THE DIFFICULTY OF LAPAROSCOPIC TOTAL MESORECTAL EXCISION FOR RECTAL CANCER <u>Cho Tae-ho, MD</u>, Baek Jeong-heum, MD, Lee Won-suk, MD, Lee Woon-kee, MD, Kang Jeonghyun, MD, Department of Surgery, Gachon University of Medicine and Science, Gil Medical Center, Incheon, Korea
- P066 THE USE OF BIOABSORBABLE MESH IN OSTOMY CLOSURE <u>Paravasthu Ramanujam, MD FACS</u>, Hadi Najafian, DO FACS FASCRS, Pedram Motamedi, Sushil Pandey, West Valley Colon & Rectal Surgery Center
- P067 TRANSANAL ENDOSCOPIC MICROSURGERY IN A MAJOR URBAN MEDICAL CENTER <u>Claire Graves</u>, Beth Krieger, MD, Alex Ky, MD, Randolph Steinhagen, MD, Sanghyun Kim, MD, Mount Sinai School of Medicine, New York, NY
- P068 A TECHNIQUE OF IDENTIFYING THE RECTAL STUMP IN PATIENT'S WITH HARTMANN POUCH BEFORE CLOSURE, BY TATTOOING WITH INDIA INK (SPOT) <u>Sushil Pandey, MD</u>, Hadi Najafian, DO FACS FASCRS, Pedram Motamedi, Paravasthu Ramanujam, MD FACS, West Valley Colon & Rectal Surgery Center
- P069 FACTORS ASSOCIATED WITH SUCCESSFUL EXCISION OF SMALL RECTAL CARCINOID TUMOR Hae Jung Son, MD, <u>Dae Kyung Sohn, MD PhD</u>, Chang Won Hong, MD, Kyung Su Han, MD, Byung Chang Kim, MD, Ji Won Park, MD, Hyo Seong Choi, MD PhD, Hee Jin Chang, MD PhD, Jae Hwan Oh, MD PhD, Center for Colorectal cancer, Research Institute and Hospital, National Cancer Center, Goyang, Gyeonggi, South Korea
- P070 EXPERIENCE OF THE THREE TROCARS METHOD FOR COLORECTAL LAPAROSCOPIC SURGERY <u>Shuji Kitashiro</u>, Shunichi Okushiba, Yo Kawarada, Takeshi Sasaki, Daisuke Saikawa, Hiroyuki Katoh, Tonan hospital
- P071 "LAPAROSCOPIC COLONIC RESECTIONS WITH INTRACORPOREAL ANASTOMOSIS AND TRANSVAGINAL SPECIMEN EXTRACTION: A PILOT STUDY" Francesco Stipa, MD PhD FACS, Valentina Giaccaglia, MD, Alessio Pigazzi, MD PhD FACS, Ettore Santini, MD, Antonio Burza, MD, Department of Surgery, Colorectal Surgical Unit, San Giovanni Hospital, Rome, Italy
- PO72 INTRAOPERATIVE COLONOSCOPY IN LAPAROSCOPIC ASSISTED COLORECTAL SUGERY FOR THE ASSESSMENT OF ANASTOMOSIS WITH DOUBLE STAPLING TECHNIQUE <u>Chu Matsuda</u>, Hiroshi Tamagawa, Kazuhiro Iwase, Kazuhiro Nishikawa, Takashi Deguchi, Junji Kawata, Yasuhiro Tanaka, Osamu Nishiyama, Takanobu Irie, Osaka General Medical Center
- P073 TRAINEE LEARNING CURVE IN LAPAROSCOPIC COLORECTAL SURGERY AT A DISTRICT (PERIPHERAL) GENERAL HOSPITAL Filippos Sagias, MD, Samer Doughan, MD, QUEEN ELIZABETH THE QUEEN MOTHER HOSPITAL, KENT, UK
- P074 LAPAROSCOPIC RECTAL SURGERY -HOW DO WE TEACH? Akiyoshi <u>Kanazawa, MD PhD FACS</u>, Tadayoshi Yamaura, MD, Hisahiro Hosogi, MD PhD, Akio Nakajima, MD PhD, Seiichiro Kanaya, MD PhD FACS, Yukihiro Kohno, MD PhD, Department of Surgery, Osaka Red Cross Hospital
- P075 LAPAROSCOPIC SURGERY FOR COLORECTAL CANCER WITH THE HIGH LIGATION USING AUTOMATIC STAPLING DEVICE: THE EXAMINATION OF ONCOLOGIC VALIDITY AND TECHNICALLY SAFETY Masanori Naito, PhD MD, Masahiko Watanabe, PhD MD, Takeo Sato, PhD MD, Atsushi Ikeda, PhD MD, Naoto Ogura, MD, Kitasato University



School of Medicine, Department of Surgery

- P076 SINGLE INCISION LAPAROSCOPIC COLECTOMIES WITH CONVENTIONAL INSTRUMENTATION- OUR EXPERIENCE <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, R Parthasarthi, S Rajapandian, Anirudh Vij, S Saravanakumar, GEM Hospital & Research Centre
- P077 A NOVEL APPROACH TO WOUND HEALING AND HERNIA PREVENTION FOLLOWING LAPAROSCOPICALLY ASSISTED LEVATOR-CUFF ABDOMINOPERINEAL RESECTION (APR) OF THE RECTUM Christopher Wright, Mr, Matthew Tutton, Mr, Department of Colorectal Surgery, Colchester General Hospital
- P078 23-HOUR DISCHARGE FOR MASSIVE RECTAL ADENOMAS TREATED WITH TRANSANAL ENDOSCOPIC MICROSURGERY Christopher Wright, Mr, <u>Matthew Tutton</u>, <u>Mr</u>, Department of Colorectal Surgery, Colchester General Hospital
- P079 SINGLE PORT LAPAROSCOPIC COLECTOMY: LONG TERM OUTCOME Ovunc Bardakcioglu, MD FACS, Saint Louis University
- P080 ROBOTIC VERSUS OPEN RECTAL RESECTION FOR CANCER: A COMPARATIVE ANALYSIS OF ONCOLOGICAL SAFETY AND SHORT-TERM OUTCOMES IN 164 PATIENTS <u>Paolo Pietro Bianchi, MD</u>, Wanda Petz, MD, Bruno Andreoni*, Pr, Antonio Chiappa*, MD, Emilio Bertani*, MD, Lorenzo Casali, MD, Daniele Belotti, MD, Matias Parodi, MD, Unit of Minimally-Invasive Surgery, * Division of General Surgery, European Institute of Oncology
- P081 COMPARATIVE ANALYSIS OF OPEN AND LAPAROSCOPIC COLECTOMY FOR MALIGNANCY IN A DEVELOPING COUNTRY <u>Pierreanthony Leake, MD</u>, Kristen B Pitzul, MSc, Patrick O Roberts, MD, Joseph M Plummer, MD, University of the West Indies (Mona Campus), Kingston, Jamaica, West Indies
- P082 DUPLICATE APPENDIX WITH ACUTE RUPTURED APPENDICITIS- CASE REPORT <u>Sharique Nazir, MD</u>, Ibrahim I Jabbour, MD MPH, Larry Griffith, MD FACS, Armand Asarian, MD FACS, Peter J Pappas, MD FACS, The Brooklyn Hospital Center
- P083 COMPARISON OF OPEN, LAPAROSCOPIC ASSISTED, AND TOTALLY LAPAROSCOPIC RIGHT HEMICOLECTOMY <u>Gideon Sroka, MD MSc</u>, Tal Kopelman, MD, Dan Shteinberg, MD, Nadav Slijper, MD, Husam Mady, MD, Ibrahim Mattar, MD, Bnai-Zion Medical Center, Technion Israel Institute of Technology, Haifa, Israel
- P084 LOW ANTERIOR RESECTION SYNDROME: A NOT UNCOMMON COMPLICATION OF TRANSANAL ENDOSCOPIC MICROSURGERY Michael F Horaist, MD, Philip A Cole Ii, MD, Andrew M Werner, MD FACS, Michael D Stratton, MD FACS, W Reid Grimes, MD FACS, Philip A Cole, MD FACS, LSU Health Shreveport
- P085 LAPAROSCOPIC TOTAL COLECTOMY FOR PATIENTS WITH SEVERE ULCERATIVE COLITIS. CAN WE IMPROVE THE RESULTS? Alejandro G Canelas, MD, Maximiliano E Bun, MD, Esteban Grzona, MD, Mariano Laporte, MD, Federico Carballo, MD, Nicolás A Rotholtz, MD, Hospital Alemán, Buenos Aires, Argentina
- P086 MCKITTRICK-WHEELOCK SYNDROME TREATED BY TEM/TEO:REPORT OF TWO CASES <u>Mikel Prieto</u>, Hector Marin, Jose Maria Garcia, Iñaki Marinez, Alberto Lamiquiz, Tamara Moreno, Eduardo Ayestaran, Iratxe Rodeño, Alberto Colina, Cruces University Hospital
- P087 SELF-EXPANDING METAL STENTS IN THE CONTEXT OF COLONIC OBSTRUCTION: A RETROSPECTIVE ANALYSIS FROM 45 CASES. Hector Marin, Mikel Prieto, Laura Buendia, Alberto Lamiquiz, Aingeru Sarriugarte, Jose Maria Garcia, Andoni Larzabal, Tamara Moreno, Alberto Colina, Cruces University Hospital
- P088 THE EFFECT OF CO2 PNEUMOPERITONEUM FOR OCTOGENARIAN DURING LAPAROSCOPIC RECTAL SURGERY <u>Chang Sheng-chi, MD</u>, Ke De-wei, MD, William Tzu-liang Chen, MD, China Medical University Hospital, Taichung, Taiwan
- P089 OUTCOME IN 23 PATIENTS UNDERGOING LAPAROSCOPIC POSTERIOR RECTOPEXY WITH SHALLOW REPERITONIZATION FOR FULL-THICKNESS RECTAL PROLAPSE Koji <u>Masumori, Assistant ProfessorMD</u>, Koutarou Maeda, Professor, Tsunekazu Hanai, Associate Professor, Haruyosihi Sato, Associate Professor, Hiroshi Matsuoka, Assistant Professor, Department of Surgery, School of Medicine, Fujita Health University
- P090 EFFICACY OF INTRACOLONIC WASHOUT IN PATIENTS WITH ANASTOMOTIC LEAK <u>Sohyun Kim, MD</u>, Sanghun Jung, MD PhD, Jae Hwang Kim, MD PhD, Yeungnam university hospital
- P091 TWO-PORT LAPAROSCOPIC APPENDECTOMY: MAXIMALLY VERSATILE MINIMALLY INVASIVE SURGERY R S Brooks, MD RVT, St.

P092 LAPAROSCOPIC MESH POSTERIOR RECTOPEXY FOR THE TREATMENT OF FULL THICKNESS RECTAL PROLAPSE <u>Hitoshi Idani, MD</u>, Satoshi Komoto, MD, Kanyu Nakano, MD, Shinichiro Kubo, MD, Yohei Kurose, MD, Shinya Asami, MD, Tetsushi Kubota, MD, Yasushi Ohmura, MD

Mary's Hospital and Community Hospital Grand Junction, CO

- KOMOTO, MID, Kanyu Nakano, MID, Shinichiro Kubo, MID, Yohei Kurose, MD, Shinya Asami, MD, Tetsushi Kubota, MD, Yasushi Ohmura, MD, Hiroshi Sasaki, MD, Katsuyoshi Hioki, MD, Hiroki Nojima, MD, Takashi Yoshioka, MD, Masahiko Muro, MD, Department of Surgery, Fukuyama City Hospital, Department of Gastrointestinal surgery, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences
- P093 NATIONAL UTILIZATION OF MINIMALLY INVASIVE SURGERY FOR COLON RESECTION: AN ANALYSIS OF RECENT TRENDS <u>Allyson H Stone, MD MS</u>, Stefan Holubar, MD MPH, Samuel Finlayson, MD MPH, Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA
- P094 SINGLE-PORT LAPAROSCOPIC ABDOMINO-PERINEAL RESECTION (SPLS-APR) THROUGH THE COLOSTOMY SITE https://doi.org/10.108/ncb.12 Chul Lee, MD, Yoon-suk Lee, MD, Hyeon-min Cho, MD, Jun-gi Kim, MD, Department of Surgery, The Catholic University of Korea
- P095 EARLY EXPERIENCE OF SINGLE-PORT LAPAROSCOPIC ANTERIOR RESECTION FOR COLON CANCER <u>Hyung-jin Kim, MD</u>, Sang-chul Lee, MD, Bong-hyung Kye, MD, In-kyu Lee, MD, Hyeon-min Cho, MD, Seong-taek Oh, MD, Jun-gi Kim, MD, Department of Surgery, College of Medicine, The Catholic University of Korea
- P096 RARE COMPLICATIONS DURING THE PLACEMENT OF SELF-EXPANDABLE METALLIC STENT FOR COLON CANCER OBSTRUCTION <u>Hyung-jin Kim, MD</u>, Bong-hyeon Kye, MD, Hyeon-min Cho, MD, Jae-im Lee, MD, Jong-kyung Park, MD, Jun-gi Kim, MD, Department of Surgery, St. Vincent's Hospital, College of Medicine, The Catholic University of Korea
- P097 APPENDICEAL PHLEGMON; A LAPAROSCOPICALLY DEFEATED FOE <u>Hani H Haider, MD</u>, Dalal F Al-aradi, MD, Ramla T Juma, MD, Waleed Al-herz, MD, Talib Juma, MD, Department of Surgery, Amiri Hospital, Kuwait.
- P098 SINGLE UMBILICAL INCISION LAPAROSCOPIC COLECTOMY WITH AN ADDITIONAL PORT FOR COLORECTAL CANCER <u>Sang Woo Lim, MD PhD</u>, Hun Jin Kim, MD, Chang Hyun Kim, MD, Jung Wook Huh, MD PhD, Young Jin Kim, MD PhD, Hyeong Rok Kim, MD PhD, Department of Colon and Rectal Surgery, Chonnam National University Hwasun Hospital
- P099 REDUCED PORT SURGERY FOR COLORECTAL CANCER <u>Jun-ichi</u>
 <u>Tanaka, MD FACS</u>, Tomokatsu Omoto, MD, Shunpei Mukai, MD, Kenta
 Nakahara, MD, Chiyo Maeda, MD, Yusuke Takehara, MD, Daisuke
 Takayanagi, MD, Eiji Hidaka, MD, Shungo Endo, MD, Fumio Ishida, MD,
 Sin-ei Kudo, MD, Digestive Disease Center Showa University Northern
 Yokohama Hospital
- P100 TOTALLY ROBOTIC COLORECTAL SURGERY IN SINGAPORE: OUR INITIAL EXPERIENCE OVER 3 YEARS <u>Kuok-chung Lee</u>, Ker-kan Tan, Seon Hahn Kim, Charles B Tsang, Dean C Koh, National University Health System
- P101 LAPAROSCOPIC INTERSPHINCTERIC RESECTION FOR LOW RECTAL CANCER <u>Sang Woo Lim, MD PhD</u>, Chang Hyun Kim, MD, Hun Jin Kim, MD, Jung Wook Huh, MD PhD, Young Jin Kim, MD PhD, Hyeong Rok Kim, MD PhD, Department of Colon and Rectal Surgery, Chonnam National University Hwasun Hospital
- P102 TRAINING LEVELS OF SURGEONS DO NOT IMPACT SHORT- AND LONG-TERM COLORECTAL CANCER OUTCOMES AFTER SUPERVISED LAPAROSCOPIC SURGERY <u>Danilo Miskovic</u>, <u>MD</u>, Najaf Siddiqi, Dilan Dabare, John Conti, PhD, Karen Fleshman, Jim Khan, MD, Amjad Parvaiz, MD, Queen Alexandra Hospital, Portsmouth/UK
- P103 RATE OF UTILIZATION OF HAND-ASSISTED LAPAROSCOPIC METHODS IS DIRECTLY PROPORTIONAL TO BMI <u>Elizabeth A Myers, DO</u>, Daniel L Feingold, MD, Tracey D Arnell, MD, Linda Njoh, MSc, Vesna Cekic, RN, Joon Ho Jang, MD, Daniel D Kirchoff, MD, Samer Naffouje, MD, Sonali Herath, BS, Jon Kluft, BS, Richard L Whelan, MD, St. Luke's Roosevelt Hospital Center, New York, NY, USA; College of Physicians and Surgeons, Columbia University, New York, NY, USA
- P104 GETTING MORE FOR YOUR MONEY: LAPAROSCOPIC RECTAL SURGERY PROVIDES SIMILAR SHORT TERM OUTCOMES AND SHORTER LENGTH OF STAY AT COMPARABLE COSTS TO OPEN SURGERY <u>Krista Hardy, MSc MD</u>, Josephine Kwong, BScH MPA, Kristen Pitzul, BScH MSc, Ashley Vergis, MD MMed, Timothy Jackson, MD MPH, David Urbach, MD MSc, Allan Okrainec, MD MHPE, University of Manitoba, Winnipeg, Man., Department of General Surgery, University Health Network,

- University of Toronto, Toronto, Ont., Canada
- P105 SURGICAL OUTCOME AFTER LAPAROSCOPIC SURGERY IN PATIENTS WITH COLONIC ADENOMATOUS POLYPOSIS SYNDROMES <u>Francisco</u> <u>Lopez-kostner</u>, <u>MD</u>, Alejandro J Zarate, MD, Udo Kronberg, MD, Claudio Wainstein, MD, Katya Carrillo, MD, Colorectal Unit. Clinica las Condes
- P106 COST-EFFICIENCY OF SINGLE-PORT WHEN COMPARED TO CONVENTIONAL LAPAROSCOPIC COLECTOMY <u>Barlas Sulu, MD</u>, Hasan T Kirat, MD, Meagan Costedio, MD, Emre Gorgun, MD, Ravi P Kiran, MD, Cleveland Clinic Foundation
- P107 ENHANCED RECOVERY PATHWAYS DECREASE LENGTH OF STAY FOLLOWING COLORECTAL SURGERY BUT HOW QUICKLY DO PATIENTS ACTUALLY RECOVER? <u>A Neville, MD</u>, A S Liberman, MD, P Charlebois, MD, B Stein, MD, A Ncuti, BSc, M C Vassiliou, MD, G M Fried, MD, L S Feldman, MD, McGill University Health Center
- P108 MINIMALLY INVASIVE COLORECTAL RESECTION FOR BENIGN PATHOLOGY IS ASSOCIATED WITH PROANGIOGENIC PLASMA COMPOSITIONAL CHANGES; POSTOPERATIVE PLASMA STIMULATES IN VITRO ENDOTHELIAL CELL GROWTH, INVASION, AND MIGRATION DURING WEEK 2 AND 3 AFTER SURGERY. Hmc Shantha Kumara, PhD, Samer A Naffouje, MD, Elizabeth A Myers, DO, Sonali A Herath, BS, Joon Jang, MD, Linda Njoh, MS, Daniel Kirchoff, MD, Xiaohong Yan, MDPhD, Vesna Cekic, RN, Nadav Dujovny, MD, Richard L Whelan, MD, (1)Division of Colon and Rectal Surgery, Department of Surgery, St Luke-Roosevelt Hospital Center, Suite 7B, 425 West, 59th Street, New York, NY 10019,(2) Ferguson Clinic, Spectrum Health Medical Group, 4100 Lake Drive 205, Grand Rapids, MI 49546,USA
- P109 USE OF LAPAROSCOPIC COLORECTAL RESECTION FOR CANCER AND SHORT-TERM OUTCOME AMONG ELDERLY PATIENTS IN URBAN COMMUNITY HOSPITAL <u>Karmina Choi, MD</u>, Vadim Nakhamiyayev, MD, Justin Mann, Aamisha Gupta, New York Methodist Hospital
- P110 PLASMA LEVELS OF MONOCYTE CHEMOTACTIC PROTEIN-1 (MCP-1), A PROANGIOGENIC PROTEIN, ARE PERSISTENTLY ELEVATED DURING THE FIRST MONTH AFTER MINIMALLY INVASIVE COLORECTAL CANCER RESECTION. Hmc Shantha Kumara, PhD, Samer A Naffouje, MD, Sonali A Herath, BS, Elizabeth A Myers, DO, Joon Jang, MD, Linda Njoh, MS, Xiaohong Yan, MDPhD, Daniel Kirchoff, MD, Vesna Cekic, RN, Martin Luchtefeld, MD, Richard L Whelan, MD, (1)(1) Division of Colon and Rectal Surgery, Department of Surgery, St Luke-Roosevelt Hospital Center, Suite 7B, 425 West, 59th Street, New York, NY 10019, USA;(2)(2) Spectrum Health, 25, Michigan Ave SE, Suite 4300, MC 038, Grand Rapids, MI 49503, USA
- P111 PREDICTIVE FACTORS OF POSTOPERATIVE ILEUS AFTER LAPAROSCOPIC COLORECTAL SURGERY <u>E Grzona, MD</u>, F Carballo, MD, M Bun, A Canelas, MD, L Pereyra, MD, <u>N Rotholtz, MD</u>, Hospital Alemán de Buenos Aires
- P112 SINGLE INCISION LAPAROSCOPIC COLORECTAL SURGERY FOR INFLAMMATORY DISEASE <u>Dan Geisler, MD</u> <u>Associate Staff</u>, West Penn AlleghenyHealth System
- P113 LAPAROSCOPIC APPENDECTOMIES: DOES TECHNIQUE MATTER? T <u>J Hufford, BA</u>, Ronald Markart, PhD, Jonathan M Saxe, MD, Wright State University
- P114 ABDOMINAL WALL NECROTIZING FACIITIS-A RARE COMPLICATION OF PERFORATED APPENDICITIS-CASE REPORT <u>Sharique Nazir, MD</u>, Timothy S Kuwada, MD FACS FASMBS, Division Gastrointestinal and Minimally Invasive Surgery, Carolinas Medical Center, Charlotte
- P115 OPEN VERSUS LAPAROSCOPIC COLECTOMY FOR PATIENTS WITH ENDOSCOPICALLY UNRESECTABLE POLYPS. THE EFFECT OF CONVERSION Nawar A Alkhamesi, MD PhD FRCSGenSurg FRCS FRCSEd, Micheal V Lebenbaum, MSc, Sisira Sarma, PhD, Janet Martin, PhD, Christpher M Schlachta, BSc MD CM FRCSC FACS, Department of Surgery and Department of Epidemiology & Biostatistics, Schulich School of Medicine, University of Western Ontario
- P116 THE USE OF MINIMALLY INVASIVE SURGERY AS A TREATMENT FOR COLOCUTANEOUS FISTULA CASE REPORT <u>Ahmed Hammad, MR</u>, Hitham Qandeel, FRCS, Hitham Abudeep, MR, Arijit Mukherjee, FRCS, Ali Amin, Mr, C Murch, Dr, GeneralL Surgery Department Hairmyres Hospital, Glasgow
- P117 SINGLE INCISION LAPAROSCOPIC COLORECTAL RESECTIONS Elie K Chouillard, MD PhD, Andrew Gumbs, MD FACS, On behalf of the Intercontinental Society of Natural Orifice, Endoscopic, and Laparoscopic Surgery (i-NOELS), Poissy, France
- P118 FEASIBILITY OF LAPAROSCOPIC REOPERATION FOR EARLY

- COMPLICATIONS AFTER LAPAROSCOPIC COLORECTAL RESECTIONS Rodrigo A Pinto, MD, Fábio G Campos, PhD, Sérgio A Araújo, MD, Jaime P Kruger, MD, Guilherme N Namur, MD, Sérgio C Nahas, PhD, Ivan Cecconello, University of São Paulo School of Medicine
- P119 SINGLE INCISION LAPAROSCOPIC RECTAL RESECTION FOR CANCER: A PRELIMINARY STUDY <u>Elie K Chouillard, MD PhD</u>, Nelson Trelles, MD, Andrew Gumbs, MD FACS, On behalf of the Intercontinental Society of Natural Orifice, Endoscopic, and Laparoscopic Surgery (i-NOELS), Poissy, France
- P120 COMBINED ABDOMINAL AND TRANSANAL NOTES-INSPIRED APPROACH TO THE TOTAL MESORECTUM EXCISION (TME): A PRELIMINARY STUDY <u>Elie K Chouillard, MD PhD</u>, Vincenzo J Greco, MD, Andrew Gumbs, MD FACS, On behalf of the Intercontinental Society of Natural Orifice, Endoscopic, and Laparoscopic Surgery (i-NOELS), Poissy, France
- P121 INFLUENCE OF ANASTOMOTIC LEAKAGE IN THE LONG-TERM RESULTS OF LAPAROSCOPIC TREATMENT OF CURATIVE RECTAL CANCER. <u>Cedric Adelsdorfer</u>, MD, Salvadora Delgado, MD, Waldemar Adelsdorfer, MD, Raúl Almenara, MD, David Saavedra, MD, Mihai Pavel, MD, Nils Hidalgo, MD, Antonio M Lacy, MD PhD, Department of Gastrointestinal Surgery, Institute of Digestive and Metabolic Diseases (ICMDM), Hospital Clínic of Barcelona
- P122 THE CURRENT STATUS OF LAPAROSCOPIC VERSUS OPEN COLECTOMY: INCIDENCE AND SHORT TERM OUTCOMES IN A COHORT OF 59,000 PATIENTS. Rodrigo Pedraza, MD, Javier Nieto, MD, Victor Malave, MD, Eric M Haas, MD FACS FASCRS, Division of Elective Minimally Invasive Colon and Rectal Surgery, Department of Surgery, The University of Texas Medical School at Houston
- P123 SINGLE INCISION LAPAROSCOPIC COLORECTAL SURGERY FOR NEOPLASIA <u>Dan Geisler, MD</u> Associate Staff, West Penn Allegheny Health System
- P124 COLONOSCOPIC PERFORATION MANAGEMENT IN THE ERA OF LAPAROENDOSCOPY; A SIMPLE ALGORITHIM <u>Tafadzwa P Makarawo, MD</u>, Edward Itawi, MD, Amir Damadi, MD, Gurteshwar Rana, MD, Vijay K Mittal, MD, Providence Hospital Medical Centers
- P125 CLINICAL RESULTS OF LESS INVASIVE LAPAROSCOPIC ISR BY USING NEEDLE DEVICES AND SURGICAL CLIPS <u>Masaaki Ito, MD PhD</u>, Yusuke Nishizawa, MD PhD, Akihiro Kobayashi, MD PhD, Masanori Sugito, MD PhD, Norio Saito, MD PhD, National Cancer Center Hospital East
- P126 ACUTE SOLITARY TRANSVERSE COLON DIVERTICULITIS IN A 27 YEAR OLD FEMALE Negar M Salehomoum, MD, Georg N Herlitz, MD JD, Mark R Schwartz, MD FACS, Robert Wood Johnson Medical School; Jersey Shore University Medical Center
- P127 EARLY LAPAROSCOPIC SINGLE-STAGE RESECTION FOR THE TREATMENT OF ACUTE DIVERTICULITIS <u>Seema Izfar, MD</u>, Teresa H. Debeche-adams, MD, Sam Atallah, MD, Matthew R Albert, MD, James Clancy, ARNP, Karla Miller, Omar Felix, MBBS, Sergio W Larach, MD, Florida Hospital
- P128 COMPARISON OF RESULTS AND COMPLICATIONS OF STAPLED HEMORRHOIDOPEXY PERFORMED WITH THE ETHICON AND COVIDIEN STAPLERS Rebekah Kim, MD, Andrea Ferrara, Mark Soliman, Robert Stevens, Samuel Dejesus, Paul Williamson, Joseph Gallagher, Jay Macgregor, Kiyanda Baldwin, Colon and Rectal Clinic of Orlando, Orlando Health
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- P131 OBESITY INCREASES RISK OF COMPLICATIONS OF DIVERTICULAR DISEASE IN A VA PATIENT POPULATION Michelle K Savu, MD, G. Abourjaily, MD, A Logue, MD, J Mayoral, MD, Ej Ledesma, MD, W.b. Perry, MD, Kareem Eid, MD, South Texas VA HCS/University of Texas Health Science Center, San Antonio, TX
- P132 SINGLE PORT ACCESS LAPAROSCOPY VIA THE GLOVE PORT FOR PLANNED AND URGENT COLORECTAL SURGERY Mohamed Moftah, Dr, Ronan A Cahill, Dr, Department of Colorectal Surgery, Beaumont Hospital, Dublin, Ireland
- P133 SINGLE PORT LAPAROSCOPIC TOTAL COLECTOMY WITH END



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- P145 THE IMPACT OF A FUNDAMENTALS OF LAPAROSCOPIC SURGERY AND VIRTUAL REALITY TRAINING PROGRAM ON SURGICAL PERFORMANCE, A BLINDED RANDOMIZED VALIDATION TRIAL S B Goldin, MD PhD, H Lomas Iv, MPAS PAC MSIV, R E Heithaus, MS MSIV, D Molloy, MS MSIV, J R Williams, MD, D Donohue, MS MSIV, J Groundland, PT MSIV, S Schnaus, MS MSII, Jj Mateka, MS MSII, R Singh, MD, M T Brannick, PhD, The University of South Florida College of Medicine, Tampa FL
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- FRCSC, Neal Church, MD FRCSC, Department of Surgery, Faculty of Medicine, Qassim University, Saudi Arabia. Department of Upper GI and Laparoscopic Surgery, Peter Lougheed Center, Calgary, and Department of Community Health Sciences, Faculty of Medicine, University of Calgary, Canada.
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- P157 EVALUATING VIRTUAL REALITY SIMULATOR TRAINING ON SURGICAL RESIDENTS PERCEPTIONS OF STRESS: A RANDOMIZED CONTROLLED TRIAL <u>Kamran Samakar, MD</u>, J Andres Astudillo, MD, Mallika Moussavy, MA, Joanne Baerg, MD, Mark Reeves, MD, Carlos Garberoglio, MD, Loma Linda University Medical Center
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- P160 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY PERFORMED BY RESIDENTS <u>Elizabeth Hooper, MD</u>, Jonathan Myers, MD, Keith Millikan, MD, Minh Luu, MD, Rush University Medical Center
- P161 DOES A SURGICAL OPERATING PLATFORM SHORTEN THE LEARNING CURVE FOR SINGLE-INCISION-LAPAROSCOPY? Erwin Rieder, MD, Matthew Breen, BS, Maria A Cassera, BS, Danny V Martinec, BS, Chet W Hammill, MD, Lee L Swanstrom, MD, MIS Program, Legacy Health, Portland, OR; Gastrointestinal and Minimally Invasive Surgery, The Oregon Clinic, Portland, OR
- P162 MODELS FOR TRAINING AND EVALUATION OF FLEXIBLE ENDOSCOPIC SKILLS USING THE STEP PROGRAM D. Berger-richardson,

- Y. Kurashima, MD, P. Kaneva, MSc, L. S Feldman, MD, G. M Fried, MD, M. C Vassiliou, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery and Innovation, McGill University Health Centre, and The Arnold and Blema Steinberg Medical Simulation Centre, McGill University
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- P173 WHICH SKILLS REALLY MATTER? PROVING FACE, CONTENT, AND CONSTRUCT VALIDITY FOR A COMMERICAL ROBOTIC SIMULATOR Calvin Lyons, MD, David Goldfarb, MD, Brian Miles, MD, Rohan Joseph, MD, Richard Link, MD, Barbara L Bass, MD, Brian J Dunkin, MD, The Methodist Institute for Technology, Innovation, and Education
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- P176 ENDOSCOPIC RECTUS ABDOMINIS MUSCLE HARVESTING EXPERIMENTAL STUDY <u>Alexandru I Blidisel</u>, <u>Assistant Professor MD PHD</u>, Lucian P Jiga, Associated Professor MD PHD, Octavian Cretu, Professor,

- Razvan Tirziu, MD Phd, Mihai Ionac, Professor, University Of Medicine and Pharmacy from Timisoara, Romania
- P177 GASTRODUODENAL INTUSSUSCEPTION-A RARE INTERESTING CASE REPORT. <u>Choden Norbu, MS</u>, J S Basunia, MS, K Khan, MD, D Bagchi, MS, N Pandit, MD, A N Sarkar, MS, Jamyang Gyatsho, MS, North Bengal Medical Colleg& Hospital,Sushrutanagar,Darjeeling,West Bengal,India
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- P179 EFFECTS OF ORALLY DISINTEGRATED METOCLOPRAMIDE (ODM) IN OPTIMIZING LATE OUTPATIENT ENDOSCOPY: A RANDOMIZED DOUBLE-BLIND PLACEBO-CONTROLLED CLINICAL TRIAL <u>P Patrick Basu, MD MRCP MACG AGAF</u>, Niraj James Shah, MD, Hemanth Hampole, MD, Thankam Nair, MD, Nithya V Krishnaswamy, MD, S Farhat, MD, Columbia College of Physicians and Surgeons, NY, North Shore University Hospital at Forest Hills, NY
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- P182 BODY MASS INDEX DOES NOT AFFECT THE SURGICAL OUTCOME OF LAPAROSCOPIC HELLER-DOR SURGERY FOR ACHALASIA PATIENTS Kazuto Tsuboi, MD, Nobuo Omura, MD, Fumiaki Yano, MD, Masato Hoshino, MD, Se Ryung Yamamoto, MD, Shunsuke Akimoto, MD, Hideyuki Kashiwagi, MD, Katsuhiko Yanaga, MD, Department of Surgery, Jikei University School of Medicine, Tokyo, JAPAN
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- P188 PRYMARY COLONIC TYPE ADENOCARCINOMA OF THE CECAL APPENDIX: A RARE CAUSE OF CONVERSION IN LAPAROSCOPIC APPENDECTOMY. <u>Alexander Ramirez Valderrama</u>, <u>MD</u>, Armando Castro, MD FACS, New York Hospital Queens
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- P190 THE CHARACTERISTICS OF OUR PROCEDURES IN ANTI-REFLUX SURGERY FOR GERD PATIENTS <u>Tatsushi Suwa, MD PhD</u>, Kazuhiro Karikomi, MD, Naoki Asakage, MD PhD, Eishi Totsuka, MD PhD, Naokazu Nakamura, MD PhD, Keigo Okada, MD, Tomonori Matsumura, MD, Kashiwa Kousei General Hospital
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- P193 LAPAROSCOPIC PYLORUS-PRESERVING GASTRECTOMY WITH INTRACORPOREAL DELTA-SHAPED ANASTOMOSIS <u>Shinya Tanimura, PhD</u>, Naoki Hiki, PhD, Soya Nunobe, PhD, Sayuri Sekikawa, Dr, Takehiro Chiba, Dr, Toshiyuki Kosuga, Dr, Takafumi Sato, Dr, Yoshikazu Hashimoto, Dr, Yohei Watanabe, Dr, Koshi Kumagai, Dr, Susumu Aiko, Dr, Takeshi Kubota, PhD, Takeshi Sano,, Cancer Institute Hospital, Japan Foundation for Cancer Research
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- P197 COMPLETE LAPAROSCOPIC R-Y RECOSTRUCTION WITH HUNT-LAURENCE POUCH IN TOTAL GASTRECTOMY <u>Koji Hattori, MDPhD</u>, Kazunao Watanabe, MD, Hidemitsu Ogino, MD, Rai Shimoyama, MD, Jun Kawachi, MD, Hiromitsu Takeyama, MDPhD, Shonan Kamakura General Hospital
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- P199 UNCUT ROUX-EN-Y RECONSTRUCTION AFTER LAPAROSCOPIC DISTAL GASTRECTOMY Yong Jin Kim, MD PhD, SCH Hospital
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- P201 LAPAROSCOPIC WEDGE RESECTION OF THE STOMACH FOR EARLY GASTRIC CANCER <u>Tsutomu Sato</u>, Yasushi Rino, Koichiro Yamaoku, Hirohito Fujikawa, Daisuke Inagaki, Roppei Yamada, Takashi Oshima, Norio Yukawa, Toshio Imada, Munetaka Masuda, Department of surgery, Yokohama City University, School of Medicine
- P202 SINGLE INCISION LAPAROSCOPIC NISSEN FUNDOPLICATION IN 11 PATIENTS WITH GERD <u>Kazuo Tanoue</u>, <u>MD PhD FACS</u>, Hidenobu Okino, MD PhD, Yasuhiro Nozoe, MD PhD, Masamitsu Kanazawa, MD PhD, Kiichiro Ueno, MD PhD, Ueno Hospital, Fukuoka, Japan
- P203 META-ANALYSIS OF STAGING LAPAROSCOPY VERSUS COMPUTED TOMOGRAPHY IN OESOPHAGOGASTRIC CANCER STAGING <u>Matthew F Leeman</u>, <u>MBChB MSc MRCS</u>, Department of Surgery, Royal Infirmary of Edinburgh, UK
- P204 THE DIAGNOSTIC ACCURACY OF MULTI-DETECTOR CT VERSUS STAGING LAPAROSCOPY IN OESOPHAGOGASTRIC CANCER PERITONEAL METASTASES <u>Matthew F Leeman</u>, <u>MBChB MSc MRCS</u>, Patel Dilip, FRCR, Anderson Judith, FRCR, Simon Paterson-brown, MBBS MPhil MS FRCSEd FRCSEng, Department of Surgery, Royal Infirmary of Edinburgh, UK
- P205 LAPAROSCOPIC HAND-SEWN ESOPHAGOJEJUNAL ANASTOMOSIS AFTER LAPAROSCOPIC TOTAL GASTRECTOMY FOR GASTRIC CANCER <u>Susumu Inamine, MD</u>, Yasuaki Mayama, MD, Tomofumi Orokawa, MD, Osamu Kakazu, MD, Hiroki Sunagawa, MD, Tetsuo Toyama, MD, Hisamitsu Zaha, MD, Nakagami General Hospital
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- ESOPHAGECTOMY: COMPARISON WITH OPEN THORACO-ABDOMINAL APPROACH <u>Hiroyuki Kitagawa</u>, Tsutomu Namikawa, Jun Iwabu, Michiya Kobayashi, Kazuhiro Hanazaki, Kochi Medical School
- P207 LAPAROSCOPIC MANAGEMENT OF BOWEL OBSTRUCTION, THE ALL INCLUSIVE APPROACH, IMPROVES OUTCOMES. <u>Christopher W Salzmann, MD</u>, Morris E Franklin, MD FACS, Karla Russek, MD, Texas Endosurgery Institute
- P208 A SURVEY OF PEDIATRIC SURGEONS' EXPERIENCE WITH LAPAROSCOPIC PYLOROMYOTOMY Charles W Hartin, M A Escobar, ST Lau, SZ Yamout, Michael G Caty, YH Lee, Women and Children's Hospital of Buffalo, State University of New York at Buffalo, Mary Bridge Children's Hospital & Health Center, Kaiser Permanente Los Angeles Medical Center, University of Rochester Medical Center
- P209 LAPAROSCOPIC LIMITED GASTRECTOMY WITH SENTINEL NODE NAVIGTION FOR GASTRIC CANCER <u>Ju-hee Lee, MD</u>, Sang Hoon Ahn, MD, Do Joong Park, MDPhD, Hyung-ho Kim, MDPhD, Hye Seung Lee, MDPhD, Seoul National University Bundang Hospital
- P210 LAPAROSCOPY ASSISTED PROXIMAL GASTRECTOMY IN GASTRIC CANCER: SHORT TERM CLINICAL OUTOCOME AND FUNCTIONAL STUDY <u>Tomotaka Shibata</u>, Shinichi Sakuramoto, Hiroaki Mieno, Masayuki Nemoto, Nobue Futawatari, Keishi Yamashita, Natsuya Katada, Shirou Kikuchi, Masahiko Watanabe, Department of Surgery Kitasato University
- P211 LAPAROSCOPY-ASSISTED GASTRECTOMY AS ADDITIONAL TREATMENT AFTER ENDOSCOPIC SUBMUCOSAL DISSECTION FOR EARLY GASTRIC CANCER <u>H Mieno</u>, S Sakuramoto, T Shibata, M Nemoto, K Yamashita, N Katada, S Kikuchi, M Watanabe, Depertment of Surgery, Kitasato University School of Medicine
- P212 LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR WITH ANTERIOR GASTROPEXY DOES NOT WORSEN REFLUX AND IMPROVES DYSPHAGIA; AN INSTITUTIONAL SERIES <u>Toms Augustin, MD MPH</u>, Jonathan M Tomasko, MD, Gustavo E Bello, MD, Randy S Haluck, MD FACS, Ann M Rogers, MD FACS, Jerome R Lynsue, MD FACS, Milton S. Hershey Penn State Medical Center
- P213 TWO-LUNG VENTILATION TECHNIQUE FOR THORACOLAPAROSCOPIC ESOPHAGECTOMY IN PRONE POSITION Daisuke Saikawa, MD, Shunichi Okushiba, MD PhD, Saseem Puedel, MD, Takanobu Onoda, MD, Takeshi Sasaki, MD PhD, Yuma Ebihara, MD PhD, Yo Kawarada, MD PhD, Shuji Kitashiro, MD PhD, Hiroyuki Kato, MD PhD, tonan hospital
- P214 A CLINICAL STUDY ON POSTOPERATIVE ENDOSCOPIC APPEARANCE OF ANASTOMOSIS EARLY AFTER ESOPHAGECTOMY. Yujiro Tanaka, MD, Katsunori Nishikawa, MD, Fumiaki Yano, MD, Jun Asakura, MD, Tomoyoshi Okamoto, MD, Hideyuki Kashiwagi, MD, Katsuhiko Yanaga, MD, Dept. of Surgery, Daisan Hospital, Jikei University School of Medicine?, Tokyo, Japan
- P215 COLLABORATING LAPAROSCOPIC AND ENDOSCOPIC METHOD FOR GASTRIC SUBMUCOSAL TUMORS: OUR EXPERIENCE <u>Saseem Poudel</u>, <u>MD</u>, Yuma Ebihara, PhD MD, Daisuke Saikawa, MD, Takanobu Onoda, MD, Takeshi Sasaki, MD PhD, Yo Kawarada, MD PhD, Shuji Kitashiro, MD PhD, Syunichi Okusiba, MD PhD, Hiroyuki Katoh, MD PhD, Tetsuya Sumiyoshi, MD, KKR Sapporo Medical Center, Tonan Hospital
- P216 LAPAROSCOPIC SINGLE-PORT GASTRECTOMY FOR A GASTRIC GASTROINTESTINAL STROMAL TUMOR. Norimasa Koide, MD, Takao Kunou, MD, Kenji Kato, Inazawa City Hospital
- P217 THE ADVANTAGE OF TOTALLY LAPAROSCOPIC TOTAL GASTRECTOMY (TLTG), LESS INVASIVENESS, APPLICATION EASINESS AND COST EFFECTIVENESS: IN A SINGLE-INSTITUTION EXPERIENCE OF OVER 140 CASES. <u>Hitoshi Satodate</u>, Haruhiro Inoue, Shin-ei Kudo, Showa University Northern Yokohama Hospital
- P218 CAUSTIC AGENT INGESTION OUTCOMES FROM ONE INSTITUTION IN THAILAND WITH MEAN 6 YEARS FOLLOW UP <u>Orapich Kayunkid, MD</u>, Panot Yimchareon, MD, Vibul Trakulhun, MD, Department of Surgery Bhumibol Adulyadej Hospital, Bangkok, Thailand
- P219 PRESERVATION OF VAGUS NERVE TECHNIQUE USING LEFT-SIDED APPROACH IN LAPAROSCOPIC GASTRECTOMY. <u>Tetsu Fukunaga, PhD MD</u>, Shinya Mikami, PhD MD, Takehito Ohtsubo, PhD MD, Nobuyoshi Miyajima, PhD MD, St. Marianna University School of Medicine
- P220 A LESS INVASIVE THERAPY BY DIAGNOSTIC DOUBLE BALOON INTESTINAL ENDOSCOPY (DBE) AND LAPAROSCOPIC SALVAGE SURGERY (LSS) <u>Shigehiko Yag</u>i, Fumiki Kushihata, Riki Ohno, Hideshi Yamamoto, Hirotsugu Yoshiyama, Hidenori Takatsuki, Yasutsugu

- Takada, DEPARTMENT OF SURGERY, Ehime Prefectural Imabari Hospital P221 THE FEASIBILITY AND SAFETY OF LAPAROSCOPIC DISTAL PANCREATECTOMY FOR PANCREATIC TUMOR Long Vo Duy, Ms, Bac Nguyen Hoang, Prof PhD, Tuan Le Quan Anh, Ms, University Medical Center, Hochiminh city, Vietnam
- P222 SUB-TOTAL LAPAROSCOPIC GASTRECTOMY PROVIDES AN APPROPRIATE ONCOLOGIC PROCEDURE IN SELECTED PATIENTS WITH ANTRAL ADENOCARCINOMA <u>Samantha Benlolo</u>, Jonathan Coolslartigue, MD, Victoria Marcus, MD, Lorenzo Ferri, MD PhD, Department of Surgery McGill University Health Center, Department of Pathology McGill University Health Center, Steinberg-Bernstein Center for Minimally Invasive Surgery
- P223 ROLE OF ENDOSCOPIC ULTRASONOGRAPHY (EUS) VERSUS COMPUTERISED TOMOGRAPHY(CT) SCAN IN STAGING OF GASTRIC MALIGNANCY Ahmed Hammad, Mr, <u>Mohamed Shams</u>, Mr, Mohamed Gamil, PhD, Reda Tabash, PhD, Ali Amin, Mr, National Cancer Institute, Cairo University, Cairo, Egypt
- P224 LAPAROSCOPIC IMPLANTATION OF GASTRIC STIMULATOR AS AN EFFECTIVE TREATMENT MODALITY FOR GASTROPARESIS <u>Lee A Farber</u>, <u>DO</u>, David B Earle, MD, Baystate Medical Center
- P225 OUR EXPERIENCE WITH LAPARASOPIC NISSEN FUNDOPLICATION IN PATIENTS WITH GASTROESOPHAGEAL REFLUX <u>M.tahir Oruc, MD</u>, M. Umit Ugurlu, MD, H. Taner Turgut, MD, Emel Canbey, MD, Mehmet Ozyildiz, MD, Zehra Boyacioglu, MD, KOCAELI DERINCE TEACHING AND RESEARCH HOSPITAL GENERAL SURGERY CLINIC, KOCAELI, TURKEY
- P226 A SYSTEMATIC REVIEW OF PAIN AFTER ANTI-REFLUX SURGERY <u>David Bunting, Mr</u>, Lukasz Szczebiot, Dr, Paul Peyser, Mr, The Royal Cornwall Hospital, Truro, Cornwall, UK.
- P227 LAPAROSCOPIC GASTRECTOMIES IN GASTRIC CANCER PATIENTS: A SINGAPORE'S INSTITUTION INITIAL EXPERIENCE <u>Aung M Oo, MD</u>, V Shelat, MD, K H Lim, MD, A Koura, MD, J Rao, MD, Tan Tock Seng Hospital, Singapore
- P228 INITIAL EXPERIENCE OF PROSTHETIC MESH IN LAPAROSCOPIC REPAIR OF GIANT PARAESOPHAGEAL HIATUS HERNIA H Poon, MD MRCS, A Patel, MD MRCS, A S Perry, MD FRCS, <u>M S Wadley, MD FRCS</u>, Department of Upper GI Surgery, Worcestershire Royal Hospital, Worcester, UK
- P229 DO ROUTINE POSTOPERATIVE UPPER GASTROINTESTINAL STUDIES FOLLOWING LAPAROSCOPIC GASTRIC BYPASS AFFECT CLINICAL OUTCOMES? A COMMUNITY HOSPITAL EXPERIENCE. Salim Abunnaja, MD, Lucian Panait, MD, Aziz Richi, MDFACS, Shady Macaron, MDFACS, Ankit Dhamija, MS, Binh Nguyen, MS, Alexander Palesty, MDFACS, Saint Mary's Hospital
- P230 LAPAROSCOPIC REPAIR OF PARAESOPHAGEAL HERNIAS: THE LAST TEN YEARS <u>Michael Latzko, MD</u>, Frank Borao, MD FACS, Anthony Squillaro, MD FACS, Jonas Mansson, MD, William Barker, MD, Thomas Baker, Monmouth Medical Center
- P231 LONG-TERM SYMPTOMATIC OUTCOMES IN PATIENTS UNDERGOING RE-OPERATIVE FUNDOPLICATION <u>Masato Hoshino</u>, Ananth Srinivasan, Amith V Reddy, Tommy H Lee, Sumeet K Mittal, Creighton University Medical Center
- P232 EVALUATION OF ESOPHAGOGASTROSTOMY USING A CIRCULAR STAPLER IN LAPAROSCOPY-ASSISTED PROXIMAL GASTRECTOMY Daisuke Ichikawa, MD, Shuhei Komatsu, MD, Kazuma Okamoto, MD, Atsushi Shiozaki, MD, Hitoshi Fujiwara, MD, Yasutoshi Murayama, MD, Yoshiaki Kuriu, MD, Hisashi Ikoma, MD, Masayoshi Nakanishi, MD, Toshiya Ochiai, MD, Yukihito Kokuba, MD, Eigo Otsuji, MD, Division of Digestive Surgery, Department of Surgery, Kyoto Prefectural University of Medicine
- P233 LEIOMYOMA REMOVED DURING LAPAROSCOPIC GASTRIC BYPASS <u>Daniel J Mullins, MD</u>, Sean Orenstein, MD, Nissin Nahmias, MD, University of Connecticut
- P234 COMBINED ENDOSCOPIC AND LAPAROSCOPIC INTRAGASTRIC TUMOR REMOVAL: AN APPLIED TECHNIQUE TO MANAGE SUBMUCOSAL GASTRIC TUMOR LOCATED NEXT TO THE EJ JUNCTION <u>Suriya Punchai</u>, <u>MD</u>, Suppa-ut Pungpapong, MD, Chadin Tharavej, MD, Patpong Navicharern, MD, Suthep Udomsawaengsup, MD, Chula Minimally Invasive Surgery Center Chulalongkorn University, Bangkok, Thailand
- P235 RETROSPECTIVE ANALYSIS OF LAPAROSCOPIC APPROACH IN INTESTINAL OBSTRUCTION <u>Masaru Matsumura, MD</u>, Tomoaki Okada, MD, Yoshitomo Ueno, MD, Kei Tamura, MD, Tetsuya Mizumoto, MD, Naoki Ishida, MD, Yoshinori Imai, MD, Taro Nakamura, MD, Hidenori

- Kiyochi, MD, Kenzo Okada, MD, Toshihiko Sakao, MD, Shinsuke Kajiwara, MD, Uwajima city hospital
- P236 ENDOFLIP HIATAL CALIBRATION DURING ANTERIOR PARTIAL FUNDOPLICATION EARLY OUTCOMES <u>Leslie Nathanson</u>, <u>Dr</u>, Wesley Hospital, Brisbane
- P237 COSMETIC OUTCOME AFTER SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY AND CONVENTIONAL LAPAROSCOPIC CHOLECYSTECTOMY: AN OBJECTIVE COMPARISON Pankaj Garg, MBBS MS, Vikas Gupta, MBBS MS MCH, Jai D Thakur, MBBS, 1.Fortis Super Speciality Hospital, Mohali, India, 1.MMIMS, Mullana, India 2.Post Graduate Institute of Medical Sciences & Research, Chandigarh, India, 3.

 1. Louisiana State University Health Sciences Center, Shreveport, Louisiana, USA
- P238 POSTOPERATIVE OUTCOMES OF ROUX-EN Y RECONSTRUCTION WITH DOUBLE STAPLING AND INTRACORPOREAL SUTURES; IN A TOTALLY LAPAROSCOPIC DISTAL GASTRECTOMY <u>Jung Ho Shim, MD</u>, Kyo Young Song, Department of Surgery, College of Medicine, The Catholic University of Korea
- P239 COMPARISON OF SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY AND CONVENTIONAL LAPAROSCOPIC CHOLECYSTECTOMY: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS Pankaj Garg, MBBS MS, <u>Vikas Gupta, MBBS MS MCH</u>, Jai D Thakur, MBBS, Geetha R Menon, PhD, 1. Fortis Super Speciality Hospital, Mohali, India & MMIMS, Mullana, India, 2. PGIMER, Chandigarh, India, 3. Louisiana State University Health Sciences Center, Shreveport, Louisiana, USA, 4. ICMR, New Delhi, India
- P240 ENHANCED RECOVERY PROGRAM IN LAPAROSCOPIC RADICAL GASTRECTOMY FOR GASTRIC CANCER PATIENTS <u>Chung-wei Lin, MD, Tzu-jung Tsai, MD, Tsung-yen Cheng, MD, Hung-kuang Wei, MD, Chiiming Chen, MD, Koo Foundation Sun Yat-Sen Cancer Center</u>
- P241 EARLY REFERRAL FOR 24-HOUR ESOPHAGEAL PH MONITORING MAY PREVENT UNNECESSARY TREATMENT WITH ACID-REDUCING THERAPY <u>David A Kleiman</u>, MD, Matthew J Sporn, BS, Toni Beninato, MD, Thomas J Fahey, Iii, MD, Rasa Zarnegar, MD, New York Presbyterian Hospital Weill Cornell Medical College
- P242 FEASIBILITY OF MINIMALLY INVASIVE ESOPHAGECTOMY AFTER NEOADJUVANT CHEMO-RADIATION <u>Charles Bakhos, MD</u>, Tolutope Oyasiji, MD, Michael Kent, MD, Sidhu Gangadharan, MD, Jonathan Critchlow, MD, Tom Fabian, MD, Albany Medical Center (Albany NY), Beth Israel Deaconess Medical Center (Boston, MA)
- P243 LONG-TERM SYMPTOM CONTROL AND SATISFACTION SCORES IN PATIENTS UNDERGOING PRIMARY ANTI-REFLUX SURGERY <u>Ananth Srinivasan</u>, Masato Hoshino, Amith V Reddy, Tommy H Lee, Sumeet K Mittal, Creighton University Medical Center
- P244 SWALLOW SYNCOPE AFTER LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY: FIRST REPORTED CASE <u>Sergio G Casillas</u>, MD, Gintaras Antanavicius, MD FACS, Abington Memorial Hospital, Department of Surgery
- P245 THE SURGICAL OUTCOMES OF LAPAROSCOPIC ASSISTED TOTAL GASTRECTOMY WITH UPPER MEDIAN SMALL INCISION <u>Nobuhiro Takiguchi, MD PhD</u>, Matsuo Nagata, MD, Yoshihiro Nabeya, MD, Atsushi Ikeda, MD, Osamu Kainuma, MD, Hiroaki Soda, MD, Akihiro Cho, MD, Takumi Ota, MD, Sjonjin Park, MD, Hiroshi Yamamoto, MD, Divsion of Gastroenterology, Chiba Cancer Center
- P246 THE EFFECT OF VESSEL SEALING SYSTEM ON THE OUTCOME OF LAPAROSCOPIC GASTRECTOMY <u>Kengo Kanetaka</u>, <u>PhD</u>, Shinichiro Ito, MD, Kosho Yamanouchi, PhD, Fumihiko Fujita, PhD, Mitsuhisa Takatsuki, PhD, Tamotsu Kuroki, PhD, Susumu Eguchi, PhD, Nagasaki University Graduate School of Biomedical Sciences
- P247 DOES SIMULTANEOUS HIATAL HERNIA REPAIR WITH LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS EFFECT OUTCOMES? <u>Kunoor Jain-spangler</u>, MD, Jin Yoo, MD, Alfonso Torquati, MD MSci, Dana Portenier, MD, Ranjan Sudan, MD, Aurora D Pryor, MD, Duke University Medical Center; Stony Brook University Medical Center
- P248 PARAESOPHAGEAL HERNIA REPAIR IN THE ELDERLY PATIENT <u>Isabelle Raiche, MD FRCSC</u>, Fatima Haggar, MPH, Joseph Mamazza, MDCM FRCSC, Husein Moloo, MD FRCSC MSc, Guillaume Martel, MD FRCSC, Eric C Poulin, MD MSc FRCS C, James Masters, MD, Christopher Smith, MD FRCSC, Balpreet Brar, MD FRCSC, The Minimally Invasive Surgery Research Group, The Ottawa Hospital, University of Ottawa
- P249 PARTIAL LONGITUDINAL GASTRECTOMY: A NOVEL CURATIVE APPROACH FOR GASTROPARESIS Avishai Meyer, MD, Pradeep Pallati,



- MD, Abhijit Shaligram, MBBS, Dmitry Oleynikov, MD, Matthew Goede, MD, University of Nebraska Medical Center
- P250 IMPACT OF TRANSORAL INCISIONLESS FUNDOPLICATION ON SUBJECTIVE AND OBJECTIVE GERD INDICES: A META-ANALYSIS OF THE PUBLISHED LITERATURE <u>Mark R Wendling</u>, MD, W. Scott Melvin, MD, Kyle A Perry, MD, Center for Minimally Invasive Surgery, The Ohio State University, Columbus, OH
- P251 LAPAROSCOPIC MANAGEMENT OF SMALL BOWEL OBSTRUCTION DUE TO MECKEL'S DIVERTICULUM IN THE ADULT. Alex Gandsas, MD, Adeshola Fakulujo, MD, <u>Wanda Good, DO</u>, Sohail Mamdani, DO, Abier Abdelnaby, MD, UMDNJ-SOM
- P252 MARKED INCREASE IN INTRACRANIAL PRESSURE WITH LAPAROSCOPY: CASE REPORT <u>Tovy H Kamine</u>, <u>MD</u>, Efstathios Papavassiliou, MD, Benjamin E Schneider, MD, Beth Israel Deaconess Medical Center
- P253 LAPAROSCOPIC RESECTION OF GASTROINTESTINAL STROMAL TUMORS (GIST) REPORT OF 62 CASES AND COMPARISON TO OPEN RESECTION Michael J Pucci, MD, Francesco Palazzo, MD, Bernadette C Profeta, MD, Pei-wen Lim, BS, Karen A Chojnacki, MD, Ernest L Rosato, MD, Adam C Berger, MD, Thomas Jefferson University Hospital, Department of Surgery, Philadelphia, PA, USA
- P254 ROLE OF LAPAROSCOPIC SURGERY IN PALLIATIVE GASTRIC CANCER MANAGEMENT. Cedric Adelsdorfer, MD, Waldemar Adelsdorfer, MD, Elizabeth Pando, MD, Dulce Momblán, MD, Antonio M Lacy, MD PhD, Department of Gastrointestinal Surgery, Institute of Digestive and Metabolic Diseases (ICMDM), Hospital Clínic of Barcelona
- P255 LAPAROSCOPIC ANTIREFLUX PROCEDURES WITH HEPATIC SHOULDER TECHNIQUE FOR THE SURGICAL MANAGEMENT OF LARGE PARAESOPHAGEAL HERNIAS AND REFRACTORY GASTROESOPHAGEAL REFLUX DISEASE Philippe J Quilici, MD FACS, Carie Mcvay, MD, Alexander Tovar, MD, Dept. of Surgery, Providence St. Joseph Medical Center, Burbank CA
- P256 PNEUMATIC BALLOON DILATION HAS LIMITED EFFECTIVENESS IN PATIENTS AFTER FOREGUT SURGERY <u>Alla Zemlyak, MD</u>, Sofiane El-djouzi, MD, Paul D Colavita, MD, Dimitrios Stefanidis, MD, Brant T Heniford, MD, Carolinas Medical Center
- P257 SURVIVAL AND SURGICAL OUTCOMES AFTER LAPAROSCOPY-ASSISTED TOTAL GASTRECTOMY FOR GASTRIC CANCER: CASE CONTROL STUDY <u>Young-woo Kim</u>, Bang Wool Eom, Sang Eok Lee, Keun Won Ryu, Jun Ho Lee, Hong Man Yoon, Soo-jeong Cho, Myeong-cherl Kook, Soo Jin Kim, Gastric Cancer Branch, Research Institute & Hospital, National Cancer Center
- P258 LETHAL ACUTE GASTRIC VOLVULUS MASQUERADING IN THE MEDICAL UNIT IS MANAGABLE WITH A LAPAROSCOPIC APPROACH Michael L Hibbard, MD, Giovanni Begossi, MD, Paul Suding, MD, Teresa Kim, MD, Greg Broderick-villa, MD, Rupert Horoupian, MD, Steven Stanten, MD, Ajay Upadhyay, MD, First Surgical Consultants, Alta Bates Summit Medical Center, Oakland, California, U.S.A and St. Rose Hospital, Hayward, California, U.S.A.
- P259 PEG PLACEMENT OUTCOMES IN THE OBESE PATIENT POPULATION Onur C Kutlu, MD, Diana Vega-burgueno, MD, Ari Halldorsson, MD, Sharmila Dissanaike, MD, Texas Tech University, Department of General Surgery
- P260 A NOVEL BIOLOGIC MESH AS REINFORCEMENT OF HIATAL CLOSURE DURING LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR <u>Felco B</u> <u>Wassenaar, MD PhD</u>, Carlos A Pellegrini, MD, Brant K Oelschlager, MD, University of Washington
- P261 DELAY IN THE REPAIR OF OBSTRUCTED PARAESOPHAGEAL HERNIAS INCREASES POST-OPERATIVE SEPTIC COMPLICATIONS Neil H Bhayani, MD MHS, Ashwin A Kurian, MBBS, Kevin M Reavis, MD, Christy M Dunst, MD, Lee L Swanstrom, MD, The Orgeon Clinic
- P262 SINGLE PORT LAPAROSCOPIC SURGERY FOR ACHALASIA A CASE REPORT <u>Hisae Aoki, MD</u>, Toshiyuki Mori, MD, Nobutsugu Abe, MD, Osamu Yamagida, MD, Tadahiko Masaki, MD, Masanori Sugiyama, MD, Department of Surgery, Kyorin University
- P263 SINGLE INCISION LAPAROSCOPIC SURGERY FOR SURGICAL LIVER DISEASE Jonathan D Svahn, MD FACS, Austin L Spitzer, MD, <u>Christine Henneberg</u>, <u>BS</u>, Matthew R Dixon, MD, Kaiser Permanente East Bay, Oakland Campus
- P264 SINGLE ACCESS LAPAROSCOPIC SURGERY (SALS) FOR ILEAL DISEASE Mohamed Moftah, Dr, John Burke, Dr, Ronan A Cahill, Dr, Department of Colorectal Surgery, Beaumont Hospital, Dublin, Ireland

- P265 PROSPECTIVE RANDOMIZED TRIAL COMPARING LAPAROSCOPIC TRANSABDOMINAL PREPERITONEAL (TAPP) AND LAPAROSCOPIC TOTALLY EXTRA PERITONEAL (TEP) APPROACH FOR BILATERAL INGUINAL HERNIA <u>Deborshi Sharma</u>, <u>MS MRCSEdin FMAS</u>, Kamal Yadav, MBBS MS, Nikhil Gupta, MS MRCSEdin FMAS, Romesh Lal, MS DNB, Lady Hardinge Medical College & Associated Dr RML Hospital, New Delhi
- P266 SYMPTOMATIC PARA ESOPHAGEAL AND INCISIONAL HERNIA: SIMULTANEOUS OR SEQUENTIAL REPAIR? Osama Hamed, MBBS, Stephen Kavic, MD, Adrian Park, MD, Department of Surgery University of Maryland School of Medicine Baltimore, MD. Department of Surgery, University of Dalhousie, Halifax NS Canada
- P267 TAPP REPAIR OF SPIGELIAN HERNIA AND INCIDENTALLY FOUND INDIRECT INGUINAL AND FEMORAL HERNIA: A CASE REPORT <u>Amy L Hiuser, MD</u>, John Bach, MD, Timothy Barnett, MD, Cleveland Clinic Foundation
- P268 CLINICAL APPLIED STUDY OF TENSION-FREE HERNIA REPAIR TECHNIQUES FOR INGUINAL HERNIA <u>Ke Gong, MD</u>, Zhanzhi Zhang, MD, Dexiao Du, MD, Xingbiao Wang, MD, Yankai Zhang, MD, Beijing Shijitan Hospital affiliated to Capital Medical University
- P269 LAPAROSCOPIC PARASTOMAL HERNIA REPAIR AND RE-OSTOMY,A TOTALLY NEW LAP-RE-DO TECHNIQUE <u>Yao Qiyuan</u>, Huashan Hospital, Shanghai Medical Collage, Fudan University,
- P270 PATTERN OF RECURRENCE, READMISSION AND WOUND INFECTION FOLLOWING EMERGENT VENTRAL HERNIA REPAIR <u>Tolutope O Oyasiji</u>, <u>MD MRCS</u>, Scott W Helton, MD FACS, Department of Surgery, Hospital of Saint Raphael, New Haven, CT 06511
- P271 LAPAROSCOPIC HERNIA REPAIR IN A TERTIARY CARE CENTRE: A SINGLE INSTITUTION EXPERIENCE <u>François Julien</u>, <u>MD</u>, Jean-pierre Gagné, MD, Québec Centre for Minimally Invasive Surgery. Centre Hospitalier Universitaire de Québec
- P272 LIGHTWEIGHT VERSUS HEAVYWEIGHT MESH IN LAPAROSCOPIC INGUINAL HERNIA REPAIR: A META-ANALYSIS A Currie, MRCS, <u>H</u> Andrew, MRCS, A Tonsi, MRCS, P R Hurley, MS FRCS, S Taribagil, FRCS, Croydon University Hospital
- P273 THE MEANDERING ILIAC ARTERY: A VASCULAR ABNORMALITY COMMONLY ENCOUNTERED DURING LAPAROSCOPIC INGUINAL HERNIA REPAIR <u>Jonathan P Pearl, MD</u>, Tiffany C Cox, MD, Kristen Trinca, MD, Gary Wind, MD, E. Matthew Ritter, MD, National Military Medical Center, Bethesda
- P274 LOW INCIDENCE OF SURGICAL SITE INFECTION IN LAPAROSCOPIC INGUINAL HERNIORRHAPHY Maris S Jones, MD, Charles St Hill, MD, Shawn Tsuda, MD, University of Nevada School of Medicine
- P275 OVERLAYING THERAPY USING COLLAGEN SPIN-COATED PLLA NANOSHEET FOR FIXATION OF POLYPROPYLENE MESH <u>Keiichi Fujino, MD PhD</u>, Manabu Kinoshita, MD PhD, Hiroki Haniuda, Hidekazu Yano, MD, Akihiro Saitoh, PhD, Toshinori Fujie, PhD, Kahoko Nishikawa, PhD, Keiichi Iwaya, MD PhD, Shinji Takeoka, PhD, Daizoh Saitoh, MD PhD, Yuji Tanaka, MD PhD, Department of General Medicine, National Defense Medical College

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- P277 STAGED APPROACH TO INFECTED SYNTHETIC MESH: OUTCOMES FOLLOWING ABDOMINAL WALL RECONSTRUCTION WITH STRATTICE BIOLOGICAL MATRIX Sujata Sofat, MD, Ketan Patel, MD, Frank Albino, MD, Maurice Nahabedian, MD, Parag Bhanot, MD, Georgetown University Hospital Departments of General Surgery and Plastics Surgery
- P278 CRITICAL ANALYSIS OF STRATTICE PERFORMANCE IN COMPLEX ABDOMINAL WALL RECONSTRUCTION: INTERMEDIATE RISK PATIENTS AND EARLY COMPLICATIONS Sujata Sofat, MD, Ketan Patel, MD, Frank Albino, MD, Maurice Nahabedian, MD, Parag Bhanot, MD, Georgetown University Hospital Departments of General Surgery and Plastics Surgery
- P279 TOTALLY EXTRAPERITONEAL SINGLE INCISION LAPAROSCOPIC INGUINAL HERNIA REPAIR <u>Nicole Sharp</u>, <u>MD</u>, Justin Fried, BS, Rob Watson, MD, John F Eckford, MD, F. Paul Buckley, MD, Stephen Abernathy, MD, Richard Frazee, MD, Scott & White
- P280 LAPAROSCOPIC HERNIA REPAIR UNDER LOCAL ANESTHESIA Norihito Wada, MD PhD, Toshiharu Furukawa, MD PhD, Yuko Kitagawa, MD PhD, Department of Surgery, School of Medicine, Keio University
- P281 A SYSTEMATIC REVIEW OF THE ASSOCIATION BETWEEN OBESITY AND INGUINAL HERNIAS <u>Kourosh Sarkhosh</u>, <u>MD MSc FRCSC</u>, Richdeep S Gill, MD, Daniel W Birch, MD MSc FRCSC, Xinzhe Shi, MPH, Shahzeer

- Karmali, BSc MD FRCSC, University of Alberta
- P282 LAPAROSCOPIC REPAIR FOR A BOCHDALEK HERNIA IN YOUNG PERSON –REPORT OF A CASE- <u>Atsushi lida, MD PhD FACS</u>, Katsusji Sawai, MDPhD, Mitsuhiro Morikawa, MD PhD, Takanori Goi, MD PhD, Kanji Katayama, MD PhD, Akio Yamaguchi, MD PhD, Gastroenterological surgery, University of Fukui
- P283 HIGH INCIDENCE OF SYMPTOMATIC INCISIONAL HERNIA AFTER MIDLINE EXTRACTION IN LAPAROSCOPIC COLON RESECTION <u>Lawrence Lee, MD</u>, Benjamin Mappin-kasirer, Chao Li, MD, Pepa Kaneva, MSc, Barry Stein, MD, Patrick Charlebois, MD, Sender Liberman, MD, Melina Vassiliou, MD, Gerald M Fried, MD, Liane S Feldman, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery and Innovation, McGill University, Montreal, QC, Canada
- P284 ASSESSING POSTOPERATIVE URINARY SYMPTOMS IN LAPAROSCOPIC CHOLECYSTECTOMY AND TAPP INGUINAL HERNIA REPAIR USING THE AMERICAN UROLOGICAL ASSOCIATION SYMPTOM SCORE FOR BPH Robert Mckay, MD, Ellis Hospital
- P285 LAPAROSCOPIC HERNIA REPAIR WITH C-QUR EDGE-A REPORT OF THREE CASES- Roppei Yamada, MD PhD, Yasushi Rino, MD PhD, Norio Yukawa, MD PhD, Tsutomu Sato, MD, Hirohito Fujikawa, MD, Koichiro Yamaoku, MD, Daisuke Inagaki, MD, Teni Godai, MD, Shinichi Hasegawa, MD PhD, Takashi Oshima, MD PhD, Munetaka Masuda, MD PhD, Department of Surgery, Yokohama City University School of Medicine
- P286 INTERNAL HERNIA WITH SMALL BOWEL INCARCERATION DUE TO MECKEL'S DIVERTICULUM Ming-li Wang*, MD, Scott Bloom, MD, Staten Island University Hospital, Yale New Haven Hospital*
- P287 A CASE OF LARGE PARAESOPHAGEAL HIATAL HERNIA SUCCESSFULLY TREATED BY LAPAROSCOPIC TENSION-FREE REPAIR. <u>Hirohito Fujikawa</u>, Yasushi Rino, Kenji Inafuku, Koichiro Yamaoku, Daisuke Inagaki, Nobuhiro Sugano, Tsutomu Sato, Roppei Yamada, Norio Yukawa, Munetaka Masuda, Toshio Imada, Yokohama City University Hospital
- P288 IMMEDIATE POSTOPERATIVE PAIN MEDICATION USE AFTER LAPAROSCOPIC VENTRAL HERNIA REPAIR <u>Maureen M Tedesco, MD</u>, Dan Eisenberg, MD MS, Stanford University Medical Center and Palo Alto VA HCS
- P289 HIATAL HERNIA AFTER THE ESOPHAGECTOMY REPAIRED BY LAPAROSCOPIC SURGERY <u>Jun Iwabu</u>, Hiroyuki Kitagawa, Tsutomu Namikawa, Michiya Kobayashi, Kazuhiro Hanazaki, Kochi Medical School
- P290 EVALUATION OF ABDOMINAL WALL REMODELING FOLLOWING VENTRAL HERNIA FORMATION IN A RODENT MODEL <u>David M Krpata</u>, <u>MD</u>, Karem C Harth, MD, Jeffrey A Blatnik, MD, Michael J Rosen, MD, Case Comprehensive Hernia Center, University Hospitals Case Medical Center
- P291 INITIAL OUTCOMES FOR LAPAROSCOPIC INGUINAL HERNIA REPAIR WITH PARTIALLY ABSORBABLE POLYPROPYLENE/POLYGLECAPRONE-25 MESH. Edward Samourjian, MD, Shawn Tsuda, MD, University of Nevada School of Medicine Department of Surgery.
- P292 SACCULAR AND INTRA-SACCULAR NEOPLASMS OF THE HERNIA SAC A CASE SERIES <u>Ambar Banerjee</u>, MD, Randy Tashjian, MD, Robert D Danforth, MD, John E Boccaccio, MD, DEPARTMENT OF SURGERY, DEPARTMENT OF PATHOLOGY, ST JOHN HOSPITAL AND MEDICAL CENTER, DETROIT, MI
- P293 A MODIFIED ACCESS TECHNIQUE COMBINING TAPP AND TEP TO FACILITATE EXTRAPERITONEAL INGUINAL HERNIA REPAIR USING MINI-INSTRUMENTS. <u>Gustavo L Carvalho, MD PhD</u>, Marcelo P Loureiro, MD PhD, Eduardo A Bonim, MD MSc, Christiano P Claus, MD MSc, Frederico W Silva, MD, Antonio M Cury, MD, Flavio A Fernandes Jr., MD, Adriano C Sales, Student, Oswaldo Cruz University Hospital and UNIPECLIN, Faculty of Medical Sciences, University of Pernambuco Recife and Positivo University Curitiba, Brazil.
- P294 PARASTOMAL HERNIA AFTER LAPAROSCOPIC ABDOMINOPERINEAL RESECTION CAN BE PREVENTED BY CREATING END SIGMOID COLOSTOMY THROUGH THE EXTRAPERITONEAL ROUTE <u>Madoka Hamada, MD</u>, Genya Muraoka, MD, Naoya Kawakita, MD, Kazuhide Ozaki, MD, Yasuo Fukui, MD, Yutaka Nishioka, MD, Toshitatsu Taniki, MD, Tadashi Horimi, MD, Kochi Health Sciences Center
- P295 LAPAROSCOPIC VENTRAL HERNIA REPAIR & BODY MASS INDEX Mohamed I Dahman, MD, <u>Damien J Lapar, MD</u>, Bruce D Schirmer, MD, Peter T Hallowell, MD, Department of Surgery, University of Virginia, PO Box 800709, Charlottesville, VA 22908, USA

- P296 "A PROSPECTIVE COMPARISON OF TACKS AND GLUE FOR MESH FIXATION IN LAPAROSCOPIC REPAIR OF INGUINAL HERNIA" <u>Francesco</u> <u>Stipa, MD PhD FACS</u>, Valentina Giaccaglia, MD, Alessio Pigazzi, MD FACS, Ettore Santini, MD, Antonio Burza, MD, Department of Surgery, San Giovanni Hospital, Rome, Italy
- P297 PROSPECTIVE EVALUATION OF THE ECONOMIC BENEFIT OF LAPAROSCOPIC TRANSABDOMINAL PRE-PERITONEAL (TAPP) HERNIA REPAIR IN THE DETECTION OF OCCULT BILATERAL INGUINAL HERNIAS A Patel, MD MRCS, D Vandellen, MD FRCS, M S Wadley, MD FRCS, Department of Surgery, Worcestershire Royal Hospital, Worcester, UK
- P298 LAPAROSCOPIC REPAIR OF COEXISTING PREVASCULAR AND OBTURATOR HERNIAS <u>David Bunting</u>, <u>Mr</u>, lan Finlay, Mr, The Royal Cornwall Hospital, Truro, Cornwall, UK.
- P299 LAPAROSCOPIC HERNIA REPAIR WHEN IS A HERNIA NOT A HERNIA? <u>David Bunting, Mr</u>, Lukasz Szczebiot, Dr, Alwyn Cota, Mr, The Royal Cornwall Hospital, Truro, Cornwall, UK.
- P300 LAPAROSCOPIC SUBCUTANEOUS DIRECT SUTURE CLOSURE FOR A CASE OF HERNIA IN THE LINEA ALBA Masanobu Hagiike, MD, Norikatsu Maeda, MD, Jun Uemura, MD, Seiji Noge, MD, Minoru Oshima, MD, Hirotaka Kashiwagi, MD, Naoki Yamamoto, MD, Shintaro Akamoto, MD, Masao Fujiwara, MD, Shinichi Yachida, MD, Takehiro Takama, MD, Keiichi Okano, MD, Hisashi Usuki, Department of Gastroenterological Surgery, Kagawa University, Japan
- P301 Withdrawn
- P302 A CASE OF INCARCERATED HERNIA AT THE 5MM PORT SITE AFTER REMOVAL OF TUBE DRAIN <u>Takayuki lino</u>, <u>MD</u>, Hideto Oishi, MD PhD, Takao Yamane, MD, Eiichi Hirai, MD PhD, Shingo Kameoka, MD PhD, Masaki Fukunaga, YACHIYO MEDICAL CENTER, TOKYO WOMEN'S UNIVERSITY
- P303 INCIDENCE OF INCISIONAL HERNIAS INCREASE WITH SINGLE PORT LAPAROSCOPIC TECHNIQUE <u>Cici Zhang</u>, Bruce Robb, MD, Joshua Waters, MD, Don Selzer, MD, Eric Wiebke, MD, Virgilio George, MD, Indiana University School of Medicine
- P304 LAPAROSCOPIC REPAIR OF PARASTOMAL HERNIAS OF ILEAL CONDUITS: A CASE SERIES <u>Philip J Davis, MD</u>, Denis R Klassen, MD, Dalhousie University
- P305 SAFETY AND EFFICACY OF COMMON LAPAROSCOPIC PROCEDURES IN PATIENTS WITH CIRRHOSIS A LARGE RETROSPECTIVE MULTI-CENTER STUDY <u>Abhijit Shaligram</u>, <u>MBBS</u>, Anton Simorov, MD, Vishal Kothari, MD, Matthew Goede, MD, Dmitry Oleynikov, MD, University of Nebraska Medical Center
- P306 IS PERITONEAL CLOSURE REQUIRED IN TEP PROCEDURE <u>Bojan m</u>
 <u>Radovanovic, md</u>, Miodrag m Cudomirovic, md, Nenad m Davidovic, md. General hospital Pozarevac
- P307 THE INCREASING UTILIZATION OF COMPONENT SEPARATION TECHNIQUE DURING VENTRAL HERNIA REPAIR: ASSOCIATION OF PATIENT, PAYOR, AND COMMUNITY DEMOGRAPHICS <u>Tatyan M Clarke, MD</u>, Ross F Goldberg, MD, Jillian M Lloyd, MD, Armando Rosalesvelderrain, MD, Steven P Bowers, MD, Mayo Clinic Florida
- P308 A META-ANALYSIS OF TRIALS COMPARING THE EFFECTIVENESS OF USE OF MESH IN LAPAROSCOPIC REPAIR OF PARAESOPHAGEAL HERNIAS <u>Katherine G Lamond, MS MD</u>, Miloslawa Stem, MS, Michael A Schweitzer, MD, Kimberley E Steele, MD, Anne O Lidor, MD MPH, Department of Surgery, Johns Hopkins Hospital
- P309 REPAIR OF A GIANT INGUINAL HERNIA WITHOUT LOSS OF INTRA-ABDOMINAL DOMAIN. <u>Gretchen Aquilina</u>, <u>DO</u>, Roy Sandau, DO, Alia Abdulla, DO, UMDNJ-SOM
- P310 TOTAL PREPERITONEAL BIOLOGICAL PATCH INDIRECT INGUINAL HERNIOPLASTY <u>Andrew Dobradin, MD PhD</u>, Winter Park Memorial Hospital, University of Central Florida
- P311 INGUINAL HERNIA REPAIR WITH BIOLOGIC MESH: EARLY SERIES OUTCOMES <u>Alla Zemlyak</u>, <u>MD</u>, Paul Colavita, MD, Victor B Tsirline, MD, Brant T Heniford, Carolinas Medical Center
- P312 EARLY CLINICAL OUTCOMES OF HERNIA REPAIR WITH PHYSIOMESH Alla Zemlyak, MD, Victor Tsirline, MD, Paul Colavita, MD, Amy Lincourt, PhD, Brant T Heniford, MD, Carolinas Medical Center
- P313 A CHEAP METHOD OF SINGLE INCISION LAPAROSCOPIC SURGERY IN TOTAL EXTRAPERITONEAL APPROACH FOR INGUINAL HERNIA Hayashi Nobuyasu, PhD, Ichihara Takao, PhD, Oka Yoshio, PhD, Sakon Masato, PhD, Nishinomiya Municipal Hospital
- P314 LAPAROENDOSCOPIC SINGLE SITE HERNIA REPAIR USING CONVENTIONAL TROCARS AND INSTRUMENTS: INITIAL EXPERIENCE



- <u>C Palanivelu</u>, P Senthilnathan, P Praveen Raj, S Rajapandian, S Sathiyamurthy, Anirudh Vij, GEM Hospital & Research Centre
- P315 LAPAROSCOPIC MINOR PANCREATIC RESECTIONS (ENUCLEATIONS/ ATYPICAL RESECTIONS). A LONG-TERM APPRAISAL OF A SUPPOSED MINI-INVASIVE APPROACH. Renato Costi, MD PhD, Bruto Randone, MD PhD, Frédéric Mal, MD, Silvia Basato, MD, Hugues Levard, MD, Vincenzo Violi, MD, Brice Gayet, MD, 1 Département de Pathologie Digestive, Institut Mutualiste Montsouris, Paris, France; 2 Dipartimento di Scienze Chirurgiche, Università degli Studi di Parma, Parma, Italia.
- P316 ACUTE PANCREATITIS: A RARE COMPLICATION FROM A MIGRATED GASTROSTOMY TUBE Dan Enger Ruiz, MD, Mingwei Ni, MD PHD, Rajkumar Jeganatan, MD, New York Hospital Queens
- P317 SINGLE USE OF ROMIPLOSTIM THROMBOPOIETIN ANALOGUE(TPO) IN SEVERE THROMBOCYTOPENIA FOR OUTPATIENT PERCUTANEOUS LIVER BIOPSY IN PATIENTS WITH CHRONIC LIVER DISEASE (CLD)- A RANDOMIZED DOUBLE BLINDED PROSPECTIVE CLINICAL PILOT TRIAL Patrick Basu, MD MRCP MACG AGAF, Thankam J Nair, MD, Nithya V Krishnaswamy, MD, Niraj James Shah, MD, Robert S Brown Jr, MD MPH, Columbia College of Physicians and Surgeons, NY, North Shore University Hospital at Forest Hills, NY
- P318 PRACTICE PATTERNS FOR GALLSTONE PANCREATITIS: A 5-YEAR EXPERIENCE AT A COMMUNITY-BASED TEACHING HOSPITAL John Compoginis, MD, <u>Tiffany Wu, MD</u>, Gabriel Akopian, MD, Huntington Hospital
- P319 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY <u>Nihat Yavuz</u>, <u>MD</u>, Serkan Teksoz, MD, Engin Hatipoglu, MD, Sabri Erguney, MD, Osman Tortum, MD, Tuna Yildirim, MD, Sirri Ozkan, MD, Istanbul University, Cerrahpasa Medical School, General Surgery Department and Acibadem Kadikoy Hospital, General Surgery Department
- P320 LAPAROSCOPIC CHOLECYSTECTOMY: A RETROSPECTIVE ANALYSIS OF HOSPITAL COSTS AND CLINICAL OUTCOMES IN PATIENTS UNDERGOING CONVENTIONAL, SINGLE PORT, AND MICRO-LAPAROSCOPIC SURGERY Edward Chekan, MD FACS, Mathew Moore, MHA, Tina Hunter, PhD, Candace Gunnarsson, EdD, Ethicon Endo-Surgery, Inc Cincinnati, Ohio; S2 Statistical Solutions, Inc Cincinnati, Ohio
- P321 LAPAROSCOPIC PANCREATECTOMY FOR BENIGN/LOW-MALIGNANT LESIONS <u>T Misawa, MD PhD</u>, K Furukawa, MD PhD, H Kitamura, MD, F Suzuki, MD, R Ito, MD, T Gocho, MD, H Shiba, MD PhD, Y Futagawa, MD, S Wakiyama, MD, Y Ishida, MD PhD, K Yanaga, MD, Department of Surgery, The Jikei University School of Medicine, Tokyo, Japan
- P322 LAPAROSCOPIC LIVER RESECTION WITH SELECTIVE PRIOR VASCULAR CONTROL <u>Hadrien Tranchart, MD</u>, Giuseppe Di Giuro, MD, Panagiotis Lainas, MD, Guillaume Pourcher, MD, Gabriel Perlemuter, MD PhD, Dominique Franco, MD, Ibrahim Dagher, Department of General Surgery, Antoine Béclère Hospital, AP-HP, Clamart
- P323 A RETROSPECTIVE ANALYSIS OF THE SAFETY OF OUTPATIENT PERCUTANEOUS LIVER BIOPSY IN PATIENTS WITH VON WILLEBRAND DISEASE <u>P Patrick Basu</u>, <u>MD MRCP MACG AGAF</u>, Krishna Rayapudi, MD, Niraj James Shah, MD, Nithya Krishnaswamy, MD, Thankam Nair, MD, Sakina Farhat, MD, Robert Brown, MD MPH, Columbia College of Physicians and Surgeons, NY, North Shore University Hospital at Forest Hills. NY
- P324 COMMUNITY HOSPITAL EXPERIENCE WITH SILS CHOLECYSTECTOMY Kimberly N Weaver, MS, James W Valuska, MD, Thomas V Lheureau, MD, Pablo G Giuseppucci, MD, <u>Miles L Weaver, MD</u>, UPMC Passavant and UPMC Horizon
- P325 THE APPROACH FOR STANDARDIZATION OF PURE LAPAROSCOPIC HEPATECTOMY ~STANDARDIZATION OF PURE LAPAROSCOPIC AND SINGLE PORT LATERAL SECTIONECTOMY~ F Hirokawa, M Hayashi, Y Miyamoto, M Asakuma, K Komeda, Y Inoue, Department of General and Gastroenterological Surgery Osaka Medical College
- P326 LAPAROSCOPIC PANCREATIC SURGERY <u>Nobumi Tagaya</u>, <u>PhD</u>, Yawara Kubota, MD, Asami Suzuki, MD, Yoshitake Sugamata, PhD, Hidemaro Yoshiba, PhD, Masatoshi Oya, PhD, First Department of Surgery, Dokkyo Medical University Koshigaya Hospital
- P327 EXPERIENCE WITH REAL-TIME FLUORESCENCE IMAGING OF BILIARY ANATOMY DURING SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY <u>Nobumi Tagaya, PhD</u>, Yawara Kubota, MD, Asami Suzuki, MD, Nana Makino, MD, Kosuke Hirano, MD, Shinichiro Kouketsu, PhD, Emiko Takeshita, PhD, Yoshitake Sugamata, PhD, Hidemaro Yoshiba, PhD, Shinichi Sameshima, PhD, Masatoshi Oya, PhD, First Department of Surgery, Dokkyo Medical University Koshigaya Hospital

- P328 EXPERIENCE WITH NEEDLESCOPIC CHOLECYSTECTOMY IN 160 PATIENTS Nobumi Tagaya, PhD, Yawara Kubota, MD, Asami Suzuki, MD, Nana Makino, MD, Kosuke Hirano, MD, Shinichiro Kouketsu, PhD, Emiko Takeshita, PhD, Yoshitake Sugamata, PhD, Hidemaro Yoshiba, PhD, Shinichi Sameshima, PhD, Masatoshi Oya, PhD, First Department of Surgery, Dokkyo Medical University Koshigaya Hospital
- P329 SINGLE-INCISION NEEDLESCOPIC CHOLECYSTECTOMY Nana Makino, MD, Nobumi Tagaya, PhD, Yawara Kubota, MD, Asami Suzuki, MD, Kousuke Hirano, MD, Shinichiro Kouketsu, PhD, Emiko Takeshita, PhD, Yoshitake Sugamata, PhD, Hidemaro Yoshiba, PhD, Shinichi Sameshima, PhD, Masatoshi Oya, PhD, First Department of Surgery, Dokkyo Medical University Koshigaya Hospital
- P330 LAPAROSCOPIC HEPATIC RESECTION FOR HEPATOCELLULAR CARCINOMA: COMPARATIVE ANALYSIS OF SHORT AND LONG TERM RESULTS <u>Satoru Imura, MD</u>, Mitsuo Shimada, MD PhD, Tohru Utsunomiya, MD PhD, Yuji Morine, MD, Tetsuya Ikemoto, MD, Hiroki Mori, MD, Jun Hanaoka, MD, Mami Kanamoto, MD, Koji Sugimoto, MD, Hidenori Miyake, MD PhD, Tokushima University
- P331 LAPAROSCOPE-ASSISTED HEPATIC RESECTION FOR GALLBLADDER CANCER <u>Masato Yoshikawa</u>, Mitsuo Shimada, MD PhD, Tohru Utsunomiya, MD PhD, Satoru Imura, MD, Yuji Morine, MD, Tetsuya Ikemoto, MD, Hiroki Mori, MD, Jun Hanaoka, MD, Mami Kanamoto, MD, Hidenori Miyake, MD PhD, Tokushima University
- P332 HOW TO OVERCOME THE LEARNING CURVE OF SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY Stephen Ky Chang, FRCS, <u>Chee Wei Tay, MRCSEd</u>, lyer Shridhar Ganpathi, FRCS, Victor Tswen Wen Lee, FRCS, Krishnakumar Madhavan, FRCS, National University Health System, Singapore
- P333 LAPAROSCOPIC SPLENECTOMY PLUS PREOPERATIVE SPLENIC ARTERY EMBOLIZATION VERSUS LAPAROSCOPIC SPLENECTOMY ALONE FOR MASSIVE SPLENOMEGALY: COMPARISON OF TREATMENT OUTCOME AND LITERATURE REVIEW Zhong W, Jin Zhou, Bing Peng, W
- P334 THE EFFICACY AND SAFETY OF URGENT LAPAROSCOPIC COMMON BILE DUCT EXPLORATION(LCBDE) USING C-TUBE FOR CRITICAL ABDOMINAL CONDITIONS. <u>Yoshihide Chino, PhD</u>, Masaki Fujimura, PhD, Isao Sato, MD, Seiji Masuda, MD, Makoto Mizutani, PhD, Tomotake Tabata, MD, Atsushi Okita, PhD, Reina Shimoshiro, MD, Minoru Iida, PhD, Daiichi Towakai Hospital Endoscopic Surgery Center
- P335 EFFECT OF NORMAL SALINE IRRIGATION ON ATTENUATION OF SHOULDER TIP PAIN AND CHANGE OF BETA-ENDORPHIN AFTER LAPAROSCOPIC CHOLECYSTECTOMY <u>Tae Kyung Ha, PhD</u>, Youn Kyoung Seo, PhD, Kyeong Geun Lee, PhD, Department of Surgery, College of Medicine, Hanyang University
- P336 LAPAROSCOPIC CHOLECYSTECTOMY IN SITUS INVERSUS TOTALIS: FEASIBILITY AND REVIEW OF LITERATURE <u>Ibrahim A Sslama, MD</u>, Mohammed H Abdullah, MD, Mohammed a Houseni, MD, Department of Hepatobilary Surgery (1), Department of Anesthesia (2), Department of Radiology (3) National Liver Institute, Menophyia University. Shiben Elkom, Egypt
- P337 ROLE OF THE USE OF OMENTAL FLAP IN PROGNOSIS OF CASES WITH INDUCED ACUTE PANCREATITIS IN EXPERIMENTAL DOGS Mohamed H Fahmy, title, Engie T Hefnawy, title, Karim A Hoseny, title, Ashraf Seeda, MD, Hisham M Elsharkawy, MD, Nader Shaaban, MD, Reem Jan, MD, Mustafa Khodeir, PhD, faculty of medicine cairo university
- P338 LAPAROSCOPIC AND OPEN SPLENECTOMY FOR SPLENOMEGALY SECONDARY TO LIVER CIRRHOSIS: AN EVALUATION OF IMMUNITY <u>Bing Peng, PhD</u>, Zhong Wu, MD, Jin Zhou, MD, West China Hospital, Sichuan University
- P339 FEASIBILITY OF LAPAROSCOPIC HEPATECTOMY FOR INTRAHEPATIC CHOLANGIOCARCINOMA <u>Mitsuo Shimada</u>, <u>MD FACS</u>, Toru Utsunomiya, MD FACS, Yuji Morine, MD, Satoru Imura, MD, Tetsuya Ikemoto, MD, Jun Hanaoka, MD, Hidenori Miyake, MD, Department of Surgery, The University of Tokushima
- P340 ANALYSIS OF INTRAOPERATIVE FINDINGS DURING SINGLE PORT LAPAROSCOPIC CHOLECYSTECTOMY <u>Hyung Joon Han, MD</u>, Sae Byeol Chi, MD, Jin-suk Lee, MD, Young Dong Yu, MD, Cheol Woong Jung, MD FACS, Wan-bae Kim, MD, Dong-sik Kim, MD, Tae Jin Song, MD FACS, Sung Ock Suh, MD, Sang Yong Choi, MD, Korea University Medical Center
- P341 COMPARISON OF PAIN AND INFLAMMATORY RESPONSE BETWEEN SINGLE PORT AND LAPAROSCOPIC CHOLECYSTECTOMY A PROSPECTIVE STUDY. Renato A Luna, MD, Daniel B Nogueira, MD, Pablo

- S Varella, MD, Eduardo O Rodrigues Neto, MD, Maria Julia R Norton, MD, Luciana Do Carmo B Ribeiro, MD, Agatha M Peixoto, MD, Isidro Bendet, MD, Rossano Fiorelli, MD MS PhD, James P Dolan, MD, Servidores do Estado do Rio de Janeiro Hospital and Oregon Health and Science University
- P342 ROLE OF LAPAROSCOPY AND MINI INCISION IN MANAGEMENT OF COMPLICATED FORMS OF CHOLELITHIASIS ****abdulkadir Yakubu, MD MSc PhD, *viktor N Chernov, Prof, *Rostov State Medical University, Russia, ** Kazaure General hospital, Jigawa state, nigeria
- P343 THE ROLE OF THE PREOPERATIVE ENDOSCOPIC DRAINAGE IN THE MALIGNANT OBSTRUCTIVE JAUNDICE <u>Constantinos S. Mammas, MD MSC PhD</u>, Andreas Polydorou, Associate Professor, Nikolaos Arkadopoulos, Assistant Professor, Dimitrios Lappas, Assistant Professor, Vasileios Smyrniotis, Professor, National and Kapodistrian University of Athens, Aretaieion University Hospital, Surgical Experimental Unit 'K.TOUNTAS',
- P344 REDUCED PORT CHOLECYSTECTOMY A STEP FORWARD IN MINIMIZING ACCESS IN LAPAROSCOPIC SURGERY <u>Asfar Ali, MS MRCS FNB FIAGES</u>, Parveen Bhatia, MS FRCS FACS, Sudhir Kalhan, MS, Mukund Khetan, MS, Suviraj John, MS MRCS DNB FNB, Institute of MInimal Access, Metabolic & Bariatric Surgery, Sir Ganga Ram Hospital

P345 - Withdrawn

- P346 CLINICAL OUTCOMES COMPARED BETWEEN LAPAROSCOPIC AND OPEN DISTAL PANCREATECTOMY: A RETROSPECTIVE COHORT STUDY Takanori Morikawa, MD, Takeshi Naitoh, MD FACS, Masayuki Kakyo, MD, Naoki Tanaka, MD, Kazuhiro Watanabe, MD, Tohru Onogawa, MD, Fuyuhiko Motoi, MD, Toshiki Rikiyama, MD, Yu Katayose, MD, Chikashi Shibata, MD, Shinichi Egawa, MD FACS, Michiaki Unno, MD, Tohoku University Hospital, Department of Surgery
- P347 PRIMARY NEUROENDOCRINE TUMOR OF THE LEFT HEPATIC DUCT A CASE REPORT WITH REVIEW OF LITERATURE <u>Jaydeep H Palep, MS</u>, Ajay H Bhandarwar, MS, Aditya Mandke, MD, Grant Medical College & Sir J. J. Group of Hospitals, Mumbai, INDIA
- P348 A NEW INNOVATIVE TECHNIQUE TO PRESERVE GALLBLADDER FOR THE POLYPOID LESIONS OF THE GALLBLADDER <u>Zhen-ling Ji, MD PhD</u>, Department of General Surgery, Zhongda Hospital, Southeast University Medical College, Nanjing, China
- P349 PROSPECTIVE COMPARISON BETWEEN SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY AND NEEDLESCOPIC CHOLECYSTECTOMY Koji Hattori, MDPhD, Kazunao Watanabe, MD, Hidemitsu Ogino, MD, Rai Shimoyama, MD, Jun Kawachi, MD, Hiromitsu Takeyama, MDPhD, Shonan Kamakura General Hospital
- P350 THE USEFULNESS OF LAPAROSCOPY-ASSISTED HEPATECTOMY FOR METASTATIC LIVER TUMOR AND HEPATOCELLULAR CARCINOMA Go Oshima, MD, Osamu Itano, MD, Yoshiaki Shoji, MD, Shingo Maeda, MD, Yasumasa Koyama, MD, Satoshi Aiko, MD, Yuko Kitagawa, Prof, Eiju General Hospital
- P351 FIRST EXPERIENCES WITH SINGLE PORT CHOLECYSTECTOMIES <u>D A Van Dam, MD</u>, M A Cuesta, MD PhD, S S Gisbertz, MD PhD, W J Meijerink, MD PhD, VU University Medical Centre Amsterdam
- P352 VISUALISATION OF THE COMMON BILE DUCT AND CYSTIC DUCT WITH A NOVEL NEAR-INFRA RED CAMERA AND INDOCYANINE GREEN DURING LAPAROSCOPIC CHOLECYSTECTOMY <u>D A Van Dam, MD</u>, M Ankersmit, M H Van Der Pas, MD, W J Meijerink, MD PhD, VU University Medical Centre Amsterdam
- P353 REVISITING VASCULAR PATENCY FOLLOWING SPLEEN-PRESERVING LAPAROSCOPIC DISTAL PANCREATECTOMY WITH CONSERVATION OF SPLENIC VESSELS <u>Ho Kyoung Hwang, MD</u>, Chang Moo Kang, MD, Woo Jung Lee, Yonsei University College of Medicine
- P354 RE-DO LAPAROSCOPIC LONGITUDINAL
 PANCREATICOJEJUNOSTOMY IN A PATIENT WITH CHRONIC
 PANCREATITIS AND FAILED OPEN PEUSTOW'S PROCEDURE <u>Srikanth</u>
 <u>Gadiyaram, MS MCh</u>, Neel Shetty, DNB, Sunil Alur, DNB, Ganesh Shenoy,
 MS, Institute of Gastroenterology, BGS Global Hospitals, Bangalore
- P355 LAPAROSCOPIC LATERAL PANCREATICO-JEJUNOSTOMY IN CHRONIC PANCREATITIS Srikanth Gadiyaram, MCh, Neel Shetty, DNB, Ganesh Shenoy, MS, <u>Sunil Alur, DNB</u>, Institute of Gastroenterology, BGS Global Hospitals, Bangalore
- P356 LAPAROSCOPIC DISTAL PANCREATECTOMY WITH SPLENECTOMY FOR SEROUS CYSTIC TUMOR IN PROXIMAL BODY OF PANCREAS Srikanth Gadiyaram, MCh, Neel Shetty, DNB, Sunil Alur, DNB, Jayanth Reddy, MCh, Institute of Gastroenterology, BGS Global Hospitals,

Bangalore

- P357 LAPAROSCOPIC RESECTION OF GIANT LIVER HEMANGIOMA USING LAPAROSCOPIC HABIB PROBE FOR PARENCHYMAL TRANSECTION Srikanth Gadiyaram, MCh, Neel Shetty, DNB, Ganesh Shenoy, MS, Sunil Alur, DNB, Jagannath H, MS, Institute of Gastroenterology, BGS Global Hospitals, Bangalore
- P358 ACUTE AND CHRONIC CALCULOSE CHOLECYSTITIS AS ONE DAY SURGERY TREATMENT <u>Vladimir Zivanovic</u>, <u>MsC MD</u>, Goran Vasic, MD, Radoslav Perunovic, PhD MD, Predrag Stevanovic, PhD MD, Radisav Scepanovic, PhD MD, KBC Dr D.Misovic University hospital
- P359 SAFETY OF LAPAROSCOPIC CHOLECYSTECTOMY WITH SELECTIVE USE OF INTRAOPERATIVE CHOLANGIOGRAPHY IN MANAGEMENT OF GALLBLADDER DISEASE <u>Aileen Murphy</u>, <u>MA DO</u>, Satbir Dhillon, BS, Maureen Martin, MD FACS FRCSC, Department of Surgery, Kern Medical Center, Bakersfield, Ca
- P360 LAPAROSCOPIC RESECTION OF BILIARY MALIGNANCIES <u>Osamu</u> <u>Itano, MD PhD</u>, Go Oshima, MD, Minoru Tanabe, MD PhD, Shigeyuki Kawachi, MD PhD, Masahiro Shinoda, MD PhD, Minoru Kitagou, MD PhD, Ryo Nishiyama, MD, Hiroto Fujisaki, MD, Kysho Mihara, MD, Tomonori Fujimura, MD, Yoshie Kadota, MD, Shigenori Ei, MD, Y, Department of Surgery, Keio University, School of Medicine, Tokyo, Japan; and Department of Surgery, Eiju General Hospital, Tokyo, Japan
- P361 IS IT SUITABLE LAPROSCOPIC TRANSDUODENAL AMPULLECTOMY FOR THE TREATMENT OF LARGE AMPULLARY TUMORS WITH HIGH-GRADE DYSPLASIA? <u>Ki Byung Song, MD</u>, Song Cheol Kim, PhD, Duck Jong Han, PhD, Jae Berm Park, MD, Young Hoon Kim, MD, Young Soo Jung, MD, Depetment of surgery, Ulsan University College of Medicine and Asan Medical Center
- P362 SCLEROSING ANGIOMATOID NODULAR TRANSFORMATION OF THE SPLEEN DIAGNOSED AFTER LAPAROSCOPIC SPLENECTOMY <u>Young Hoe Hur, MD</u>, Ho Hyun Kim, MD, Hee Joon Kim, MD, Byung Gwan Choi, MD, Eun Kyu Park, MD, Yang Seok Koh, PhD, Jung Chul Kim, PhD, Chol Kyoon Cho, PhD, Hyun Jong Kim, PhD, Department of Surgery, Chonnam National University Medical School
- P363 REDUCED PORT NEEDLESCOPIC CHOLECYSTECTOMY Selman Uranues, MD FACS, <u>Gordana Tomasch</u>, <u>MD</u>, Department of Surgery, Medical University of Graz, Graz, Austria
- P364 MINIMALLY INVASIVE(LAPAROSCOPIC + ROBOTIC) SPLEEN-PRESERVING SUBTOTAL LEFT-SIDED PANCRATECTOMY <u>Lim Jin Hong,</u> <u>MD</u>, Whang Ho Kyung, MD, Kim Sung Hoon, MD, Choi Sung Hoon, MD, Lee Woo Jung, MD, Kang Chang Moo, MD, Division of hepatobiliary and pancrreas, department of surgery, Yonsei University College of Medicine
- P365 A CASE OF GASTRIC HETEROTOPIC PANCREAS <u>Kenneth Juenger</u>. <u>MD</u>, Leandra H Burke, BS, Elizabeth A Steensma, MD, Christian W Ertl, MD FACS FACCWS, Michigan State University / Kalamazoo Center for Medical Studies
- P366 SIXTY-TWO CONSECUTIVE LAPAROSCOPIC MINOR LIVER RESECTIONS OF THE POSTERO-SUPERIOR SEGMENTS. A SHORT-TERM OUTCOME ANALYSIS. Bruto Randone, MD PhD, Renato Costi, MD PhD, Oriana Ciacio, MD, Vishal Gupta, MD, Brice Gayet, MD, Département de Pathologie Digestive, Institut Mutualiste Montsouris, Université Paris Descartes, Paris, France; Dipartimento di Scienze Chirurgiche, Università degli Studi di Parma, Parma, Italia.
- P367 ANOTHER CAUSE OF ABSCESS: DROPPED GALLSTONES Vinayak Sreenivas, MD, <u>Vinay Singhal, MD</u>, Amir R Azar, MD, Daniel Farkas, MD, Bronx Lebanon Medical Centre
- P368 SUCCESSFUL LAPAROSCOPIC COMMON BILE DUCT EXPLORATION Christopher W Salzmann, MD, Morris E Franklin, MD FACS, Karla Russek, MD, Texas Endosurgery Institute
- P369 TRANSUMBILICAL MULTIPLE-PORT LAPAROSCOPIC CHOLECYSTECTOMY USING STANDARD LAPAROSCOPIC INSTRUMENTS M.tahir Oruc, MD, M. Umit Ugurlu, MD, Zehra Boyacioglu, MD, KOCAELI DERINCE TEACHING AND RESEARCH HOSPITAL GENERAL SURGERY CLINIC
- P370 TRANSUMBILICAL SINGLE SITE COLECYSTECTOMY VERSUS STANDARD LAPAROSCOPIC CHOLECYSTECTOMY: RESULTS OF A PILOT TRIAL M. Umit Ugurlu, MD, M. <u>Tahir Oruc, MD</u>, Zehra Boyacioglu, MD, H. Taner Turgut, MD, Mehmet Ozyilmaz, MD, S. Yigit Yildiz, MD, KOCAELI DERINCE TEACHING AND RESEARCH HOSPITAL GENERAL SURGERY CLINIC, KOCAELI, TURKEY
- P371 NOVEL END-TO-END SUPRA-AND INFRA-HEPATIC CAVAL



- ANSTOMOSIS FOR ORTHOTOPIC LIVER TRANSPLANTATION WITH A 21 MM CIRCULAR STAPLER. <u>Muhammad S Ikram, MD</u>, John Ham, MD, Shawn Tsuda, MD, University of Nevada Las Vegas, University Medical Center, Las Vegas, Nevada
- P372 OUTPATIENT SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY WITH ROUTINE INTRAOPERATIVE CHOLANGIOGRAM <u>B Pellini</u>, <u>MD</u>, S Smith, MD, B O'connell, MD, I Daoud, MD FACS, St Francis Hospital and Medical Center, Hartford, CT
- P373 WHEN IS THE OPTIMAL TIME FOR LAPAROSCOPIC CHOLECYSTECTOMY IN GALLBALDDER EMPYEMA? Yong Jin Kwon, BS, Hwon Gyeom Park, MD, Kwang Soo Lee, MD, Kyeong Geun Lee, MD, Department of Surgery, College of Medicine, Hanyang University
- P374 PANCREATICOGASTROSTOMY DURING LAPAROSCOPIC PANCREATICODUODENECTOMY; A VIABLE ALTERNATIVE TO PANCREATICOJEJUNOSTOMY. <u>E M True, MD</u>, J R Debord, MD, J S Marshall, MD, University of Illinois College of Medicine Peoria, Department of Surgery
- P375 INTRA-OPERATIVE CHOLANGIOGRAPHY FOR PREVENTION OF "MAJOR" BILE DUCT INJURY DURING LAPAROSCOPIC CHOLECYSTECTOMY <u>Jai Bikhchandani</u>, <u>MD</u>, Xiang Fang, PhD, Robert J Fitzgibbons, MD, Creighton University Medical Center
- P376 FESIBILITY OF TWO-STAGE LAPAROSCOPIC HEPATECTOMY FOR BILOBAR METASTATIC LIVER TUMORS. <u>Hitoshi Inagaki, MD</u>, Gifu Chuo Hospital, Japan
- P377 LAPAROSCOPIC ASSISTED PANCREATICODUODENECTOMY: FEASIBILITY AND OUTCOME STUDY Raymund Andrew G Ong, MD FPCS FPALES, <u>Winston S Vequilla</u>, <u>MD DPBS</u>, Jeremy J Tan, MD, Department of Surgery, FEU-NRMF Medical Center, Philippines
- P378 METHODS OF VENOUS HEMOSTASIS FOR THE STANDARDIZATION OF TOTAL LAPAROSCOPIC HEPATECTOMY Mitsuo Miyazawa, MD FACS, Masayasu Aikawa, MD, Katsuya Okada, MD, Kojun Okamoto, MD, Yasuko Toshimitsu, MD, Shigeki Yamaguchi, MD, Isamu Koyama, MD, Saitama Medical University International Medical Center
- P379 THE IMPROVEMENT OF THE PATIENTS WITH ACUTE DESTRUCTIVE PANCTREATITIS SURGICAL TREATMENT <u>Vladimir M Demidov</u>, PhD <u>DSci Medicine</u>, Sergei M Demidov, PhD Medicine, Odessa National Medical University. Ukraine
- P380 THE INTRODUCTION OF LAPAROSCOPIC DISTAL PANCREATECTOMY AT OUR INSTITUTION <u>Hisashi Ikoma, PhD</u>, Yukihito Kokuba, PhD, Yusuke Yamamoto, PhD, Ryou Morimura, PhD, Yastutoshi Murayama, PhD, Syuuhei Komatsu, PhD, Atsushi Shiozaki, PhD, Yoshiaki Kuriu, PhD, Masayoshi Nakanishi, PhD, Daisuke Ichikawa, PhD, Hitoshi Fujiwara, PhD, Kazuma, Department of Digestive Surgery,Kyoto Prefectural University of Medicine
- P381 ADOPTION OF A SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY <u>Hisashi Ikoma</u>, PhD, Yukihito Kokuba, PhD, Yusuke Yamamoto, PhD, Ryou Morimura, PhD, Yastutoshi Murayama, PhD, Syuuhei Komatsu, PhD, Atsushi Shiozaki, PhD, Yoshiaki Kuriu, PhD, Masayoshi Nakanishi, PhD, Daisuke Ichikawa, PhD, Hitoshi Fujiwara, PhD, Kazuma, Department of Digestive Surgery,Kyoto Prefectural University of Medicine
- P382 INITIAL RESULT AND FEASIBILITY OF LAPAROSCOPIC HEPATECTOMY Fumiki Kushihata, title, Hitoshi Inoue, title, Yoshikuni Yonenaga, title, Jota Watanabe, Akifumi Miyoshi, Taiji Toyama, Yasutsugu Takada, Surgery, Ehime University School of Medicine
- P383 SINGLE INCISION CHOLECYSTECTOMY WITH NEEDLESCOPIC INFUNDIBULAR RETRACTION; INITIAL EXPERIENCE <u>Kee-hwan Kim, MD PhD</u>, Young-kyung You, MD PhD, Chang-hyeok An, MD PhD, Jeongsoo Kim, MD PhD, II-young Park, MD PhD, Dong-gu Kim, MD PhD, Uijeongbu St. Mary's Hospital, Uijeongbu, Korea
- P384 THE PURE LAPAROSCOPIC HEPATECTOMY INDUCTION IN THE LOW-VOLUME CENTER Shinjiro Tomiyasu, MD PhD, Kazutoshi Okabe, MD PhD, Toru Beppu, MD PhD, Osamu Sano, MD PhD, Tsuyoshi Yamanaka, MD PhD, Akira Chikamoto, MD PhD, Kouichi Doi, MD PhD, Masatoshi Ishiko, MD PhD, Hideo Baba, MD PhD, NTT West Kyusyu Hospital , Saiseikai Kumamoto Hospital and Department of Gastroenterological Surgery, Graduate School of Medical Sciences, Kumamoto University
- P385 CRITICAL VIEW EXPOSURE USING THE "FRENCH"
 TECHNIQUE ENSURES PATIENT SAFETY DURING LAPAROSCOPIC
 CHOLECYSTECTOMY Shin-ichirou Mori, MD, Kenji Baba, MD, Tsutomu
 Kozono, MD, Kuniaki Aridome, MD, Kousei Maemura, MD, Shouji

- Natsugoe, MD, Department of Digestive Surgery, Breast and Thyroid Surgery
- P386 NEEDLE-ASSISTED SINGLE-INCISION LAPAROSCOPIC (NASLAP) LIVER SURGERY <u>Minoru Tanabe, MD PhD</u>, Shigeyuki Kawachi, MD PhD, Osamu Itano, MD PhD, Masahiro Shinoda, MD PhD, Minoru Kitago, MD PhD, Norihito Wada, MD PhD, Yuko Kitagawa, MD PhD, Department of Surgery, Keio University School of Medicine
- P387 ONE-STAGE LAPAROSCOPIC CHOLECISTECTOMY AND CBD EXPLORATION WITH PRIMARY CLOSURE Gintaras Antanavicius, MD FACS, Carlos A Cutini Cingozoglu, MD, Patricio E Donnelly, MD, Rodolfo H Scaravonati, MD, Rodrigo Moran Azzi, MD, Roberto P Munin, MD, Victor H Serafini, MD FACS, Sanatorio Güemes, Argentina. Abington Health, USA
- P388 SINGLE-PORT LAPAROSCOPIC HEPATECTOMY: TECHNIQUE, SAFETY, AND FEASIBILITY IN A CLINICAL CASE SERIES <u>Masayasu Aikawa, MD</u>, Mitsuo Miyazawa, MD, Katsuya Okada, MD, Yasuko Toshimitsu, MD, Kojun Okamoto, MD, Shigeki Yamaguchi, MD, Isamu Koyama, MD, Saitama Medical University International Medical Center
- P389 SILS CHOLECYSTECTOMY <u>Adrian M Maghiar, MD PhD</u>, Pravish R Sookha, MD PhD, George E Dejeu, MD, Pelican Hospital Oradea Romania
- P390 MINIMALLY INVASIVE DISTAL PANCREATECTOMY IMPROVES OUTCOMES COMPARED TO OPEN AT A RURAL TERTIARY CARE CENTER Horatiu C Dancea, MD, Vladan N Obradovic, MD, Nicole L Woll, PhD, Mohsen M Shabahang, MD PhD, Joseph A Blansfield, MD, Geisinger Medical Center, Danville, PA
- P391 SURGICAL VERSUS PERCUTANEOUS DRAINAGE FOR PANCREATIC PSEUDOCYSTS: PATIENT, DISEASE AND PROCEDURE CHARACTERISTICS <u>Justin Lee, MD</u>, Romie Mundy, MD, Neal E Seymour, MD, St. Elizabeth Medical Center, Baystate Medical Center, Tufts University School of Medicine
- P392 LAPAROSCOPIC HEPATOBILIARY SURGERY FOR BENIGN AND MALIGNANT LESIONS BRINGING NEW PARADIGM INTO PRACTICE <u>Daniel Tuvin</u>, Manuel I Rodriguez-davalos, Marcelo E Facciuto, Ashutosh Kaul, Patricia A Sheiner, Michael R Marvin, Sukru Emre, Yale University, Recanati-Miller Transplantation Institute/Mount Sinai NY, New York Medical College
- P393 FLUORESCENCE CHOLANGIOGRAPHY FACILITATES IDENTIFICATION OF BILIARY ANATOMY <u>Cristina A Metildi, MD</u>, Sharmeela Kaushal, PhD, Santiago Horgan, MD, Mark A Talamini, MD, Robert M Hoffman, PhD, Michael Bouvet, MD, University of California San Diego Department of Surgery; AntiCancer, Inc., San Diego
- P394 INCIDENCE OF UNSUSPECTED STONES IN THE COMMON BILE DUCT DURING ELECTIVE LAPAROSCOPIC CHOLECYSTECTOMY: A WORD OF CAUTION Gintaras Antanavicius, MD FACS, Rodolfo H Scaravonati, MD, Carlos A Cutini Cingozoglu, MD, Patricio E Donnelly, MD, Mariano Irigoyen, MD, Rodrigo Moran Azzi, MD, Victor H Serafini, MD FACS, Sanatorio Guemes; Abington Health
- P395 ROBOTIC MAJOR LIVER RESECTIONS. ANALYSIS OF TECHNIQUE AND INTRAOPERATIVE HEMODYNAMICS. <u>David Calatayud</u>, <u>MD PhD</u>, Stefano D'ugo, MD, Francesco Coratti, MD, Paolo Raimondi, MD, Federico Gheza, MD, Mario Masrur, MD, Enrique F Elli, MD, Francesco M Bianco, MD, Subashini Ayloo, MD, Pier C Giulianotti, MD FACS, University of Illinois at Chicago Medical Center
- P396 FLUORESCENCE GUIDANCE FOR IDENTIFICATION OF THE CYSTIC DUCT COMMON BILE DUCT JUNCTION. FIRST EXPERIENCE IN ROBOTIC SURGERY. Pier C Giulianotti, MD FACS, <u>David Calatayud</u>, <u>MD PhD</u>, Luca Milone, MD, Stefano D´ugo, MD, Paolo Raimondi, MD, Mario Masrur, MD, Federico Gheza, MD, Enrique F Elli, MD, Francesco M Bianco, MD, Subashini Ayloo, MD, Enrico Benedetti, MD FACS, University of Illinois at Chicago Medical Center
- P397 A CASE OF PSEUDOLYMPHOMA OF THE LIVER OPERATED WITH LAPAROSCOPIC SURGERY <u>Hiroki Kamata</u>, Kenichiro Ishii, Hiroshi Tajima, Hiroyuki Katagiri, Kazunori Huruta, Yusuke Kumamoto, Masahiko Watanabe, Department of Surgery, Kitasato University School of Medicine
- P398 ATYPICAL LAPAROSCOPIC RIGHT ANTERIEUR BISEGMENTECTOMY FOR SINGLE TUMOR <u>Ludmil M Veltchev</u>, <u>MD PhD</u>, Manol A Kalniev, MD PhD, Department of Abdominal surgery
- P399 IS THERE ROOM FOR IMPROVEMENT IN THE DIAGNOSTIC ACCURACY OF INTRAOPERATIVE CHOLANGIOGRAM? <u>S El Djouzi, MD</u>, A Y Zemlyak, MD, V B Tsirline, MD, B Hammond, Michael T Lavelle, MD,

- Amanda Walters, MS, D Stefanidis, MD PhD, T B Heniford, MD, Carolinas Medical Center
- P400 MINIMALLY INVASIVE PANCREATIC RESECTION FOR CYSTIC NEOPLASMS Philip Q Bao, MD, Kevin T Watkins, MD, Stony Brook University Medical Center
- P401 IMPACT OF INTRODUCTION OF LAPAROSCOPIC SURGERY ON MANAGEMENT OF UNRESOLVED INTRAABDOMINAL MALIGNANCIES IN A SEMI-URBAN NIGERIAN HOSPITAL <u>Adewale O Adisa, MBChB FWACS FMCSNig DMAS</u>, Oladejo O Lawal, MBBS FMCSNig FWACS, Obafemi Awolowo University, Ile-Ife, Nigeria
- P402 THORACOSCOPIC ESOPHAGECTOMY IN THE PRONE POSITION <u>Hidehito Shibasaki, MD PhD</u>, Takahiro Kinoshita, MD PhD, Akira Ogata, MD PhD, Masaru Miyazaki, Prof, Matsudo City Hospital, Department of Surgery
- P403 SURGEONS' ESTIMATED STANDARD METABOLIC EQUIVALENT, A PILOT STUDY. Miroslaw Szura, MD PhD, <u>Jan M Krzak, MD</u>, Poul Bak Thorsen, IST DEPARTMENT OF GENERAL SURGERY JAGIELLONIAN UNIVERSITY, KRAKOW,POLAND & SYGEHUS LILLEBAELT KOLDING DENMARK
- P404 EVOLUTION OF HEPATIC ENDO-RETRACTORS IN INCISION REDUCTION ANTI-REFLUX SURGERY Fausto J Dávila, MD, Daniel Tsin, MD, Guillermo Domínguez, MD, Martha R Dávila, MD, Jose Lemus, MD, Ramiro Jesus, MD, Hosp Regional de Poza Rica, Ver. Mex. Mount Sinai Hospital Queens, NY .USA Fundación Hospitalaria. Buenos Aires. Arg. Hosp Gral Dr. Manuel Gea Gonzalez.DF, Mex. Hosp Reg Zona PEMEX. Poza Rica, Ver Mex Universidad Nacional Autonoma de Mexico. DF. Mexico.
- P405 THE NEW FEXIBLE TROCAR FOR SINGLE PORT SURGERY M. Yamagata, title, M. Matsuda, title, S. Hayashi, title, K. Hagiwara, MD, T. Takayama, PhD, Department of digestive surgery, Nihon Universuty
- P406 DEVELOPMENT OF THE HYPEREYE MEDICAL SYSTEM FOR ENDOSCOPIC SURGERY Michiya Kobayashi, MD PhD, Takayuki Sato, MD PhD, Takeki Sugimoto, MD PhD, Ken Okamoto, MD PhD, Ken Dabanaka, MD, Tsutomu Namikawa, MD PhD, Takehiro Okabayashi, MD PhD, Kazuhiro Hanazaki, MD PhD, Department of Human Health and Medical Sciences, Hospital Administration Section, Department of Cardiovascular Control, and Department of Surgery, Kochi Medical School
- P407 STERILISATION AND DISINFECTION ACCEPTATION TEST OF REUSABLE SINGLE PORT AND MINIPORT LAPAROSCOPIC INSTRUMENTS D A Van Dam, MD, S Beeksma, W J Meijerink, MD PhD, VU University Medical Centre Amsterdam
- P408 FIRST CASE SERIES OF MICROLAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: MAINTAINING ERGONOMICS AND LAPAROSCOPIC PRINICPLES OF TRIANGULATION WHILE REDUCING SCARS Emma J Patterson, MD, Jamie Laut, MEd, Oregon Weight Loss Surgery LLC, Portland OR; Legacy Good Samaritan Medical Center, Portland OR; Wilshire Surgery Center, Portland OR
- P409 SINGLE PORT ACCESS (SPA) LAPAROSCOPIC CHOLECYSTECTOMY VERSUS THREE-PORT LAPAROSCOPIC CHOLECYSTECTOMY: A PROSPECTIVE RANDOMIZED STUDY <u>Raymund Andrew G Ong, MD FPCS FPALES</u>, Winston S Vequilla, MD DPBS, Department of Surgery, FEUNRMF Medical Center, Philippines
- P410 DEVELOPMENT OF AN ERGONOMIC INSTRUMENT FOR LAPAROSCOPIC AND LESS SURGERY <u>Jakeb D Riggle</u>, Adam E De Laveaga, Jake Kaufman, Chad A Lagrange, MD, Dmitry Oleynikov, MD FACS, M Susan Hallbeck, PhD PE CPE, University of Nebraska Lincoln and University of Nebraska Medical Center
- P411 REVIEW OF SURGICAL ERGONOMICS RESEARCH ASSOCIATED WITH MINIMALLY INVASIVE SURGERY Donald R Peterson, PhD, <u>Tarek Tantawy</u>, <u>BS</u>, Drew R Seils, BS, Angela S Kueck, MD, M Kurt E Roberts, MD, University of Connecticut Health Center, Yale University
- P412 COMPARING THE BIOMECHANICAL CHARACTERISTICS OF MANUAL AND POWERED LAPAROSCOPIC STAPLER DESIGNS Donald R Peterson, PhD, <u>Drew R Seils</u>, <u>BS</u>, Tarek Tantawy, BS, Angela S Kueck, MD, M Kurt E Roberts, MD, University of Connecticut Health Center, Yale University
- P413 30-30 CUT/COAG IS ELECTROSURGICAL MONOPOLAR ENERGY TECHNOLOGY UNDERUSED? Paul N Montero, MD, Matthew Fox, MD, Thomas Robinson, MD, Gregory V Stiegmann, MD, University of Colorado School of Medicine
- P414 A COMPARITIVE STUDY OF GASTROJEJUNAL STRICTURES AFTER ROUX-EN-Y GASTRIC BYPASS IN 3200 CONSECUTIVE PATIENTS WITH A

- USE OF 21-MM VS 25MM CIRCULAR STAPLER <u>Atif Iqbal</u>, <u>MD</u>, Mir Ali, MD, Kelly Frances, MD, Phillip Chin, MD, Peter Leport, MD, Leport Surgical Associates, Orange Coast Memorial Medical Center and Fountain Valley Hospital, Fountain Valley, CA.
- P415 MALIGNANT HYPERTHERMIA DURING LAPAROSCOPIC ADJUSTED GASTRIC BANDING: A CASE REPORT <u>Josue Chery, MD</u>, Chiba Shintaro, Ambibola Pratt, MD, Ronell Kirkley, DNP CRNA, Barbara Hearne, RN, Andrew Beyzman, MD, Piotr Gorecki, MD, New York Methodist Hospital
- P416 WEIGHT REGAIN AND REMISSION OF DIABETES AFTER ROUX-EN-Y GASTRIC BYPASS <u>Andrew A Taitano, MD</u>, Tejinder P Singh, MD, AMC Bariatric Surgery Group, Albany Medical Center
- P417 EFFECTIVE USE OF INFERIOR VENA CAVA FILTERS IN HIGH-RISK MORBIDLY OBESE PATIENTS UNDERGOING BARIATRIC SURGERY <u>TecChong, MD FACS</u>, Suma Sangisetty, MD, Siva Vithianathan, MD FACS, Brown Alpert School of Medicine
- P418 LAPAROSCOPIC BARIATRIC PROCEDURES IN COMMUNITY TEACHING HOSPITAL HOW FAR ARE WE INTO TEACHING SURGICAL RESIDENTS? <u>Arunkumar Baskara, MRCS MD</u>, Stefanie L Saunders, MS, Brendan O Connell, MD, Prashanth Ramachandra, MD, Mercy Catholic Medical Center
- P419 TRANSVERSUS ABDOMINUS PLANE BLOCK + SINGLE PORT OPERATION = ALMOST SCARLESS AND ALMOST PAINLESS SURGERY: A PILOT STUDY ON SINGLE-PORT SLEEVE GASTRECTOMY <u>David Y Lee, MD,</u> Ronald Ross, MBBS, Michael Wassef, MD, Jun Levine, MD, Julio Teixeira, MD, St. Luke's Roosevelt Hospital
- P420 LAPAROSCOPIC SLEEVE GASTRECTOMY WITH STAPLE LINE BUTTRESS REINFORCEMENT IN 116 CONSECUTIVE MORBIDLY OBESE PATIENTS: A CANADIAN EXPERIENCE <u>Richdeep S Gill, MD</u>, Noah Switzer, <u>Mike Driedger</u>, Xinzhe Shi, MPH, Arya M Sharma, MD, Daniel W Birch, MD MSc, Shahzeer Karmali, MD, University of Alberta; Royal Alexandria Hospital
- P421 EARLY EXPERIENCE OF BARIATRIC SURGERY AT DAYANAND MEDICAL COLLEGE&HOSPITAL,LUDHIANA(PUNJAB)INDIA. <u>Ashish Ahuja, MS</u>, Prabhdeep Nain, MS, Satpal Singh Virk, Mch, Dayanand Medical College&hospital,Ludhiana,(Punjab)INDIA
- P422 CORRELATION BETWEEN INTRAOPERATIVE DEXAMETHASONE ADMINISTRATION AND LEUKOCYTE COUNT ON POST-OPERATIVE DAY NUMBER ONE IN LAPAROSCOPIC GASTRIC BYPASS PATIENTS <u>David R Donahue, DO</u>, Kevan E Mann, MD, Naval Medical Center Portsmouth
- P423 STAPLER MISFIRE DURING SLEEVE GASTRECTOMY: CAUTION WITH BUTTRESS USE David Nguyen, MD, Bahar Moheban, <u>Amir Mehran, MD</u>, UCLA Department of Surgery
- P424 DIFFERENCE IN QUALITY OF LIFE IN MORBIDLY OBESE PATIENTS AFTER BARIATIC SURGERY <u>Ravinder Singh Bal</u>, <u>MS</u>, Ashish Ahuja, MS, Satpal Singh Virk, Mch, Dayanand Medical college&hospital,Ludhiana,(Punjab)INDIA
- P425 LENGTH OF STAY IS A PREDICTOR OF WEIGHT LOSS IN PATIENTS WITH GASTRIC BYPASS <u>Lucian Panait, MD</u>, Graeme Rosenberg, Andrew J Duffy, MD, Kurt E Roberts, MD, Robert L Bell, MD, Yale School of Medicine
- P426 ANALYZING EARLY OUTCOMES OF ROUX-EN-Y GASTRIC BYPASS IN A PUBLICALLY FUNDED CANADIAN OBESITY PROGRAM <u>Kevin Whitlock, BSc</u>, Daniel W Birch, MD MSc, Richdeep S Gill, MD, Shahzeer Karmali, MD, Center for the Advancement of Minimally Invasive Surgery (CAMIS)
- P427 A SYSTEMATIC REVIEW OF STAPLE LINE REINFORCEMENT DURING LAPAROSCOPIC SLEEVE GASTRECTOMY <u>Jean Knapps, MD</u>, Maher Ghanem, MD, John Clements, MPA, Aziz Merchant, MD, Synergy Medical Education Alliance
- P428 ENDOSCOPIC MANAGEMENT OF POST-GASTRIC BYPASS ANASTOMOTIC STRICTURES WITH BALLOON DILATIONS AND ENDOLUMINAL STENTS <u>Eric Marcotte, MD MSc</u>, Emilie Comeau, MD FRSCS, Anne Meziat-burdin, MD, Charles Ménard, MD FRCPC, George Rateb, MD, Centre Hospitalier Universitaire de Sherbrooke
- P429 EARLY SINGLE STAGE OPERATIVE MANAGEMENT OF SLEEVE GASTRECTOMY LEAKS WITHOUT ENDOSCOPIC STENT PLACEMENT <u>Abdelrahman A Nimeri, MD</u>, Maria Margarita, MD, Mohammed B Al Hadad, RN, SKMC managed by Cleveland Clinic
- P430 INTERNAL HERNIA AFTER LAPAROSCOPIC ANTECOLIC ROUX-EN-Y GASTRIC BYPASS <u>Mazen R Al-mansour, MD</u>, John R Romanelli, MD FACS, Jay N Kuhn, MD FACS, Baystate medical Center
- P431 LAPAROSCOPIC ROUX-Y-GASTRIC BYPASS ACHIEVES SUPERIOR WEIGHT LOSS IN ADOLESCENTS COMPARED TO LAPAROSCOPIC



- ADJUSTABLE GASTRIC BANDING David Y Lee, MD, <u>Hamza Guend, MD</u>, Ronald E Ross, MBBS, Malcom Reid, BS, Jun Levine, MD, Julio Teixeira, MD, St. Lukes-Roosevelt Hospital Center
- P432 COMPARISON OF LAPAROSCOPIC VERSUS ROBOTIC ASSISTED LONGITUDINAL SLEEVE GASTRECTOMY Nathan Miller, Erik Wilson, Brad Snyder, Phil Leggett, Terive Duperier, Terive Duperier, Todd Wilson, Kulvinder Bajwa, Nick Brown, Ben Dubois, Rachel Reeder, Sheilindra Mehta, Rich Engelhardt, UT- Houston, Bariatric Medical Institute of Texas, Houston Northwest MIS Fellowship
- P433 WEIGHT LOSS AFTER MAJOR REOPERATIONS FOR ADJUSTABLE GASTRIC BANDING <u>Melissa M Beitner, MBBS</u>, Christine J Ren-fielding, MD, Marina S Kurian, MD, Bradley F Schwack, MD, Andrew H Kaye, MBBS MD, Anita R Skandarajah, MBBS MD, Benjamin N Thomson, MBBS PhD, George A Fielding, MD, NYU Langone Medical Center and University of Melbourne
- P434 METABOLIC OUTCOMES OF BARIATRIC SURGERY: THE RESULT OF THAI SUBJECTS <u>Suthep Udomsawaengsup</u>, <u>MD</u>, Amarit Tansawet, MD, Poochong Timratana, MD, Suriya Punchai, MD, Warit Utanwutipong, MD, Komdej Thanavachirasin, MD, Suppa-ut Pungpapong, MD, Chadin Tharavej, MD, Patpong Navicharern, MD, Chula Minimally Invasive Surgery Center, Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
- P435 PERIODICALY EMPTYING OF THE GASTRIC BAND SYSTEM REDUCES LATE COMPLICATIONS <u>Brane Breznikar, MD</u>, Dejan Dinevski, PhD Prof, Grega Kunst, MD, Barbara Rozej, MD, General Hospital Slovenj Gradec
- P436 LAPAROSCOPIC SLEEVE GASTRECTOMY WITH HIATAL HERNIA REPAIR: A RETROSPECTIVE CASE SERIES AND REVIEW OR LITERATURE Anna Goldenberg-sandau, DO, Wanda Good, DO, Lisa Shaw, RN, Marc Neff, MD, University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine(Kennedy University Health System)- Department of Surgery
- P437 COMPARATIVE OUTCOMES OF WEIGHT LOSS AND PERIOPERATIVE COMPLICATIONS IN MORBIDLY OBESE POPULATION UNDERGOING BILIOPANCREATIC DIVERSION BASED ON AGE <u>Iswanto Sucandy</u>, <u>MD</u>, Gintaras Antanavicius, MD FACS, Abington Memorial Hospital, Abington, Pennsylvania
- P438 LAPAROSCOPIC BARIATRIC SURGERY FOR THE TREATMENT OF SEVERE HYPERTRIGLYCERIDEMIA <u>Wei-jei Lee, MD PhD</u>, Jung-chien Chen, MD, Kong-han Ser, MD, Jun-juin Tsou, SPN, Yi-chih Lee, MHA, Min-Sheng General Hospital, National Taiwan University, Taiwan
- P439 EARLY EXPERIENCE WITH NATURAL ORIFICE TRANS-UMBILICAL SURGERY GASTRIC BYPASS(NOTUS) USING NEEDLESCOPIC INSTRUMENTS <u>Arif Ahmad, MD FACS FRCS</u>, Ashish Agarwala, DO, John T. Mather Memorial Hospital, Stony Brook University Medical Center
- P440 A NOVEL APPROACH FOR CONVERSION OF ROUX-EN-Y GASTRIC BYPASS TO BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH Philippe Topart, MD, Guillaume Becouarn, MD, Carine Phocas, RN, Societe de Chirurgie Viscerale, Clinique de l'Anjou, Angers, FRANCE
- P441 ADJUSTING THE GASTRIC BAND DURING SURGERY IS TIGHTER BETTER? <u>John O'dea, BE MED PhD</u>, Robert G Snow, DO FACOS, NUI Galway, Ireland; Specialty Surgery Center of Fort Worth, TX
- P442 VIDEO GUIDE TO THE PERFORMANCE OF THE MINI-GASTRIC BYPASS R Rutledge, MD, Centers for Laparoscopic Obesity Surgery
- P443 MORBIDLY OBESE MEN SHOWED DECREASED TESTOSTERONE LEVELS AND SEXUAL QUALITY OF LIFE COMPARED WITH AGE ADJUSTED MEN IN THE COMMUNITY Taehee Kwak, MD, Homayoun Pournik, MD, Krystyna Kabata, RPAC, Anthony Tortolani, MD, Piotr Gorecki, MD, New York Methodist Hospital, Brooklyn, NY, USA
- P444 LAPAROSCOPIC SLEEVE GASTRECTOMY DOES NOT WORSEN GASTROESOPHAGEAL REFLUX DISEASE SYMPTOMS IN MORBIDLY OBESE PATIENTS Joshua A Scott, MD, Joel R Brockmeyer, MD, Rebekah J Johnson, MD, Yong U Choi, MD, D.D. Eisenhower Army Medical Center
- P445 PRESENTATION AND MANAGEMENT OF GASTROGASTRIC FISTULA AFTER ROUX-EN-Y GASTRIC BYPASS Saber Ghiassi, MD MPH, Ruby Gatschet, MD, <u>Daniel Moon, MD</u>, Keith Boone, MD FACS, Kelvin Higa, MD FACS, University of California, San Francisco, Fresno
- P446 PROPHYLACTIC MANAGEMENT OF CHOLELITHIASIS IN BARIATRIC PATIENTS IS ROUTINE CHOLECYSTECTOMY WARRANTED? Chris GSmith, Dr, Balpreet Brar, Dr, Fatima Haggar, Ms, Joseph Mamazza, Dr, Robert Dent, Dr, Jean Denis Yelle, Dr, Husein Moloo, Dr, Isabelle Raiche, Dr, the Ottawa Hospital
- P447 THE MINI-GASTRIC BYPASS: 15 YEARS LATER R Rutledge, MD, Center

- for Laparoscopic Obesity Surgery
- P448 PULL TECHNIQUE FOR INTRODUCING THE ANVIL DURING GASTRIC POUCH-JEJUNAL LIMB ANASTOMOSIS IN LRYGB <u>Amarit Tansawet</u>, <u>MD</u>, Suphakarn Techapongsatorn, MD, Sopon Lerdsirisopon, MD, Wisit Kasetsermwiriya, MD, Vajira Minimally Invasive Surgery Unit, Department of Surgery, Faculty of Medicine Vajira Hospital, University of Bangkok Metropolis
- P449 ROUX-LIMB LENGTH DOES NOT PREDICT REMISSION OF DIABETES AFTER ROUX-EN-Y GASTRIC BYPASS <u>Andrew A Taitano, MD</u>, Tejinder P Singh, MD, AMC Bariatric Surgery Group, Albany Medical Center
- P450 MORBIDLY OBESE ACHONDROPLASIC AND BARIATRIC SURGERY <u>Venkata S Kanthimathinathan, MD</u>, John Dockins, MD, Norbert Richardson, MD, Daniel Hoernschemeyer, MD, Archana Ramaswamy, MD, Natalie Suttmoeller, RN CCRN CBN, Roger De La Torre, MD, University of Missouri Health Care
- P451 SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS: A RETROSPECTIVE REVIEW OF WEIGHT-LOSS AND RESOLUTION OF CO-MORBIDITIES <u>Alisha Skinner</u>, <u>BA</u>, Brent Tatsuno, BS, Yosuke Mitsugi, MD, Edwin A Takahashi, BS, Michael Tom, BA, James Davis, PhD, Daniel Murariu, MD MPH, Racquel S Bueno, MD FACS, Cedric S Lorenzo, MD, University of Hawaii John A. Burns School of Medicine, University of Hawaii Department of Surgery, Kuakini Medical Center, The Queen's Medical Center, Honolulu, Hawaii, United States of America
- P452 TRANS-UMBILICAL TWO-SITE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: RESULTS IN 500 PATIENTS Wei-jei Lee, MD PhD, Jung-chien Chen, MD, Kong-han Ser, MD, Jun-juin Tsou, SPN, Yi-chih Lee, MHA, Min-Sheng General Hospital, National Taiwan University, Taiwan
- P453 MANAGEMENT OF A DIFFICULT: GASTROSPLENIC FISTULA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY. Flavia C Soto, MD, Wayne J English, MD FACS, Marquette General Hospital
- P454 THE UTILITY OF RADIOLOGY AND ENDOSCOPY IN THE EVALUATION OF VBG FAILURES <u>Amanda Parker, MD</u>, Michele Riordon, MD, Patrick Reardon, MD, Vadim Sherman, MD, The Methodist Hospital
- P455 INSURANCE STATUS AND OUTCOMES IN LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) <u>Paul R Balash, MD</u>, Nicholas E Bruns, BA, Minh B Luu, MD, Amanda Francescatti, BA, Khristi M Autajay, RD, Jonathan A Myers, MD, Rush University Medical Center
- P456 MARGINAL ULCER IN THE MINI-GASTRIC BYPASS; A COMPARISON WITH MARGINAL ULCER REPORTED IN BILLROTH II PATIENTS OPERATED BETWEEN 1920 AND 1980 AND WITH MARGINAL ULCER IN ROUX-EN-Y GASTRIC BYPASS <u>Robert Rutledge, MD</u>, Robert Rutledge, Mr, Center for Laparoscopic Obesity Surgery
- P457 PERI-OPERATIVE OUTCOMES OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND EFFECTIVENESS SHORT TO MEDIUM TERM WEIGHT LOSS AND IMPROVEMENT OF DIABETES MELLITUS <u>C M Hoogerboord, MBChB MMed FCSSA FRCSC</u>, S Wiebe, MD FRCSC, D Klassen, MD FRCSC, D Lawlor, NP, J Ellsmere, MD MSc FRCSC, Department of Surgery, Dalhousie University, Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia, Canada
- P458 ENDOSCOPIC CLIPPING FOR THE TREATMENT OF SLEEVE GASTRECTOMY LEAKS: IT WORKS! <u>Ali Almontashery, MD</u>, Yaser Dahlan, MD, Khalid Alshahrani, MD, Adel Bakhsh, MD, King Abdualaziz Medical City, Jeddah, Saudi Arabia
- P459 LAPAROSCOPIC REMOVAL OF POOR-OUTCOME GASTRIC BANDING WITH CONCOMITANT SLEEVE GASTRECTOMY AS A REOPERATIVE PROCEDURE Aayed R Alqahtani, FRCSC FACS, <u>Mohamed Elahmedi</u>, <u>MD</u>, Hussam Alamri, MD, King Saud University, College of Medicine, Department of Surgery
- P460 INPATIENT WEIGHT LOSS AS A PRECURSOR TO BARIATRIC SURGERY FOR ADOLESCENTS WITH EXTREME OBESITY Evan P Nadler, MD, Faisal G Qureshi, MD, Leah C Barefoot, MSN CPNP, Daniel Davidow, MD, Children's National Medical Center, Cumberland Hospital for Children and Adolescents
- P461 IMPLEMENTATION OF A STANDARDIZED BARIATRIC QUALITY OF CARE PROGRAM IN ONTARIO, CANADA R Nenshi, BA MD MSc FRCSC, S A Glazer, MD FRCPC FCCP, J Patel, RN MScN CNN, Q Huynh, MD FRCS, L Klein, MD MSc FRCS, J Hagen, MD FRCS, Humber River Regional Hospital, Toronto, Ontario
- P462 EFFICACY OF ROUX-EN-Y GASTRIC BYPASS SURGERY IN ACHONDROPLASTIC PATIENT: A CASE REPORT <u>Akeel M Merchant</u>, <u>BS</u>, Eyad M Wohaibi, MD, Tejinder P Singh, MD, Albany Medical Center P463 COMPARATIVE STUDY OF SINGLE INCISION, ROBOTIC, AND

- STADARD LAPAROSCOPIC SLEEVE GASTRECTOMY <u>Harvey C Rainville, MD</u>, Kulmeet Sandhu, MD, Brad Snyder, MD, Pratibha Vemulapali, MD, Emmanuel Agaba, MD, Diego Camacho, MD, Montefiore Medical Center, University of Texas Health Science Center
- P464 THE ROLE OF DUMPING SYNDROME IN WEIGHT LOSS AFTER GASTRIC BYPASS SURGERY <u>Ambar Banerjee</u>, <u>MD</u>, Yi Ding, BS, Nilay Shah, MD, Dean J Mikami, MD, Bradley J Needleman, MD, Center for Minimally Invasive Surgery, Division of General and Gastrointestinal Surgery, The Ohio State University, Columbus, Ohio
- P465 SHOULD SURGEONS ACCEPT LIVER BIOPSY AS A STANDARD PRACTICE WHEN PERFORMING BARIATRIC SURGERY? Manpreet K Kohli, MD, Frank Borao, MD, Steven Binenbaum, Jurek Kocik, Monmouth Medical Center, Long Branch, NJ
- P466 VENTRAL HERNIA AT THE TIME OF LAPAROSCOPIC GASTRIC BYPASS SURGERY: SHOULD IT BE REPAIRED? <u>Isabelle Raiche, MD FRCSC</u>, Fatima Haggar, MPH, Joseph Mamazza, MD FRCSC, Husein Moloo, MD MSc FRCSC, Eric C Poulin, MD MSc FRCS C, Guillaume Martel, MD FRCSC, Jean-denis Yelle, BA MD FRCSC FACS, The Minimally Invasive Surgery Research Group, The Ottawa Hospital, University of Ottawa
- P467 SLEEVE GASTRECTOMY: PRELIMINARY RESULTS FROM BARIATRIC OUTCOME LONGITUDINAL DATABASE (BOLD) <u>Jyoti Sharma, MD</u>, Debbie Winegar, PhD, Donald Risucci, PhD, Anthony Maffei, MD FACS, Thomas Cerabona, MD FACS, Ashutosh Kaul, MD FRCS FACS, New York Medical College
- P468 ADJUSTABLE GASTRIC BANDING: A SINGLE INSTITUTION
 RETROSPECTIVE REVIEW OF SINGLE INCISION VERSUS STANDARD
 LAPAROSCOPY. <u>Anthony M Gonzalez, MD FACS FASMBS</u>, Jorge R
 Rabaza, MD FACS FASMBS, Carmen Rodriguez, RN MSHSA, Maria Fuego,
 RN BSN, South Miami Hospital, Baptist Health South Florida, South
 Miami, Florida
- P469 SHOULD ADJUSTABLE GASTRIC BANDS BE DONE ONLY IN SPECIALIZED BANDING CENTERS? <u>Ashutosh Kaul, MD FRCS FACS</u>, Thomas Sullivan, BS, Pawandeep Hunjan, MD, Anthony Maffei, MD FACS, Thomas Cerabona, MD FACS, New York Medical College
- P470 INFORMING INFORMED CONSENT IN BARIATRIC SURGERY:
 DEVELOPMENT OF AN ONLINE RISK/BENEFIT CALCULATOR FROM THE
 AMERICAN COLLEGE OF SURGEONS BARIATRIC SURGERY CENTER
 NETWORK (ACS-BSCN) <u>Timothy D Jackson, MD MPH</u>, Matthew M
 Hutter, MD MPH, Codman Center for Clinical Effectiveness, Department
 of Surgery, Massachusetts General Hospital, Boston, MA, USA &
 Department of Surgery, University of Toronto, University Health
 Network, Toronto, ON, Canada
- P471 POST OPERATIVE SWALLOW STUDY AS A PREDICTOR OF INTERMEDIATE WEIGHT LOSS AFTER SLEEVE GASTRECTOMY <u>Alex Zendel, MD</u>, Gali Westrich, MD, Moshe Rubin, MD, David Goitein, MD, Sheba Medical Center
- P472 INDICATIONS FOR PROPHYLACTIC ANTIBIOTICS BASED ON CULTURES TAKEN DURING ELECTIVE LAPAROSCOPIC SLEEVE GASTRECTOMY <u>Katherine E Hansen</u>, <u>DO</u>, Marc Neff, MD, UMDNJ-SOM
- P473 CT SCANS SHOW LOW INCIDENCE OF TROCAR SITE FASCIAL DEFECTS AFTER LAPAROSCOPIC ROUX -EN-Y GASTRIC BYPASS <u>Gustavo E Bello, MD</u>, Toms Augustin, MD, Jonathan M Tomasko, MD, Jerome R Lyn-sue, MBBS, Randy S Haluck, MD, Ann M Rogers, MD, Penn State Hershey Medical Center
- P474 ANASTOMOTIC STENOSIS AND THE KEY ROLE OF THERAPEUTIC ENDOSCOPY AFTER LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH (LBPD-DS) SURGERY Fady Moustarah, MD MPH, Stéfane Lebel, MD, Simon Marceau, MD, Laurent Beirtho, MD, Frédéricsimon Hould, MD, Odette Lescelleur, MD, Simon Biron, MD, Institut Universitaire de Cardiologie et de Pneumologie de Québec (IUCPQ), Université Laval
- P475 IS SWIMMING A BETTER PREOPERATIVE METHOD OF EXERCISE FOR POST OPERATIVE WEIGHT LOSS? <u>Abraham J Frech, MD</u>, Arpan Goel, MD, Tovy H Kamine, MD, Benjamin E Schneider, MD, Daniel B Jones, MD, Robert A Andrews, MD, Beth Israel Deaconess Medical Center/Harvard Medical School
- P476 SMOKING CESSATION AFTER INTRA-GASTRIC BALLOONS
 PLACEMENT: AN INTERESTING SIDE-EFFECT FOR SMOKER PATIENTS:
 PRELIMINARY REPORT Gustavo L Carvalho, PhD, <u>Diego L Lima, Student</u>,
 Adriano C Sales, Student, Rafaela L Gouveia, Student, Rebeca G
 Rocha, Student, Flavio A Fernandes Junior, MD, Masaichi Okazaki, MD,
 University of Pernambuco Faculty of Medical Sciences

- P477 LAPAROSCOPIC GASTRIC BAND REMOVAL SINGLE INSTITUTION EXPERIENCE <u>Emilia Krol, MD</u>, Keith Zuccala, MD, Laura Choi, MD, Danbury Hospital
- P478 IS EARLY DISCHARGE OF PATIENTS POST LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS SAFE? <u>B S Brar, MD FRCSC</u>, C Smith, MD FRCSC, I Raiche, MD FRCSC, Jd Yelle, MD FRCSC, J Mamazza, MD FRCSC, University of Ottawa
- P479 LAPAROSCOPIC REPAIR OF PERFORATED MARGINAL ULCERS CAN BE DONE WITH SUPERIOR OUTCOMES COMPARED WITH OPEN REPAIR Girish Luthra, MD, Vladan N Obradovic, MD, Aamir Akmal, MD, Eliah M Malka, Corrine Blumling, MD, Lindsey Stratchko, MSIII, Mathew E Plank, PAC, Andrea L Plank, Nicole Woll, PhD, Jon D Gabrielsen, MD FACS, Chad Lee, Anthony T Petrick, MD FACS, Geisinger Medical Center, Danville, Pennsylvania
- P480 LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOR TREAMTENT OF SYMPTOMATIC PARAESOPHAGEAL HERNIA IN THE MORBIDLY OBESE Brendan M Marr, MD, Mark R Wendling, MD, Dean J Mikami, MD, Bradley J Needleman, MD, Scott Melvin, MD, Kyle A Perry, MD, Ohio State University
- P481 LAPAROSCOPIC CHOLECYSTECTOMY IN THE SUPER MORBIDLY OBESE PATIENTS <u>Muhammad Asad Khan, MD</u>, Roman Grinberg, MD, Stelin Johnson, RPAC, John N Afthinos, MD, Karen E Gibbs, MD, Staten Island University Hospital
- P482 SYSTEMATIC REMOVAL OF MORE THAN 50% OF FLUID IN PATIENTS WITH CLINICALLY SIGNIFICANT REFLUX OR SLIPPAGE-LIKE COMPLICATIONS OF ADJUSTABLE GASTRIC BANDING IS AN EFFECTIVE TREATMENT OPTION <u>Andrea S Bedrosian</u>, MD, Nabeel R Obeid, MD, Bradley F Schwack, MD, Heekoung Youn, RN MA, Christine J Ren Fielding, MD, George A Fielding, MD, Marina S Kurian, MD, New York University Langone Medical Center
- P483 SAFETY OF ADOLESCENT ROUX-EN-Y GASTRIC BYPASS AT AN ADULT BARIATRIC CENTER OF EXCELLENCE <u>James V Siatras, DO</u>, Kate Ziegler, MD, Anna Ibele, MD, Daniel Mwanza, DO, Christopher Evanson, MD, John Ditslear, MD, Samer G Mattar, MD, Department of General Surgery, Indiana University School of Medicine, Indianapolis, IN.
- P484 RELATIVE FREQUENCY OF OBESITY IN NEW BARIATRIC CENTRE IN THE INTERIOR OF PORTUGAL <u>José-eduardo Santos, FCSSA FRCSEd MMEDWits SA</u>, Miguel Freitas, MScPhysics Univ Coimbra Portugal, Ana Monteiro, LNutrit Univ Porto Portugal, Manuel R Fanfa, MD, Miguel Castelo-branco, PhDMed Univ Beira Interior Portugal, Faculty of Health Sciences, University of Beira Interior; CICS-UBI Health Sciences Research Centre, University of Beira Interior; Centro Hospitalar Cova da Beira; Av. Infante D. Henrique, 6200-506 Covilha, Portugal
- P485 THROMBOEMBOLIC EVENTS AFTER LAPAROSCOPIC GASTRIC BYPASS: IDENTIFICATION OF HIGH-RISK FACTORS <u>C Gonczy, MD</u>, V Advani, MD, S Markwell, MA, S Ahad, MD, I Hassan, MD, Southern Illinois University School of Medicine
- P486 FACTORS INFLUENCING CHOICE OF OPERATION AMONG PROSPECTIVE BARIATRIC PATIENTS <u>Stelin Johnson, RPAC</u>, Roman Grinberg, MD, John N Afthinos, MD, Karen E Gibbs, MD, Staten Island University Hospital
- P487 LAPAROSCOPIC VS. OPEN APPENDECTOMY IN OBESE PATIENTS <u>Muhammad Asad Khan, MD</u>, Roman Grinber, MD, Stelin Johnson, RPAC, Johan N Afthinos, MD, Karen E Gibbs, MD, Staten Island University hospitals
- P488 PREDICTORS OF OUTCOMES FOLLOWING ROUX EN Y GASTRIC BYPASS SURGERY AT THE OTTAWA HOSPITAL <u>Chris G Smith, Dr</u>, Balpreet G Brar, Dr, Joseph Mamazza, Dr, Husein Moloo, Dr, Haggar Fatima, Ms, Jean Denis Yelle, Dr, Robert Dent, Dr, Isabelle Raiche, Dr, The Ottawa Hospital
- P489 BARIATRIC SURGERY INCREASES TESTOSTERONE AND IMPROVES MALE SEXUAL FUNCTION. A PILOT STUDY OF THIRTEEN MORBIDLY OBESE MEN. Taehee Kwak, MD, Homayoun Pournik, MD, Krystyna Kabata, RPAC, Anthony Tortolani, MD, <u>Piotr Gorecki, MD</u>, New York Methodist Hospital, Brooklyn, NY, USA
- P490 LAPAROSCOPIC VS. OPEN APPENDECTOMY IN MORBIDLY OBESE PATIENTS (BMI>40): A NSQIP ANALYSIS <u>Muhammad Asad Khan, MD</u>, Roman Grinberg, MD, Stelin Johnson, RPAC, John N Afthinos, MD, Karen E Gibbs, MD, Staten Island University Hospital
- P491 WEIGHT LOSS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: DOES SIZE MATTER? <u>Scharf Keith, MD</u>, Nayna Lodhia, BS, Anit Kaushal, PhD, Homero Rivas, MD, John M Morton, MD MPH, Stanford School of



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- P492 IMPROVEMENT IN ESTIMATED GLOMERULAR FILTRATION RATE AFTER BARIATRIC SURGERY: A NEW APPLICATION FOR BARIATRIC SURGERY ON THE HORIZON? Michael L Hibbard, MD, Andrea R Giovanelli, Megan Palsa, PAC, Teresa Kim, MD, Gregory Broderick-villa, MD, Ajay Upadhyay, MD, First Surgical Consultants, Alta Bates Summit Medical Center, Oakland, California, U.S.A.
- P493 DOES GASTRO-INTESTINAL QUALITY OF LIFE IMPROVE AFTER GASTRIC BYPASS? Nayna Lodhia, BS, Jaffer Kattan, BS, Adam Eltorai, BS, Homero Rivas, MD, John M Morton, MD MPH, Stanford
- P494 BARIATRIC SURGERY IN PATIENTS WITH BMI LESS THAN 35. EXPERIENCE IN 895 PATIENTS <u>Salinas José, MD</u>, Rodrigo Fernandez, MD, César Muñoz, MD, Julio Cerda, MS, Luis Ibáñez, MD, Fernando Crovari, MD, Gustavo Pérez, MD, Ricardo Funke, MD, Camilo Boza, MD, Department of Digestive Surgery. Hospital Clínico P. Universidad Católica de Chile
- P495 WEIGHT LOSS IN LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING WITH SINGLE INCISION LAPAROSCOPIC SURGERY VERSUS CONVENTIONAL TECHNIQUE Jennifer Jolley, MD, Nida Ahmed, Minh Luu, MD, Amanda Francescatti, Khristi Autajay, Jonathan A Myers, MD, Rush University Medical Center
- P496 THE OPTIMAL TECHNIQUE OF GASTROJEJUNOSTOMY
 IN LAPAROSCOPIC GASTRIC BYPASS MAY BE A HAND SEWN
 ANASTOMOSIS. COMPARISON OF OUTCOMES AND COSTS. Piotr
 Gorecki, MD FACS, Krystyna Kabata, PA, Srikanth Eathiraju, MD, Suraj
 Parekh, MD, Anthony Tortolani, MD, NEW YORK METHODIST HOSPITAL
- P497 LAPAROSCOPIC GASTRIC PLICATION AS A REVISIONAL PROCEDURE AFTER FAILED ADJUSTABLE GASTRIC BAND John H Rodriguez, MD, Stacy Brethauer, MD, Matthew Kroh, MD, Cleveland Clinic Foundation
- P498 LAPAROSCOPIC GASTRIC BYPASS IN ADOLESCENTS: A PROSPECTIVE ANALYSIS OF DYNAMIC OF WEIGHT LOSS. <u>Piotr Gorecki, MD</u>, Alok Aggarwal, MD, Elizabeth Lax, MD, Anthony Tortolani, MD, Wojciech Gorecki, MD, Department of Surgery, New York Methodist Hospital, Brooklyn, NY
- P499 HIATAL HERNIA REPAIR IN LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS SIGNIFICANTLY IMPROVES REFLUX BUT NOT WEIGHT LOSS <u>Daniel Moon, MD</u>, Ahmad Bashir, MD, Jennifer Higa, BS MPH, Saber Ghiassi, MD MPH, Tienchin Ho, MD FACS, Keith Boone, MD FACS, Kelvin Higa, MD FACS, Department of Surgery, UCSF- Fresno Medical Education Program
- P500 Withdrawn
- P501 VARIANTE STRACHAN A LA MANGA GÁSTRICA <u>Ivan Strachan,</u>
 <u>Bariatric Surgeon</u>, Gianna Ramos, Bariatric Surgeon, CIPLA y Centro
 Médico Dominico Cubano
- P502 ENDOSCOPIC STENTS (ES) AS DEFINITIVE TREATMENT FOR POSTOPERATIVE LEAKS IN BARIATRIC SURGERY <u>César Muñoz, MD</u>, José Salinas, MD, Camilo Boza, MD, Fernando Crovari, MD, Ricardo Funke, MD, Alejandro Raddatz, MD, Allan Sharp, MD, Alex Escalona, MD, Fernando Pimentel, MD, Digestive Surgery Department, Hospital Clínico P. Universidad Católica de Chile
- P503 WHAT ARE THE INCIDENCE AND TIMING OF CHOLECYSTECTOMY AFTER BARIATRIC SURGERY? <u>Z M Keilani, MD</u>, S El Djouzi, MD, T S Kuwada, MD, K Gersin, MD, C Simms, RN, D Stefanidis, MD PhD, Carolinas Medical Center
- P504 MORBIDY AND MORTALITY AFTER 5000 CONSECUTIVE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASSES PERFORMED BY A SINGLE GROUP IN ARGENTINA. Oscar E Brasesco, Mario A Corengia, Gaston L Borlle, Juan M Riganti, Jose M Cabrera, Gabriel Menaldi, Guillermo Premoli, Jorge Bella, Guillermo Muzio, Pedro Martinez Duartez, Fundacion Favaloro & Hospital Universitario Austral, Buenos Aires, ARGENTINA.
- P505 PREDICTING REMISSION OF TYPE-2 DIABETES WITH ILEAL INTERPOSITION WITH SLEEVE GASTRECTOMY <u>Surendra Ugale, MS</u>, Neeraj Gupta, MBBS, Vishwas Naik, MS, Kd Modi, MD, Sunil Kota, Kirloskar Hospital and Medwin Hospitals, Hyderabad, Andhra Pradesh, India
- P506 LAPAROSCOPIC ILEAL INTERPOSITION (II) WITH DIVERTED SLEEVE GASTRECTOMY (DSG) IS VERY EFFECTIVE FOR METABOLIC DISORDERS Surendra Ugale, MS, Neeraj Gupta, MBBS, Vishwas Naik, MS, Kd Modi, MD, Sunil Kota, DNB, Kirloskar Hospital and Medwin Hospitals, Hyderabad, Andhra Pradesh, India
- P507 COMPLICATION AND OUTCOME OF LAPAROSCOPIC ADJUSTABLE

- GASTRIC BANDING (LAGB) <u>Karamollah Toolabi</u>, Saeed Arefanian, Tehran University of Medical Sciences
- P508 SURGICAL SITE INFECTION IN N.O.T.E.S. SURGERY <u>José F Noguera, PhD MD</u>, Angel Cuadrado, PhD MD, Juan C García, MD, José M Olea, MD, Rafael Morales, MD, Hospital Son Llàtzer. IUNICS
- P509 TRANSUMBILICAL HIDDEN SCAR SURGERY USING GELPOINT THROUGH AN UMBILICAL ZIGZAG SKIN INCISION <u>Takehiro Hachisuka, M. D.</u> Takashi Kinosita, M. D. Nobuhiko Kurata, M.D. Masayuki Tsutsuyama, M.D., Shinnichi Umeda, M.D., Akinaga Yaraita, M.D., Seisaku Tokunaga, M.D., Masahiro Shibata, M.D., Toshio Shikano, M.D., Keisuke Hattori, M.D., Toshihiro Mori, M.D., Masahiko Shino, Department of Surgery and Plastic Surgery, Yokkaichi Municipal Hospital
- P510 NOTES SIMULATOR: QKO SAJOR <u>Sergio Rojas-ortega, MD</u>, Gerardo Reed, MD, Octavio Gomez-escudero, MD, Eduardo Marin, MD, Hospital ANGELES / Puebla
- P511 ECTOPIC PANCREAS IN THE STOMACH PRESENTING AS AN INFLAMMATORY ABDOMINAL MASS <u>Takayuki Tokutsu</u>, <u>MD</u>, Toshiyuki Mori, MD, Noritsugu Abe, MD, Tomokazu Kishiki, MD, Hirohisa Takeuchi, MD, Hiroyoshi Matsuoka, MD, Masanori Sugiyama, MD, Yutaka Atomi, MD, Kyorin University, School of Medicine
- P512 PORCINE ESOPHAGEAL-GASTRIC EXPLANTS: A FEASIBLE TRAINING MODEL FOR PERORAL ENDOSCOPIC MYOTOMY (POEM) Whalen Clark, MD, Vic Velanovich, MD, University of South Florida Department of Surgery
- P513 SINGLE-INCISION MULTIPORT LAPAROENDOSCOPIC CHOLECYSTECTOMY USING A NEWLY DEVELOPED SHORT-TYPE FLEXIBLE ENDOSCOPE: A COMBINED PROCEDURE OF FLEXIBLE ENDOSCOPIC AND LAPAROSCOPIC SURGERY Nobutsugu Abe, MD PhD, Hirohisa Takeuchi, MD, Atsuko Ooki, MD PhD, Toshiyuki Mori, MD PhD, Masanori Sugiyama, MD PhD, Kyorin University School of Medicine, Department of Surgery
- P514 RIGID AND FLEXIBLE ENDOSCOPIC RENDEZVOUS IN SPATIUM PERITONEALIS MAY BE AN EFFECTIVE TACTIC FOR LAPAROSCOPIC MEGASPLENECTOMY: SIGNIFICANT IMPLICATIONS FOR PURE NOTES Morimasa Tomikawa, MD PhD FACS, Tomohiko Akahoshi, MD PhD, Yoshihiro Nagao, MD PhD, Makoto Hashizume, MD PhD FACS, Department of Advanced Medicine and Innovative Technology, Kyushu University Hospital
- P515 ENDOSCOPIC FULL-THICKNESS OR PARTIAL-THICKNESS MYOTOMY USING SUBMUCOSAL ENDOSCOPY WITH MUCOSAL SAFETY FLAP (SEMF) TECHNIQUE: A COMPARATIVE STUDY IN SWINE. Eduardo Aimore Bonin, MD, Erica Moran, MD, Juliane Bingener, MD, Mary Knipschield, Kohei Takizawa, MD, Christopher Gostout, MD, Mayo Clinic
- P516 EVALUATION OF BACTERIAL CONTAMINATION AFTER TOTALLY TRANSVAGINAL NOTES ACCESS FOR PERITONEOSCOPY AND LIVER BIOPSY IN SWINE: A COMPARATIVE STUDY WITH LAPAROSCOPY. Eduardo Aimore Bonin, MSc, <u>Christiano Marlo Paggi Claus, MSc</u>, Maria F Torres, Veterinarian, Antonio C Campos, PhD, Marcelo De Paula Loureiro, PhD, Antonio Moris Cury Filho, MSc, Gustavo Lopes Carvalho, PhD, Instituto Jacques Perissat (IJP) Universidade Positivo, Curitiba, Brazil.
- P517 TRANSVAGINAL CHOLECYSTECTOMY: A HYBRID APPROACH USING OUR EXPERIENCE WITH NOTES AND SILS <u>K A Zuberi, MD</u>, J W Hazey, MD, D B Renton, MD, J T Rohl, MD, V K Narula, MD, The Ohio State University Medical Center: Center for Minimally Invasive Surgery, Columbus, OH, LISA
- P518 SINGLE INCISION LAPAROSCOPIC SURGERY (SILS) AND NOTES IN BARIATRICS <u>Elie K Chouillard, MD PhD</u>, Nelson Trelles, MD, Andrew Gumbs, MD FACS, On behalf of the Intercontinental Society of Natural Orifice, Endoscopic, and Laparoscopic Surgery (INOELS)Centre Hospitalier Intercommunal, Poissy, France
- P519 PRELIMINARY RESULTS OF NEW MINIMALLY INVASIVE TECHNIQUE IN PERIPHERAL VASCULAR DISEASES: INTRAMUSCULAR INJECTION OF EXTRACTS OF LAPAROSCOPICALLY HARVESTED OMENTUM IN LIMBS OF PATIENTS WITH BUERGER'S DISEASE <u>Ali Aminian</u>, <u>MD</u>, Rasoul Mirsharifi, MD, Tehran University of Medical Sciences
- P520 LAPAROSCOPIC RETRIEVAL OF NON EXCRETED CAPSULE ENDOSCOPY Thuan Ho, MD, <u>Praneetha Narahari, MD</u>, Community regional Medical Center/UCSF Fresno MEP, Fresno, CA
- P521 LAPAROSCOPIC SLEEVE GASTRECTOMY FOR GASTRIC LIEOMYOSACROMA IN MORBIDLY OBESE PATIENT: A CASE FOR COLLABORATION Osama Hamed, MBBS, Ajay Jain, MD, Mark Kligman,

- MD, Department of General Surgery, University of Maryland School of Medicine, Baltimore MD
- P522 LAPAROSCOPIC TECHNIQUE FOR THE TREATMENT OF HEMATOCOLPOS DUE TO AN OBSTRUCTED UTERINE HORN. <u>Alexey Markelov</u>, MD, Holy Hedrick, MD FAAP FACS, Easton Hospital, Drexel University School of Medicine and Children's Hospital of Philadelphia
- P523 THE QUALITY OF ENDOSCOPIC SURGICAL SKILL QUALIFICATION IN JAPAN IN THE SECTION OF LAPAROSCOPIC CHOLECYSTECTOMY <u>Sumio Matsumoto</u>, <u>PhD</u>, Hiromi Tokumura, Dr, Yuichi Yamashita, Professor, Taizo Kimura, DMsc, Toshiyuki Mori, Professor, Fumio Konishi, Professor, Seigo Kitano, Professor, Masaki Kitajima, Professor, ESSQS Committee of the Japan Society for Endoscopic Surgery
- P524 REDUCED PORT CHOLECYSTECTOMY VS LAPAROSCOPIC CHOLECYSTECTOMY: A COMPARISON STUDY <u>Andreas Kiriakopoulos</u>, <u>MD</u>, Dimitrios Tsakayannis, MD, Dimitrios Linos, MD, Department of Surgery, Hygeia Hospital, Athens, Greece
- P525 THORACOSCOPIC ESOPHAGECTOMY FOR ESOPHAGEAL CANCER IN SEMI-PRONE POSITION Naoshi Kubo, Katsunobu Sakurai, Hiroaki Tanaka, Kazuya Muguruma, Hitoshi Nagahara, Eiji Noda, Kiyoshi Maeda, Masakazu Yashiro, Nobuya Yamada, Masaichi Ohira, Kosei Hirakawa, Department of Surgical Oncology, Graduate school of medicine, Osaka-City University
- P526 EFFICIENCY OF ABSCESS PATHWAY <u>Aliasger Amin</u>, Anil Reddy, Madan Jha, Ahmed Hammad, James Cook University Hospital
- P527 LAPAROENDOSCOPIC SINGLE SITE CHOLECYSTECTOMY USING A NOVEL OVAL-SHAPED PORT DEVICE <u>Kazunori Shibao</u>, <u>MD PhD</u>, Aiichiro Higure, MD PhD, Noritaka Minagawa, MD PhD, Koji Yamaguchi, MD PhD, Dept of Surgery I, University of Occupational and Environmental Health
- P528 KEY POINTS AND SURGICAL OUTCOME OF CHOLECYSTECTOMY USING SILS WITH 2MM FORCEPS <u>Hideaki Tsutsumida</u>, MD, Mitsunobu Uto, MD, Mari Kamimura, MD, Toshiro Kamimura, MD, Kamimura Hospital
- P529 THE FEASIBILITY OF SINGLE INCISION THORACOSCOPIC SURGERY FOR PRIMARY SPONTANEOUS PNEUMOTHORAX USING A SINGLE-INCISION LAPAROSCOPIC SURGERY PORT UNDER SINGLE-LUMEN ENDOTRACHEAL TUBE INTUBATION WITH CO2 GAS INSUFFLATION Hyun Koo Kim, MD PhD, Ho Kyung Sung, MD, Hyun Joo Lee, RN, Jiae Min, RN, Young Ho Choi, MD PhD, College of Medicine, Korea University Guro Hospital
- P530 SINGLE-INCISION LAPAROSCOPIC SURGERY: THE EXPERIENCE OF OUR FIRST 165 CASES: PEARLS AND PITFALLS <u>Akram M Alashari, MD</u>, Nissin Nahmias, MD, Bruce Bernstein, PhD, Stanton Smith, MD, Brian Pellini, MD, Justin Lee, MD, Ibrahim Daoud, MD, Division of Minimally Invasive Surgery St. Francis Hospital and Medical Center, Hartford, CT
- P531 A RARE CASE OF SOLITARY NEUROFIBROMA OF THE THORACIC ESOPHAGUS <u>Katsunori Nishikawa, MD</u>, Noburo Omura, MD, Masami Yuda, MD, Yujiro Tanaka, MD, Akira Matsumoto, MD, Yuichiro Tanishima, MD, Toshiyuki Sasaki, MD, Yoshiro Ishibashi, MD, Kouji Nakada, MD, Norio Mitsumori, MD, Hideyuki Kashiwagi, MD, Katsuhiko Yanaga, MD, The Jikei University School of Medicine Department of Surgery
- P532 VIDEO-ASSISTED THORACOSCOPIC SURGERY FOR CHILDREN'S GENERAL THORACIC DISEASE <u>Masahide Murasugi, MD PhD</u>, Masato Kanzaki, MD PhD, Takuma Kikkawa, MD, Tamami Isaka, MD PhD, Hideyuki Maeda, MD, Takamasa Onuki, MD PhD, Osamu Segawa, MD PhD, Ryuji Yoshida, MD PhD, Department of Surgery, Division of General Thoracic Surgery*, Division of Pediatric Surgery**, Tokyo Women's Medical University
- P533 MINILAPAROSCOPIC APPROACH WITH HIDDEN SCARS FOR USUAL LAPAROSCOPIC PROCEDURES. <u>Isaac Baley Spindel</u>, MD, Karla Susana Martin Tellez, MD, Angel Martinez Munive, MD, Jorge Cueto Garcia, MD, Fernando Quijano Orvañanos, MD, American British Cowdray Medical Center, Mexico City.
- P534 ANESTHESIA MANAGEMENT FOR BARIATRIC SURGERY <u>R Rutledge</u>, <u>MD</u>, Center for Laparoscopic Obesity s
- P535 LAPAROSCOPIC TREATMENT FOR URACHAL REMNANT-A REPORT OF TWO CASES- Roppei Yamada, MD PhD, Yasushi Rino, MD PhD, Norio Yukawa, MD PhD, Tsutomu Sato, MD, Hirohito Fujikawa, MD, Nobuhiro Sugano, MD, Koichiro Yamaoku, MD, Daisuke Inagaki, MD, Teni Godai, MD, Shinichi Hasegawa, MD PhD, Takashi Oshima, MD PhD, Munetaka Masuda, Department of Surgery, Yokohama City University School of Medicine

- P536 INTRA-OPERATIVE SMALL BOWEL LENGTH MEASUREMENTS <u>Ezra Teitelbaum, MD</u>, Khashayar Vaziri, MD, Sara Zettervall, MD, Richard L Amdur, PhD, Bruce A Orkin, MD, George Washington University
- P537 INTERVAL LAPAROSCOPIC MANAGEMENT OF MECKEL'S DIVERTICULITIS <u>Vinay Singhal, MD</u>, Vinayak Sreenivas, MD, S Sainathan, MD, Kamal Nagpal, MD PhD, Daniel Farkas, MD, Bronx Lebanon hospital centre
- P538 THE NOVEL APPLICATION FOR COLORECTAL STENTING AFTER ANASTAMOTIC LEAK <u>Kanika A Bowen, MD MMS</u>, Stephen W Abernathy, MD, Richard C Frazee, MD, Texas A&M University Scott & White Hospital
- P539 NEW MODIFICATION OF LAPAROSCOPIC COLECTOMY BY NOSE AND SILS WITH VIRTUAL PORTS <u>Hwei-ming Wang, MD</u>, Feng Fan Chiang, Taichung Veterans General Hospital
- P540 MINIMALLY INVASIVE SURGERY ADOPTION INTO AN ESTABLISHED SURGICAL PRACTICE: Edward P Dominguez, MD, <u>Cory D Barrat, MD</u>, Ryan Gruner, BS, Donald Whisler, BS, Lynn Shaffer, PhD, Riverside Methodist Hospital, Minimally Invasive Surgery, Columbus, OH
- P541 NEEDLESCOPIC SURGERY IN PATIENTS WITH ACUTE ABDOMEN Efthymios Poulios, MD, Konstantinos P Economopoulos, MD, Dimitrios Tsakayannis, MD, Andreas Kiriakopoulos, MD, Dimitrios Tranoudakis, MD, <u>Dimitrios Linos, MD FACS</u>, Department of Surgery, "Hygeia" Hospital, Athens, Greece University of Athens, School of Medicine, Athens, Greece
- P542 OVERNIGHT-STAY BILATERAL THORACOSOPIC SYMPATHECTOMY IN PATIENTS WITH PALMAR HYPERHIDROSIS <u>Avinash N Katara, MS DNB MRCSEd</u>, Ramya Behera, MS, Deepraj S Bhandarkar, MS FRFACS FICS FAIS FIAGES, Tehemton E Udwadia, MS FCPS FRCSEng FRCSEdin FICS, PD Hinduja National Hospital & Medical Research Centre, Mumbai
- P543 VIDEO ASSISTED ESOPHAGECTOMY WITH EXTENSIVE LYMPHADENECTOMY FOR THORACIC ESOPHAGEAL CANCER <u>Toshiaki Shichinohe</u>, <u>MD PhD</u>, Kentaro Kato, MD PhD, Akihiro Matsunaga, MD PhD, Satoshi Hayama, MD PhD, Takahiro Tsuchikawa, MD PhD, Joe Matsumoto, MD PhD, Takehiro Noji, MD PhD, Norihiro Takemoto, MD PhD, Yoshinori Suzuki, MD PhD, Hiroyuki Kaneko, MD PhD, Gastrointestinal Surgery II, Hokkaido University Graduate School of Medicine, Sapporo, Japan.
- P544 READMISSION AFTER MINOR SURGERY <u>Aliasger Amin, Mr</u>, Anil Reddy, Mr, Madan Jha, Mr, James Cook University Hospital
- P545 GASTROINTESTINAL NEUROENDOCRINE TUMOUR: CASE SERIES <u>A Amin, Mr</u>, Anil Reddy, Mr, Ahmed Hammad, Mr, M Jha, Mr, Prasad Kolanu, Dr, James Cook University Hospital
- P546 LAPAROSCOPIC VERSUS OPEN APPROACH IN THE MANAGEMENT OF APPENDICITIS COMPLICATED WITH PERITONITIS Felipe Quezada, MD, Ricardo Mejia, MD, Nicolas Quezada, MD, Oslando Padilla, Alex Escalona, MD, Nicolas Jarufe, MD, Fernando Pimentel, MD, Department of Digestive Surgery, School of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile.
- P547 HIGH-RESOLUTION MANOMETRY FINDINGS IN HEALTHY VOLUNTEERS WITH BIOVIEW® SOFTWARE Masato Hoshino, Ananth Srinivasan, Tommy H Lee, Sumeet K Mittal, Creighton University Medical Center
- P548 CURRENT PRACTICE PATTERNS OF VENOTHROMBOEMBOLISM PROPHYLAXIS IN ADVANCED MINIMALLY INVASIVE SURGERY <u>E Gilbert</u>, <u>MD</u>, A Lamoshi, MD, S Markwardt, MPH, T Deloughery, MD, B Sheppard, MD, Oregon Health & Science University
- P549 SUBCUTANEOSCOPIC EXCISION OF EXTERNAL ANGULAR DERMOID CYST IN CHILDREN: AVOIDING A SCAR ON THE FACE. <u>Julius Carillo, MD</u>, Bethany Slater, MD, Ashwin Pimpalwar, MD, Division of Pediatric surgery, Michael E Debakey Department of surgery, Baylor college of medicine and Texas Children's Hospital, Houston, Texas.
- P550 SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY USING A SURGICAL GLOVE PORT <u>Naoki Ishida, MD</u>, Tomoaki Okada, MD, Yoshitomo Ueno, MD, Kei Tamura, MD, Tetsuya Mizumoto, MD, Michiko Yamashita, MD, Masaru Matsumura, MD, Yoshinori Imai, MD, Taro Nakamura, MD, Hidenori Kiyochi, MD, Kenzo Okada, MD, Toshihiko Sakao, MD, Shinsuke Kajiwar, Uwajima City Hospital, Uwajima, Ehime, Japan
- P551 FIRST REPORT OF SINGLE INCISION LAPAROSCOPIC APPENDECTOMY IN A PREGNANT PATIENT Jonathan D Svahn, MD FACS, Matthew R Dixon, MD, <u>Joanna Lim, MD</u>, Austin L Spitzer, MD, Kaiser Permanente East Bay, Oakland Campus

- P552 LAPAROSCOPY-ASSISTED DISTAL GASTRECTOMY WITH D2 LYMPH NODE DISSECTION: OUR INITIAL EXPERIENCE <u>Masahiko Nishizaki</u>, <u>MD</u>, Syunsuke Kagawa, MD, Futoshi Uno, MD, Hiroyuki Kishimoto, MD, Toshiyoshi Fujiwara, MD, Department of Gastroenterological Surgery, Okayama University Hospital, Okayama, Japan
- P553 ASSOCIATION OF PERIPHERAL WHITE CELL COUNT AND CRP LEVELS WITH POSTOPERATIVE COMPLICATIONS AFTER LAPAROSCOPIC-ASSISTED GASTRECTOMY <u>Hiroaki Tanaka, MD</u>, Kazuya Muguruma, MD, Katsunobu Sakurai, MD, Naoshi Kubo, MD, Hisashi Nagahara, MD, Eiji Noda, Yoshito Yamashita, MD, Kiyoshi Maeda, MD, Tetsuji Sawada, MD, Masaichi Ohira, MD, Kosei Hirakawa, MD, Department of Surgical Oncology, Osaka City University Graduate School of Medicine
- P554 REALITY CHECK FOR SILS AND NOTES: USING PUBLICATIONS TO PROVIDE PERSPECTIVE ON NEW PROCEDURES <u>Tiffany Stoddard, MD</u>, Igor Milosevic, MD, Stephen Kavic, MD, University of Maryland Medical Center
- P555 THE EFFECT OF 3D MONITORING SYSTEM ON SINGLE INCISION LAPAROSCOPIC SURGERY <u>Yoshihiro Nagao, MD</u>, Munenori Uemura, MS, Hiroyuki Ishii, PhD, Kenoki Ohuchida, MD, Satoshi leiri, MD, Tomikawa Morimasa, MD FACS, Yoshihiko Maehara, MD FACS, Makoto Hashizume, MD FACS, CAMIT, Department of Surgery and Science, Kyushu University, Japan
- P556 Withdrawn
- P557 IMPACT OF FELLOWSHIP-TRAINED LAPAROSCOPIC SURGEONS ON RATES <u>Garth H Ballantyne, MD MBA</u>, Eric A Sommer, MD, Heidi Elliott, MD, Lawrence & Memorial Hospital
- P558 ENDOSCOPIC AND LAPAROSCOPIC EXPERIENCE BY RESIDENTS IN RURAL SURGERY ROTATIONS <u>Geary D Bush</u>, <u>MD</u>, Don K Nakayama, MD MBA, Martin L Dalton, MD, Mercer University School of Medicine / The Medical Center of Central Georgia
- P559 THE IMPACT OF MINIMALLY INVASIVE SURGERY (MIS) AND OPERATING ROOM (OR) TIME ON BLOOD TRANSFUSIONS AND SURGICAL SITE INFECTIONS <u>Santosh J Agarwal</u>, <u>BPharm MS</u>, Michael E Minshall, MPH, Ned Cosgriff, MD, Ross D Segan, MD MBA FACS, Gary V Delhougne, JD MHA, Covidien
- P560 SURGICAL WAY OF ADHESIONS FORMATION PREVENTION <u>Vladimir M Demidov</u>, PhD D Sci Medicine, Sergei M Demidov, PhD Medicine, Odessa National Medical University, Ukraine
- P561 COCOON FORMATION IN PATIENTS WITH MID-GUT NEUROENDOCRINE TUMORS-A RARE AND UNRECOGNIZED FINAL PATHWAY. <u>Yi-zarn Wang, MD DDS</u>, Heather M King, MD, Louisiana State University Health Science Center
- P562 LAPAROSCOPIC SMALL BOWELL ANASTOMOSIS <u>Nestor F De La Cruz-munos, MD</u>, Francisco J Jacome, MD, Marissa Montgomery, UNIVERSITY OF MIAMI MILLER SCHOOL OF MEDICINE
- P563 PROMIS FOR BASIC LAPAROSCOPY <u>Juliane Bingener, MD</u>, Jeff Sloan, PhD, Paul Novotny, MS, Mayo Clinic
- P564 SUBAXILLARY SUBMUSCULAR ENDOSCOPIC APPROACH FOR SUBCLAVICULAR TUMOR <u>Yi-chen Chang</u>, MD, Chun-wei Chang, MD, Far Eastern Memorial Hospital
- P565 RISK FACTORS FOR RESPIRATORY INSUFFICIENCY, ARREST AND FAILURE AMONG SELECTED OPEN AND LAPAROSCOPIC PROCEDURES ANALYSIS OF 90,000+ PROCEDURES Scott D Kelley, MD, Santosh J Agarwal, BPharm MS, Mary G Erslon, RN MS MBA, Jen Seda, MD, David B Lautz, MD, Covidien, Brigham and Women's Hospital
- P566 A CASE OF AN INFLAMMATORY PSEUDOTUMOR OF THE SPLEEN DIAGNOSED BY LAPAROSCOPIC SPLENECTOMY <u>Hiroshi Tajima</u>, Hiroki Kamata, Hiroyuki Katagiri, Kenichiro Ishii, Yusuke Kumamoto, Kazunori Furuta, Masahiko Watanage, Department of Surgery, Kitasato University School of Medicine, Sagamihara, Japan
- P567 Withdrawn
- P568 DOLLAR 5 LAPAROSCOPIC APPENDECTOMY <u>Muhammad f Murad</u>, <u>MBBS MCPS FCPS</u>, Qasim Ali, FCPS, Asif Zafar, FRCS FCPS, Farhat Jehan, MBBS, Holy Family Hospital, Rawalpindi
- P569 LAPAROSCOPIC EXCISION OF LARGE RETROPERITONEAL CYSTIC LYMPHATIC MALFORMATION IN A 21 MONTH CHILD. <u>Bethany Slater</u>, <u>MD</u>, Ashwin Pimpalwar, MD, Division of Pediatric surgery, Michael E Debakey Department of surgery, Baylor college of medicine and Texas Children's Hospital, Houston, Texas.
- P570 LAPAROSCOPIC RESOLUTION OF 30 CASES OF ACUTE SMALL BOWEL OBSTRUCTION IN AN UNIVERSITY CENTER <u>Nicolás Quezada</u>, <u>MD</u>, José Salinas, MD, Alex Jones, MS, Isabella Passalacqua, MD,

- Paula Pino, MS, Enrique Norero, MD, Ricardo Funke, MD, Fernando Crovari, MD, Nicolás Jarufe, MD, Camilo Boza, MD, Digestive Surgery Department, Hospital Clínico P. Universidad Católica de Chile
- P571 SYSTEMATIC REVIEW OF ROBOTIC-ASSISTED COLON AND RECTAL SURGERY <u>Aliyah Kanji, MD</u>, Richdeep S Gill, MD, Xinzhe Shi, MPH, Daniel W Birch, MD, Shahzeer Karmali, MD, Department of Surgery, University of Toronto and University of Alberta
- P572 NOVEL USE OF A SURGICAL ROBOT IN BILATERAL CORTICAL-SPARING RETROPERITONEOSCOPIC ADRENALECTOMY FOR PHEOCHROMOCYTOMA <u>Nikolaos A Dallas</u>, <u>MD</u>, Camilo Jimenez, MD, Steven G Waguespack, MD, Isabella M Iupe, Paxton V Dickson, MD, Elizabeth G Grubbs, MD, Nancy D Perrier, MD, UT MD Anderson Cancer Center
- P573 DIAPHRAGMATIC INJURY DURING ROBOTIC NEPHRECTOMY <u>Alexander Ramirez Valderrama, MD</u>, Gerald J Wang, MD, New York Hospital Queens
- P574 HYBRID ROBOTIC RIGHT HEMICOLECTOMY FOR CANCER OF THE ASCENDING COLON: A CASE CONTROL STUDY Emilio Morpurgo, MD, Tania Contardo, MD, Antonio Zerbinati, MD, Camillo Orsini, MD, Roberta Molaro, MD, Department of Surgery; Center for robotic and laparoscopic surgery; Hospital of Camposampiero
- P575 ROBOTIC-ASSISTED COMMON BILE DUCT EXPLORATION AS AN OPTION FOR COMPLEX CHOLEDOCHOLITHIASIS Nawar A Alkhamesi, MD PhD FRCSGenSurg FRCS FRCSEd, Ward T Davies, MD FRCSC, Fiona R Pinto, BA, Christopher M Schlachta, BSc MD CM FRCSC FACS, Department of Surgery, Schulich School of Medicine and Dentistry, The University of Western Ontario
- P576 UROGENITAL FUNCTION AFTER ROBOTIC-ASSISTED LAPAROSCOPIC RECTAL CANCER SURGERY <u>James Tak-kwan Fung</u>, FRCSEd, Hester Yuishan Cheung, FRACS, Lawrence Wing-chiu Ng, FRACS, Chi Chiu Chung, FRCSEd, Michael Ka-wah Li, FRCS FRCSEd, Department of Surgery, Pamela Youde Nethersole Eastern Hospital
- P577 ROBOTIC ASSISTED RESECTION OF COMPLEX RETROPERITONEAL SOFT TISSUE TUMORS IN AN OUTPATIENT SETTING <u>Gary N Mann</u>, <u>MD</u>, Eelco B Wassenaar, MD, Jonathan D Harper, MD, University of Washington
- P578 SHORT-TERM OUTCOME IN INTERSPHINCTERIC RESECTION USING THE DA VINCI S SURGICAL SYSTEM FOR LOWER RECTAL CANCER <u>Tsunekazu Hanai, MD</u>, Koutarou Maeda, MD, Kouji Masumori, MD, Hidetoshi Katsuno, MD, Ichiro Uyama, MD, Department of Surgery, School of Medicine, Fujita Health University
- P579 SHORT-TERM OUTCOME OF ROBOTIC SURGERY FOR MID OR LOWER RETAL CANCER AFTER PREOPERATIVE CHEMORADIOTHERAPY <u>Yong Sok Kim, MD</u>, Sung Chan Park, MD, Ji Won Park, MD, Dae Kyung Sohn, MD, Jae Hwan Oh, MD, Center for Colorectal Cancer, National Cancer Center, Goyang, South Korea
- P580 ENHANCED LEARNING IN ROBOTIC SURGERY USING FEEDBACK AND DISTRACTION Irene Suh, MS, Kevin Clay, MD, Chad Lagrange, MD, <u>Dmitry Oleynikov, MD</u>, Ka-chun Siu, PT PhD, University of Nebraska Medical Center, University of Nebraska at Omaha, Omaha, NE, USA.
- P581 ROBOTIC SURGERY IN GYNECOLOGY: PROGRAM INITIATION AND EARLY OUTCOMES AT A COMMUNITY HOSPITAL <u>Salim Abunnaja</u>, <u>MD</u>, Lucian Paniat, MD, Mark Albini, MD, Issa Mirmehdi, MS, Jinesh Shah, MS, Juan Sanchez, MD, Saint Mary's Hospital
- P582 VALIDATION OF TRAINING PROGRAM FOR BASIC SURGICAL TECHNIQUES IN ROBOTIC SINGLE PORT SURGERY <u>Gangmi Kim, MD</u>, Byung Soh Min, MD, Huyk Hur, MD, Seung Hyuk Baik, MD, Kang Young Lee, MD, Nam Kyu Kim, MD, Yonsei University College of Medicine, Secul Korea
- P583 ASSESSMENT OF SAFETY OF MANIPULATION IN ROBOTIC SURGERY TRAINING Anand Malpani, BTech, Balazs Vagvolgyi, David D Yuh, MD, Chi Chiung Grace Chen, MD, Hiep T Nguyen, MD, Rajesh Kumar, PhD, Johns Hopkins University, Yale University School of Medicine, Children's Hospital, Boston
- P584 ROBOTIC-ASSISTED HEPATIC RESECTION: A SYSTEMATIC REVIEW OF MORTALITY AND MORBIDITY <u>Jean-sébastien Pelletier</u>, <u>MD FRCSC</u>, Richdeep Gill, MD, Xinzhe Shi, MPH, Daniel Birch, MD MSc FRCSC, Shahzeer Karmali, MD FRCSC, University of Alberta, Centre for he Advancement of Minimally Invasive Surgery
- P585 RECTAL TUMORS ROBOTIC TREATMENT: THE SAVONA'S EXPERIENCE Antonio Langone, MD, Lorenzo Monteleone, MD, llario Caristo, MD, Domenico Aiello, MD, Massimo Bianchi, MD, Umberto

- Cosce, MD, Giorgio Gasloli, MD, Giovanni Sicignano, MD, Guido Griseri, MD, <u>Angelo Schirru, MD</u>, SC Chirurgia Generale, ASL2 Savonese Osp. S. Paolo Savona
- P586 DA VINCI ROBOTIC VENTRAL RECTOPEXY: A NEW TECHNIQUE FOR A WELL KNOWN PROBLEM <u>Tiffany T Fancher</u>, MD, David L Walters, MD FACS FASCR, St. Francis Medical Center
- P587 MULTI-MODULE ROBOTIC SURGERY TRAINING FOR OTOLARYNGOLOGY WITH INTEGRATED OBJECTIVE ASSESSMENT Anand Malpani, Martin Curry, DO, Thomas Tantillo,, Amod Jog, Ray Blanco, MD, Patrick Ha, MD, Joesph Califano, MD, Jeremy Richmon, MD, Rajesh Kumar, PhD, Johns Hopkins University, Greater Baltimore Medical Center
- P588 LAPAROBOTIC DUODENAL SURGERY: A SINGLE SURGEON'S 9-YEAR EXPERIENCE <u>Jonas Mansson</u>, <u>MD</u>, Anusak Yiengpruksawan, MD, Nino Carnevale, MD, Vikram Vattipally, MD, The Valley Hospital, Ridgewood, NJ
- P589 MINIMALLY INVASIVE CHOLECYSTECTOMY RETROSPECTIVE STUDY COMPARING LAPAROSCOPIC VS ROBOTIC APPROACH <u>David Calatayud</u>, <u>MD PhD</u>, Venkata R Kakarla, MD, Francesco Coratti, MD, Paolo Raimondi, MD, Stefano D?ugo, MD, Luca Milone, MD, Federico Gheza, MD, Mario Masur, MD, Enrique F Elli, MD, Francesco Bianco, MD, Subashini Ayloo, MD, Pier C Giulianotti, MD FACS, University of Illinois at Chicago Medical Center
- P590 SAFETY AND FEASIBILITY OF ROBOTIC ABDOMINO –PERINEAL EXCISION OF THE RECTUM. Vamsi R Velchuru, FRCS, Slawomir J Marecik, MD, Marek Zawadzki, MD, Albalawi Saeed, MD, John J Park, MD, Leela M Prasad, MD, University of Illinois, Chicago, USA, Advocate Lutheran General Hospital, Park Ridge, USA
- P591 SINGLE INCISION LAPAROSCOPIC ADRENALECTOMY <u>Nihat Yavuz</u>, <u>MD</u>, Serkan Teksoz, MD, Sabri Erguney, MD, Mete Duren, MD, Tuna Yildirim, MD, Sirri Ozkan, MD, Istanbul University,Cerrahpasa Medical School,General Surgery Department and Acibadem Kadikoy Hospital,General Surgery Department
- P592 TRANSPERITONEAL LAPAROSCOPIC RADICAL NEPHRECTOMY AFTER MULTIPLE PREVIOUS ABDOMINAL SURGERIES AND INTRAPERITONEAL HYPERTHERMIC CHEMOTHERAPY: A CASE REPORT <u>Yves Collin, MD</u>, Robert Sabbagh, MD FRCSC, Anne Meziat-burdin, MD FRCSC, University of Sherbrooke
- P593 INCIDENTALLY DIAGNOSED PAPILLARY THYROID MICROCARCINOMA AFTER MINIMALLY INVASIVE VIDEO-ASSISTED THYROID (MIVAT) SURGERY: WHAT TO DO? Istvan Gal, MD PhD, Zoltan Szabo, PhD, Gyorgy Weber, MD PhD, Miklos Czobel, MD, Telki Private Hospital, Budapest-Telki, Hungary,M.O.E.T Institute San Francisco, CA, USA, Department of Surgical Research and Technique Semmelweis University Medical School of Budapest,,Hungary
- P594 LAPAROSCOPY DECREASES PULMONDARY AND WOUND MORBIDITY AFTER SPLENECTOMY. Neil H Bhayani, MD, Sharon Ong'uti, MD MPH, Tolulope Oyetunji, MD MPH, Erin Hall, MD MPH, Edward E Cornwell lii, MD FACS FCCM, Howard University College of Medicine Department of Surgery, Georgetown University School of Medicine Department of Surgery
- P595 ADRENAL MYELOLIPOMA: OPERATIVE INDICATIONS AND OUTCOMES <u>Victoria M Gershuni, MS</u>, James G Bittner Iv, MD, Jeffrey F Moley, MD, Mary Quasebarth, RN, L Michael Brunt, MD, Sections of Minimally Invasive Surgery and Endocrine and Oncologic Surgery, Department of Surgery, Washington University School of Medicine
- P596 LONG TERM OUTCOMES OF LAPAROSCOPIC ADRENALECTOMY FOR ADRENAL MASSES <u>Thomas Kang</u>, <u>MD</u>, Asahel Gridley, MD, William S Richardson, MD, Ochsner Clinic Foundation
- P597 LAPAROSCOPICALLY ASSISTED MASSIVE SPLENECTOMY : A PRELIMINARY REPORT OF THE TECHNIQUE OF EARLY HILAR DEVASCULARIZATION <u>Pornthep Prathanvanich</u>, TAKSIN HOSPITAL
- P598 AN UNUSUAL CASE OF GALLBLADDER FIBROSIS <u>Lowell S Su, MD</u>, Christian W Ertl, MD FACS FACCWS, Leandra H Burke, BS, Michigan State University / Kalamazoo Center for Medical Studies
- P599 PROSPECTIVE CASE-CONTROL STUDY OF SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY IN OBESE PATIENTS <u>Toni Beninato, MD</u>, David A Nissan, BS, Filippo Filicori, MD, David A Kleiman, MD, Elliot Servais, MD, Thomas J Fahey Iii, MD, Rasa Zarnegar, MD, New York Presbyterian Hospital Weill Cornell Medical College
- P600 LAPAROSCOPIC SPLENECTOMY FOR HEMATOLOGIC DISEASES: LESSONS FROM EARLY EXPERIENCE. Rk Singh, MCh, J Abraham, MS,

- Hm Lokesh, MCh, A Prakash, MS, A Behari, MS, Ak Gupta, MCh, Vk Kapoor, MS, R Saxena, MS, Dept. of Surgical Gastroenterology & Liver Transplant, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India.
- P601 CONCOMITANT LAPAROSCOPIC SPLENECTOMY AND CHOLECYSTECTOMY FOR HEREDITARY SPHEROCYTOSIS CHILD WITH TECHNICAL REVIEW Masanobu Hagiike, MD PhD, Seiji Noge, MD, Hiroto Yamada, MD, Takuo Noda, MD, Takanori Oyama, MD, Hiroyuki Kubo, MD, Norikatsu Maeda, MD, Hirotaka Kashiwagi, MD, Masao Fujiwara, MD, Yasuyuki Suzuki, MD, Department of Gastroenterological and Pediatric Surgery, Kagawa University, Japan
- P602 PREDICTIVE FACTORS FOR CONVERSION AFTER LAPAROSCOPIC ADRENALECTOMY <u>Hector R Romero, MD</u>, Victoria Cerecedo, MD, Mauricio Sierra, MD, David Velazquez, MD PhD, Nicholas Williams, FRACS, Alexander P Heinze, Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubiran
- P603 RIGHT ADRENAL PHEOCHROMOCYTOMA AND A 3 MM LESION ON THE LEFT ADRENAL GLAND. HOW TO APPROACH? <u>Venkata S Kanthimathinathan</u>, MD, Camila Manrique Acevedo, MD, Arthur Rawlings, MD, University of Missouri Health Care
- P604 INFLAMMATION AND COAGULATION INTERACTION AFTER OPEN AND LAPAROSCOPIC LEFT PARTIAL HEPATECTOMY IN A PORCINE EXPERIMENTAL MODEL Constantinos S. Mammas, MD MSc PhD, Maria Kostoglou, Assistant Professor, George Kottis, Associate Professor, Chryssa Nikolaou, Associate Professor, Nicolaos Arkadopoulos, Assistant Professor, Nicolaos Kavantzas, Assistant Professor, Ismene Dontas, Profes, National and Kapodistrian University of Athens, Surgical Laboratory C.TOUNTAS
- P605 SINGLE INCISION LAPAROSCOPIC SURGERY FOR SPLENECTOMY-NTUH EXPERIENCE <u>Ching-yao Yang, MD PhD</u>, I-rue Lai, MD PhD, Rayhwang Yuan, MD PhD, Chiung-nien Chen, MD PhD, Yu-wen Tien, MD PhD, Ming-tsan Lin, MD PhD, Division of General Surgery, Department of Surgery, National Taiwan University Hospital
- P606 SINGLE-INCISION LAPAROSCOPIC CHOLECYSTECTOMY AT COMMUNITY HOSPITALS IN HONOLULU, HAWAII: A CASE SERIES Cori-ann M Hirai, BS, Daniel Murariu, MD MPH, Andrew Oishi, MD, Steven Nishida, MD, Cedric S Lorenzo, MD, Racquel S Bueno, MD FACS, University of Hawaii John A. Burns School of Medicine, University of Hawaii Department of Surgery, Kuakini Medical Center, The Queen's Medical Center, Honolulu, Hawaii, United States of America
- P607 COMPARING LAPAROSCOPIC MESH FIXATION STRENGTH BETWEEN TWO DIFFERENT TACK DEVICES Ram Elazary, Mahmoud Abu-gazala, Abed Khalaileh, Yoav Mintz, Department of Surgery, Hadassah-Hebrew University Medical Center, Campus
- P608 THE VALUE OF ABDOMINAL ULTRASONOGRAPHY TO PREVENT IATROGENIC INJURY IN PERCUTANEOUS ENDOSCOPIC GASTROSTOMY <u>Dennis Y Kim, MD</u>, Justin Regner, MD, Leslie Kobayashi, MD, Jay Doucet, MD, Jeanne Lee, MD, Mark Talamini, MD, Raul Coimbra, MD PhD, Vishal Bansal, MD, University of California San Diego
- P609 TECHNIQUE OF ESOPHAGOJEJUNOSTOMY USING TRANSORAL PLACEMENT OF THE PRETILTED ANVIL HEAD AFTER LAPAROSCOPIC TOTAL GASTRECTOMY FOR GASTRIC CANCER <u>S Sakuramoto</u>, PhD, N Katada, PhD, H Mieno, PhD, T Shibata, PhD, K Yamashita, PhD, M Nemoto, MD, S Kikuchi, PhD, M Watanabe, PhD, Kitasato University School of Medicine
- P610 SINGLE PORT SURGERY EXPERIENCE: 100 CASES AND WHICH IS THE BEST PORT? <u>Sergio Rojas-ortega</u>, <u>MD</u>, Jorge Garay Jr., MD, Cris Gomez, Nurse, Hospital Beneficencia Española de Puebla
- P611 MULTIPLE SENSORS SYSTEM TO EVALUATE MINIMALLY INVASIVE SURGERY TRAINEES <u>Sami Abusnaineh</u>, <u>MS</u>, Brent W Seales, PhD, University of Kentucky
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A NEW ROBOTIC SYSTEM FOR SINGLE-INCISION LAPAROSCOPIC SURGERY: PRELIMINARY EXPERIENCE Giancarlo Basili, MD, Gianluigi Pietroni, PhD, Arianna Menciassi, PhD, Dario Pietrasanta, MD, Marta Niccolini, PhD, Orlando Goletti, MD Health Unit 5, Pontedera Hospital, General Surgery Unit - The BioRobotic Institute, Scuola Superiore S'Anna, Pisa, ITALY

Introduction: The concept of single access procedures has gained a greater attention of general surgeons over the last four years. Despite such a wide momentum, these procedures pose several changes for the operating surgeon, such as impaired eye-hand coordination and restricted manipulation. In this context, robotic-assisted surgery represents a growing discipline designed to enhance the dexterity of the laparoscopic surgeons. A representative example of these benefits is offered by the daVinci Single-Site Surgical System, which allows the surgeon to perform complex tasks avoiding the frequent clashing of the standard single-access instruments. However, enhanced dexterity in terms of instrumentations tip maneuverability remains unresolved and, moreover, the large size and the high cost of the system itself will limit its uptake amongst surgeons. We have developed a novel teleoperated robotic system for minimally invasive surgery called SPRINT (Single-Port lapaRoscopy bimaNual roboT). The main goal of our experiments was to demonstrate the feasibility of performing complex abdominal procedures by using the proposed system.

Methods: "SPRINT" is a master-slave teleoperated robotic platform designed for bimanual interventions by means of a single access port. The system is composed by two main arms having a maximum diameter of 18 mm, a stereoscopic-camera (Karl-Storz, Tuttlingen, Germany), and additional devices, e.g. retractor or other assistive instruments that can be inserted through a central lumen left free in the access port after the introduction. The arms are inserted in a cylindrical introducer which has a diameter of 30 mm. As the arms reach the bottom of the introducer, the base link of each one has to be rotated by 90°. The proximal joints comprise the shoulder and the elbow mechanisms, which are operated by external and on-board motors respectively. As for the elbow, the actuation of the distal joints is operated by embedded motors, while the actuation of the gripper is performed by another external motor. The surgeon console is composed of two master manipulators, a foot-switch and a 3D full-HD display. Cholecystectomy and small bowel resection were performed. The experiments were carried out in an authorized laboratory.

Results: As it is a preliminary experience, the system was placed within the peritoneal cavity through an incision of about 8-10 centimeters. The robot was suspended in an open fashion. Working space was created by using hooks attached to the pig itself. The 3D display and the image stability allow the surgeon to perform the reported procedures similarly as the standard minimally invasive counterpart.

Discussion: The concept behind the "SPRINT" is to bring the operating room inside the patient's insufflated peritoneal cavity, with the objective to overcome the limits of current technologies. In our platform the robotic arms are introduced into the abdomen through a cylindrical introducer specifically designed to allow the insertion of each arm separately. During the operation, each arm may be removed in order to clean or replace the tool, or in case of system failure. "SPRINT" could pave the way for the next generation of surgical robots both for single access and for multi-port laparoscopic surgery.

ET002

AN EXTERNALLY-STEERABLE MAGNETIC LEVITATION SURGICAL CAMERA FOR MULTIPLE-POINT-OF-VIEW LAPAROSCOPY Luca Morelli,

MD. Massimiliano Simi, Elena Troia, Carlo Maria Rosati, MD, Arianna Menciassi, Paolo Dario, Franco Mosca, MD Division of General Surgery I, University of Pisa, Pisa, Italy; Scuola Superiore Sant'Anna, Pisa, Italy; Ekymed SpA, Pisa, Italy

1. Objective of the technology or device: The intended purpose of our device, the Magnetic Internal Mechanism (MIM) camera, is to overcome

the ergonomic constraints of laparoscopic surgery and in particular of single port laparoscopy (SPL) by providing a new wired miniature surgical camera with a novel magnetic levitation system. By this innovative approach the number of abdominal access ports would be reduced, since a dedicated access for the camera would not be needed any more.

2. Description of the technology and method of its use or application: Our device is composed of an extra- and an intracorporeal module, which are magnetically linked across the abdominal wall. This magnetic link is tuned precisely thanks to the use of a miniature motor embedded in the camera which also provides additional degrees of freedom.

The intracorporeal module is made up by two main components (i.e. head and tail), linked by a thin elastic flexible joint. The tail component embeds two magnets for anchoring and manual rough translation. The head component incorporates two motorized donut-shaped magnets and a miniaturized vision system at the tip. Magnetic levitation, regulated by internal motors, induces a smooth bending of the robotic head, allowing for a large angular range of motion of the point of view (0°-80°). The device is 100 mm long and 12.7 mm in diameter, thus adequate for insertion into conventional laparoscopic access ports.

- **3. Preliminary results:** Stabilization of the intracavitary components and adhesion to the abdominal wall represent a challenging task in the design of surgical endocavitary robots; thanks to the proposed levitating camera, enhanced stability and maneuverability can be achieved. Several in vivo procedures have been performed so far; the use of MIM enabled multiple points of views of the surgical field, thus increasing visual information. Surgeon's dexterity and capabilities are clearly improved with respect to traditional techniques, by using two surgical tools at the same time instead of a laparoscope and a surgical instrument. Camera introduction, magnetic coupling and motion control are extremely intuitive.
- **4. Conclusions and future directions:** In vivo tests suggest that many procedures can be performed safely with our levitation robotic camera. Enhanced image stability and motion resolution, a wide tilt span (0-80°) without pushing external handle on the abdomen wall or needing needle fixation, have been proved. Use of such a robot in single port or standard multiport laparoscopy could enable reduction of number/size of ancillary trocars, and/or increase the number of working devices that can be employed, thus paving the way for multiple-point-of-view laparoscopy.

Further improvements in the design are still necessary in order to face safety issues and to achieve proper certification for clinical use.

ET003

CONSOLE INTEGRATED STEREOSCOPIC OSIRIX 3D VOLUME RENDERED IMAGES FOR DA VINCI™ ROBOTIC SURGERY Francesco.

<u>Volonte, MD</u>, François Pugin, MD, Nicolas Buchs, MD, Joel Spaltenstein, BS, Boris Schiltz, MD, Monika Hagen, MD, Osman Ratib, MD PhD, Philippe Morel, MD PhD Clinic for Visceral and Transplantation Surgery, Department of Surgery, Clinic of Nuclear Medicine, Department of Imaging Sciences and Medical Information, Geneva University Hospital, Switzerland

Background: The increasing distance between the surgeon and the surgical field is a significant problem in laparoscopic surgery. Robotic surgery, while providing clear advantages for the operator, increases this gap by completely removing force feedback. With the introduction of mixed reality in the robotic era, integrating novel visual enhancement tools with the da Vinci™(Intuitive Surgical Inc, Sunnyvale, CA, USA) stereoscopic vision may compensate for this loss. This study reports our preliminary experience using stereoscopic 3D volume rendered images coupled with the robotic system during biliary and colonic surgery.

Methods: Volume rendered images were obtained from standard computed tomography datasets using the OsiriX DICOM workstation. Regions of interest were highlighted and the relationship with patient's vital anatomical structures established. A custom plugin allowed for stereoscopic volume rendered reconstruction within the da Vinci



surgeon's console, using TilePro™ multi-input display. The upper part of the screen showed the endoscopic operative view while the bottom showed the previously prepared reconstructed stereoscopic volumes. Images manipulated within OsiriX using a 3D mouse (3DConnexion Inc., Silicon Valley, CA, USA) installed on the console bar, are updated in real time in the Surgeon's Console.

Results: We performed robotic cholecystectomy for cholelithiasys. During the procedure, the surgeon switched several times to the split view, comparing the endoscopic and virtual images that appeared in his field of vision, looking for the spatial location of the gallbladder. Its relationship with the common hepatic duct and the common bile duct was easily established. Finally, the absence of aberrant biliary duct was confirmed. During total robotic right colectomy, tumor position, vascular supply, spatial location and relationships between organs appeared directly within the surgeon's field of view. This allowed for a safer procedure; sight diversions out of the surgical field of view, looking for CT scan images, were no longer necessary. Depth perception was subjectively perceived as profitable. There were no intraoperative complications and postoperative course for all patients was uneventful.

Conclusion: Total immersion in the operative field may give the surgeon greater control over the surgical procedure, which partially replaces the lack of tactile feedback specific to robotic intervention. This innovative tool is another step towards augmented reality robot-assisted surgery.

ET004

THE MECHANICAL PROPERTIES OF ADHESIVE POLYMER FILMS IN EX-VIVO STUDY FOR BOWEL RETRACTION IN LAPAROSCOPIC SURGERY

Z Wang, PhD, L Tai, PhD, G J Florence, PhD, D McLean, <u>S I Brown, PhD</u>, P Andre, PhD, A Cuschieri, MD PhD Universities of Dundee & St Andrews, UK

Objective To develop an adhesive polymer film able to adhere strongly on serosal side of the bowel with sufficient mechanical properties to retract the bowel for laparoscopic procedures.

Method A series of novel adhesive mono- and bi-layer polymer films were formulated in house, in which the adhesive layer was based on either Carbopol modified with N-hydroxysuccinimide (NHS) and thiobutylamidine (TBA)-chitosan (mol wt = 250k, loading of TBA = 150 μ mol/g). Each polymer sample was cast in 60 mm diameter teflon moulds and air dried at 50 °C. Prior to testing of mechanical properties the individual film samples were rehydrated with phosphate buffered saline (PBS). The mechanical properties of the polymers and their adherence to bowel, were evaluated by three tests: i) tensile and shear properties ii) adhesive retraction force and work; iii) maximal stress and Young's modulus. Ex-vivo pig bowel in 37 °C water bath and an Instron tensiometer were used for all the tests. Each polymer sample was tested 6 times and a new specimen was used for each test.

Preliminary results The bio-adhesive polymer sustained a shear stress of 4.87kPa, which was much greater than its pure tensile stress of 1.62 kPa, using a test diameter of 28 mm (or area of 616 mm²). Polymer adhesive force during bowel retraction ranged from 3 to 5 N (using a 25mm diameter retraction probe fixed at the centre of a 60mm-diameter polymer sample). Work of adhesion at the polymer/serosa interface, defined as the area under the force-displacement curve, was from 64 to 126 mJ, which is appreciably larger than that reported using existing polymers. Young's modulus ranged from 20 to 100 kPa, depending upon polymer sample and its rehydration.

Conclusions Adhesive polymers can stick to the serosal side of the bowel and its adhesive force is sufficient to lift the bowel. By exploiting the shear strength in the polymer-tissue bonding, a further reduction in device dimension is possible for MAS procedures. It is safer in low retraction stress compared to laparoscopic graspers which result in noticeably high localized pressures (210 kPa to 650 kPa) on tissue. Our ongoing R&D is to combine magnetic particles with the polymer to create a new magnetic adhesive polymer for tissue retraction and for other potential applications such as drug delivery, magnetic hyperthermia, magnetic detection or MRI contrast enhanced imaging.

ET005

MINIMALLY INVASIVE SURGERY USING INTRA-OPERATIVE REAL-TIME CAPSULE ENDOSCOPY FOR SMALL BOWEL LESIONS Kazuki Yamashita, MD PhD, Hideo Okumura, MD PhD, Yasuo Oka, MD PhD, Atsushi Urakami, MD PhD, Akiko Shiotani, MD PhD, Hiroshi Nakashima, MD PhD, Hideo Matsumoto, MD PhD, Toshihiro Hirai, MD PhD, Masafumi Nakamura, MD PhD Kawasaki Medical School, Digestive Surgery

The small bowel has been considered as the "black box" in gastroenterology and a small bowel bleeding point is difficult to detect. It is stressful for surgeons to perform an operation for a bleeding lesion, the exact site of which is unknown. We report the successful management of small bowel bleeding lesion by intra-operative real-time capsule endoscopy (CE) and minimally invasive surgery. Methods: This management was approved by the Ethical Review Board of Kawasaki Medical School Hospital. Beforehand, we developed a tool (KY-tube) that is similar to the Miller-Abbott double lumen tube, but thinner and longer compared to it. The KY-tube, a catheter of 10 Fr. in diameter and 450cm in length with an apical balloon, is very simple. The KY-tube is inserted nasally three or four days before the operation. Its balloon tip should reach the anus by the operative day. At the operation, a CE is connected to the balloon tip of the KY-tube as it protrudes from the anus. Next, an assistant pulls on the nasal end of KY-tube and, then, the balloon tip and CE are pulled into the bowel through the anus. A video system shows real-time images that the CE makes. Surgeons can find flashing CE through the bowel wall via a small skin incision or laparoscope. Result: We employed this procedure for two patients with repeated melena. Though both patients took various examinations, gastro-endoscopy and total colonoscopy, there was no bleeding lesion except for the small bowel. In these two cases, each bleeding lesion was thought to be located in the small bowel, but the exact site was unknown. Minimally invasive surgeries were performed for these patients, one by laparoscope and another by open mini laparotomy. In the laparoscopic case, though it was a little difficult to control the small bowel, a small tumor was detected by the real-time images the CE made and resection of the lesion was performed successfully. In the mini laparotomy case, it was easy to control the small bowel and CE - a bleeding lesion was detected clearly by real-time images the CE made. The operation was performed successfully. Conclusion: Contemporary CE by itself gives results that can only be read. Intra-operative CE combined with the KY-tube gives surgeons real-time images and shows the exact site of lesions. The KY-tube helps surgeons to control the CE position, aids suction of intraluminal liquid or inflates intra-lumen to allow clear views. The procedure with the KY-tube and the CE seems to facilitate good management for small bowel lesions.

ET006

CLINICAL EXPERIENCE WITH A HANDS-FREE INTERNAL LIVER RETRACTOR IN LAPAROSCOPIC BARIATRIC SURGERY Hideharu

Shimizu, MD, Tomasz Rogula, MD Cleveland Clinic, OH

<Objective> Endolift (Virtual ports, Richmond, VA) is a new liver retracting device. It is characterized by an internal and hands-free retractor, which does not require an additional port and anchoring to any external device that limits the patient's position and adds clutter to the operating table. It also enables us to get comparable or better exposure of the dorso-lateral portion of left liver lobe and thus the angle of His that is critical for most bariatric procedures, compared with the traditional liver retractors.

<Application> The device is inserted through the existing 5 mm port. It lifts the left lobe of liver and fixes into the left crus of the diaphragm to expose the underlying upper part of stomach.

<Pre><Pre>reliminary results> We have used Endolift for 19 Laparoscopic Rouxen-Y gastric bypass (LRYGB), 1 revision (gastric banding to LRYGB), and
1 single incision laparoscopic sleeve gastrectomy (LSG). There were 15
female and 6 male with mean age of 48 (25-67) and mean BMI 44 (34-56).
7 cases (33.3 %) had adhesions around the stomach, and 3 cases (14.3
%) had gross hepatomegaly. The device retracted the left lobe of liver

and exposed the stomach (angle of His) very well in all cases. Even in the patients with hepatomegaly or adhesions, a good laparoscopic view was obtained. No device related complications were observed during surgery and postoperatively. It required some learning experience, but was handled easily after a few cases. This hands-free device allowed us to focus on the task at hand. Reducing the number of incisions might result in a less invasive procedure, less postoperative pain, less scarring, and lower risk of infection. It also has a potential benefit for single incision laparoscopic surgery. Possible risks include the peritoneal trauma leading to pain and bleeding.

<Conclusions> We have experienced 21 bariatric cases with Endolift. The Approach to the upper part of stomach was satisfactory with the great laparoscopic view of angle of His. The high safety was also confirmed. Although requiring some learning eaxperience, it seems to be beneficial, specially in bariatric patients with poor exposure of the operating field.

ET007

TRANSABDOMINAL ENDOSCOPIC PERICARDIAL ACCESS FOR **EPICARDIAL ABLATION** Stephen W Unger, MD Chairman Department of Surgery, Angelo La Pietra, MD, Jennifer D Davies, MD, Steven R DeBeer,

MD Mount Sinai Medical Center

Epicardial cardiac ablation (MAZE procedure) and endocardial (percutaneous catheter based) ablation are well described techniques in the treatment of atrial fibrillation. A novel procedure recently developed is the hybrid mini-maze (convergent MAZE procedure) that involves a concurrent transabdominal endoscopic epicardial MAZE and endocardial catheter based ablation. The MAZE procedure has classically involved either a sternotomy or thoracotomy. Few case references are made of transabdominal endoscopic cardiac access. Here we present a cases series involving transabdominal endoscopic cardiac access for epicardial cardiac ablation during hybrid mini-maze procedure. Using retrospective single institution analysis of 53 patients undergoing hybrid mini-maze procedure we were able demonstrate safety and technical feasibility of SUBTLE (sub-thoracic, totally endoscopic) pericardial access. Of the 53 patients who underwent the procedure 1 required conversion to sternotomy for perforation of atrial appendage during endocardial ablation, 1 developed tamponade post-op relieved by a pericardial window, and 82% of patients remained in sinus rythem as of December 2011 (1 to 30 months follow up). All patients even those with prior abdominal surgery and inflammatory processes have undergone successful SUBTLE access without complication related to access. While further study is necessary to evaluate the efficacy of hybrid mini-maze procedure versus standard MAZE procedure or endocardial ablation alone; we have demonstrated technical feasibility and safety of transabdominal endoscopic pericardial access.

ET008

NOVEL METHOD FOR COMPREHENSIVELY ASSESSING THE BIOMECHANICAL RISKS ASSOCIATED WITH THE USE OF MINIMALLY-INVASIVE SURGICAL INSTRUMENTS Donald R Peterson, PhD MS, Drew Seils, BS, Tarek Tantawy, BS, Angela Kueck, MD, M Kurt E Roberts, MD University of Connecticut, Yale University

OBJECTIVE OF THE TECHNOLOGY: As the incidence of neuromuscular disorders among laparoscopic surgeons increases, research to understand the biomechanical risks associated with the use of minimallyinvasive surgical instruments has been underdeveloped. A method using detailed simultaneous biomechanical measurements was developed in order to analyze the quantities that are closely related to potential risks and to yield information relevant to the operating characteristics of these instruments, including ergonomic functionality and efficiency.

DESCRIPTION OF THE TECHNOLOGY AND METHOD OF ITS

APPLICATION: The following metrics and respective analytic modalities are used in the developed method and are employed simultaneously in the collection of data during a simulated surgical task.

Postures, Movement Patterns, and Technique. An Opto-Electronic Motion Capture (OEMC) system is used to track the head, neck, torso, and upper extremities of the surgeon and the handle and tip of the laparoscopic

instrument. OEMC data generates simultaneous three-dimensional movements and movement durations of the human-instrument system, identifying typical postures, movement patterns, and techniques that are inherent to the surgical task and/or instrument.

Muscle Activity and Fatigue. Surface Electromyographic electrodes are placed over the Flexor Carpi Ulnaris and Extensor Carpi Ulnaris muscles to record activity levels of these wrist stabilizers and assess instrument task demands and fatigue. Data is analyzed for differences in static and dynamic muscle activity during instrument usage and complements OEMC measurements to yield an intrinsic physiological correlate of observed posture and movement. EMG also provides assessments of various user forces that accompany awkward/strained postures and dynamic movements, which are critical to patterns of discomfort and can lead to biomechanical inefficiency and injury.

Grip Force and Push/Pull Force. Thin-film force sensors are mounted on the handle and the common gripping/operating points of the surgical instrument to directly measure levels of dynamic and static grip forces during use. Grip force exertions is a good predictor of potential injurious conditions, such as repetitive strain and fatigue. A force plate is used to measure the ground reaction forces of the surgeon, calculate the push/pull forces associated with instrument use, and to tracking of the surgeon's overall center of gravity, which are critical to understanding operator technique and stability. Force measurements provide a better understanding of awkward postures, inefficient ranges of motion, and abnormal patterns of movement.

A laparoscopic trainer, having no vertical walls, was also developed to allow the OEMC system to track position, movement, and articulation angle of the instrument tip. Tip tracking assists with understanding surgeon technique and accuracy and potential correlations between instrument design and surgical plane perception.

CONCLUSIONS / FUTURE DIRECTIONS: Results generated from this method will identify and isolate significant biomechanic behaviors of the human and human-instrument system and differentiate between efficient and inefficient postures, movement patterns, muscle recruitment, forces and moments, etc. Data interpretation can establish criteria to be used as a basis for design and development of the instruments, including proper use technique and acceptable biomechanical loadings. Future research involves the prediction of potential short-term and long-term injuries associated with minimallyinvasive surgical instrument use.

ET009

LASER GUIDED INSTRUMENT POSITIONING Danny A Sherwinter, MD, Qiang Liu, MD Maimonides Medical Center Division of Minimally Invasive Surgery

Introduction: A restricted visual field is a shortcoming of laparoscopic surgery. This limitation often leads to blind instrument insertion and can result in occult intra-abdominal injury. A navigation system which supports safe instrument use even outside of the camera's view would be ideal. This study describes the use of a novel trocar system which employs a laser to track instrument movement.

Materials and Methods: A laser guided trocar system (Trocator™, MIS, NY, NY) was compared to standard trocars in an inanimate training module. The trainer box was equipped with a barrier installed out of camera view with cutouts designed to limit entry of the instruments and mimic commonly encountered impediments to instrument insertion such as adhesions and intra-abdominal organs.

The Trocator uses a 670nm laser and haptic feedback to detect entry trajectory and identify potential obstacles prior to instrument insertion. 20 subjects, representing a wide range of surgical expertise performed basic laparoscopic tasks with and without the laser trocar system. Time to completion of the tasks and number of collisions with the barrier were

Results: The laser trocar system reduced the mean time to complete the laparoscopic tasks from 95.8 to 75.7 seconds (p=.026). This difference was most pronounced in subjects at earlier stages in their training. Even more significant, was the reduction in number of collisions with the barrier,

which was reduced from a mean of 12.78 hits per task to 0, this difference was highly significant (P=.00006).

Conclusions: Laser augmented instrument insertion significantly improves safety and may also help novices shorten their learning curve.

ET010

LAPAROSCOPIC VISION PORT <u>David Earle, MD FACS</u>, John Romanelli, MD Baystate Medical Center

Objective: Improve the efficiency and accuracy of maintaining visual exposure of the operative field during laparoscopic surgery and mimic the multiple simultaneous views of standard open surgical approaches. This accomplishes the added benefit to allow for fewer ports and assistants. This system will provide multiple, simultaneous views that are in full control of the surgeon and synchronized to the surgeons working instruments without expensive technological requirements.

Description of the technology and method of its use or application This is a laparoscopic access port that contains a miniaturized video camera and light source at the tip. The portion of the tip that houses the optics is raised, similar to how the hood of a car is raised. Once raised, it provides an "off-axis", illuminated view of the operative field and instrument tip. These vision-enhanced working ports are used to provide multiple, simultaneous views of the operative field without the need to move a camera/scope to a different port. Additionally, all instruments passed through this port will remain in its field of view at all times. The images can be displayed simultaneously on one monitor, or separate monitors. Alternatively, the images could be toggled back and forth on a single monitor, similar to what is currently done when the scope is moved to a different port.

Preliminary results: During a laparoscopic cholecystectomy and suturing exercise in a non-survival swine model, we utilized two video cannulas that were used as the working ports. Both images were displayed on separate monitors immediately adjacent to one other. This eliminated the need for a dedicated scope port, and need to hold the scope. It also eliminated the need to attain additional views by moving the scope to another port, because the multiple views were simultaneously displayed. While initially concerned that this would be confusing, it turned out to be extraordinarily intuitive, mimicking open technique.

Conclusions / future directions: Providing multiple, simultaneous images mimics the view from open operative techniques, and may be safer than standard laparoscopes by keeping the instruments in the field of view constantly. Additionally, operative efficiency may be improved by allowing the surgeon to control the field of the view solely by manipulating the instruments in the standard fashion. This enhances the assistant's performance and/or enables additional tasks to be performed by the assistant. Improving the view may also enhance the learning curve of laparoscopic techniques by reducing the physical and mental effort to maintain a view of the operative field. Improved efficiency may benefit both graduate medical education, and enhance the ability for practicing surgeons to provide learn new laparoscopic procedures. Future directions will be concentrated on refining the system to improve overall efficiency and reduce overall cost. This technology is also another step at improving and enabling both single port surgery and NOTES.

ET011

ACCURATE HIGH-INTENSITY FOCUSED ULTRASOUND ABLATION IN A PORCINE LIVER MODEL THROUGH INTEGRATION OF REAL-TIME IMAGE GUIDANCE, ROBOTIC NAVIGATION, AND ELASTOGRAPHIC MONITORING Daniel A Carnegie, MD, Emad M Boctor, PhD, Xiaoyu Guo, Hyun-Jae Kang, Nishikant Deshmukh, Pezhman Foroughi, Everette C Burdette, PhD, Robert J Webster, III, PhD, Jessica Burgner, PhD, Michael A Choti, MD MBA Department of Surgery, Johns Hopkins School of Medicine, Baltimore, MD 21287, USA., Department of Mechanical Engineering, Vanderbilt University, Nashville, TN 37235, USA.

Objective: Active research into accurate, minimally-invasive, imageguided destruction of focal hepatic malignancies will expand the population of treatable patients and potentially extend survival. Our

objective is to develop an accurate, real-time monitored minimally-invasive ablation system through the integration of high-intensity focused ultrasound (HIFU) ablation within a flexible needle configuration, robotic steerable active cannula guidance, and real-time elasticity monitoring.

Description of Technology and Method of Application: HIFU is an ablative therapy that utilizes therapeutic ultrasound to thermally destroy tumors. Peri-procedural image guidance is critical to effective use of this modality to both plan and monitor effective ablation. Though conventional ultrasound and MRI are most frequently used for image guidance, they are imperfect for visualization targeting. Precise control of needle placement through robotic guidance can improve targeting of therapy. In addition, improved real-time ablation monitoring using real-time elasticity imaging offers the opportunity to modify and confirm accurate delivery of therapy. In this study, we have adapted ultrasound strain imaging to provide accurate real-time image guidance for HIFU needle ablation of liver lesions.

Preliminary Results: Successful engineering of integrated precise robotically-controlled steerable active cannula needle ablator with real-time elasticity image-guidance allowed ablation of hepatic lesions in ex vivo liver models. We also showed a successful utility of guiding the ablation tool using robotic steerable active cannula in an in vivo porcine model.. Strain imaging allowed for the assessment of lesion ablation and will faciliate assessment of completion of treatment. The engineered robot-controlled acoustic ablator provided precise targeting control when coupled to real-time image guidance.

Conclusions and Future Directions: These experiments demonstrated that targeted liver ablation with HIFU is feasible and safe with homogeneous and shaped ablation sites. Robotic control of the active cannula delivery of the needle ablator allows for accurate, precise targeting in an in vivo environment. The ablation can be coupled with elastography which provides complementary tissue strain characteristics to determine completeness of treatment.

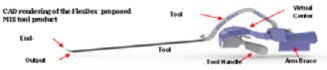
We intend to continue to fully integrate real-time imaging modalities with robot-controlled active cannula acoustic needle ablator for complete image-guided minimally invasive treatment of liver tumors.

FT012

FLEXDEX™: A MINIMALLY INVASIVE SURGICAL TOOL WITH ENHANCED DEXTERITY AND INTUITIVE CONTROL James D Geiger, MD, Shorya Awtar, PhD University of Michigan

Objective: The goal of this project is to develop a low-cost minimally invasive surgery (MIS) device that provides wrist-like dexterity and intuitive control, which are necessary for complex MIS tasks such as suturing, knot-tying, and fine dissection. Such functionality is currently available only in multi-million dollar surgical robots. The proposed technology will broaden the adoption of MIS procedures by dramatically lowering the technology cost as well as surgeon training burden, thus extending the benefits of MIS to a larger portion of the population. **Description**: The proposed FlexDex[™] device concept employs two major innovations that represent a fundamental paradigm shift in the physical configuration of hand-held, mechanical tools: 1. We create a mechanism around the surgeon's wrist that geometrically projects a 'virtual center' of rotation at the wrist. Thus, no physical structure need exist at the surgeon's wrist. 2. This 'virtual center' mechanism is placed between the tool handle and a tool frame, which is now attached to the surgeon's forearm via an arm-brace. These innovations result in several unique and desirable attributes. Mounting the tool frame provides a direct transmission of the three translations and roll rotation of the surgeon's forearm to the tool shaft and end-effector. Independent of these 4 DoF, the two wrist rotations of the surgeon's hand are captured by the virtual center mechanism and transmitted to the end-effector via transmission strips, pulleys and cables. Thus, while the surgeon's wrist is allowed to rotate freely and naturally, these two wrist rotations are effortlessly transmitted to the transmission pulleys. A cable-based system is then used to further transmit these rotations to the end-effector, providing another two DoF.

Preliminary results: To generate a preliminary confirmation of the effectiveness of this innovation, we have developed a concept prototype and sought feedback from a group of surgeons. This prototype demonstrates that in the FlexDex device, when a single rotation (e.g. up/down) is needed at the end-effector, the surgeon only provides an analogous up/down hand rotation about his/her wrist. During this action, his shoulder, elbow, and forearm remain at rest, with the latter aligned with the tool shaft. This intuitive one-to-one mapping between the surgeon's input motions and the end-effector output motions makes the FlexDex™ tool a natural extension of the surgeon's forearm and hand. Furthermore, its cable-based mechanical transmission relays the forces exerted by the end-effector back to the surgeon's hand to provide a natural 'feel' during surgery. Additionally, the reaction forces at the surgical port appear to be all but eliminated.



Conclusions/future directions: The FlexDex[™] concept has shown considerable early promise. We are now proceeding with design, and fabrication of at least two pre-clinical prototypes of the above described FlexDex[™] tool concept. These prototypes will fully embody the mechanical functionality claimed earlier, including enhanced dexterity and grasping action (i.e. seven DoF) and intuitive control. These prototypes will be tested in a simulated clinical environment completing representative advanced MIS tasks to validate the technology in comparison to standard and robotic surgical instruments.

ET013

DEVELOPMENT OF NOVEL ELECTROSPUN ABSORBABLE POLYCAPROLACTONE (PCL) SCAFFOLDS FOR HERNIA REPAIR

APPLICATIONS Gregory C Ebersole, MS MS, Evan G Buettmann, Matthew R MacEwan, BSE, Michael E Tang, BS, Margaret M Frisella, RN, Brent D Matthews, MD, Corey R Deeken, PhD Washington University School of Medicine, St. Louis, Missouri

INTRODUCTION: Permanent hernia repair materials rely on pro-fibrotic wound healing. As a result, repair sites are commonly composed of disorganized fibrotic tissue, resulting in greater risk of re-herniation. Electrospun scaffolds are a novel class of biomaterials which may provide a unique platform for the design of increasingly advanced soft tissue repair materials. These scaffolds are simple, inexpensive, non-woven materials composed of micro- or nano-scale polymer fibers which readily mimic structural elements of the natural extracellular matrix. Unlike currently available permanent meshes, absorbable electrospun scaffolds possess the ability to direct cellular orientation through the presentation of ordered topographical cues and to prevent chronic foreign body response through resorption of the scaffold. However, the mechanical properties of electrospun scaffolds are currently unknown. Thus, the primary aim of the present study was to evaluate the physiomechanical properties of several novel scaffold designs and to determine their suitability for hernia repair applications. Based on prior experimentation, scaffolds possessing at least 20N suture retention strength, 20N tear resistance, and 50N/cm tensile strength will be suitable for hernia repair applications.

METHODS: Six novel scaffolds were designed, fabricated, and tested in our laboratory. The scaffolds were fabricated using various combinations of polymer concentration (10-12%) and flow rate (3.5-10mL/hr). Briefly, poly(ε-caprolactone) (PCL) was dissolved in a solvent mixture, loaded into a syringe, and electrospun onto a planar metal collector, yielding scaffolds with randomly oriented fibers. Physiomechanical properties of each scaffold were subsequently evaluated through scanning electron microscopy, laser micrometry, and mechanical testing (suture retention, tear resistance, and ball burst testing).

RESULTS: Scanning electron micrographs revealed fiber diameters ranging from 1.0±0.1μm (10%PCL, 3.5mL/hr) to 1.5±0.2μm (12%PCL, 4mL/hr). Laser micrometry showed thicknesses ranging from 0.72±0.07mm (12%PCL, 10mL/hr) to 0.91±0.05mm (10%PCL, 3.5mL/hr). Only 2 designs achieved suture retention values above 20N (12%PCL, 10mL/hr and 12%PCL, 6mL/hr), and none of the designs achieved tear resistance values above 20N (range: 4.7±0.9N to 10.6±1.8N). Tensile strengths ranged from 35.27±2.08N/cm (10%PCL, 3.5mL/hr) to 81.76±15.85N/cm (12%PCL, 4mL/hr), with 3 out of 6 designs achieving strengths above 50N/cm (12%PCL, 10mL/hr; 12%PCL, 6mL/hr; 12%PCL, 4mL/hr).

CONCLUSIONS: Two scaffold designs (12%PCL, 10mL/hr and 12%PCL, 6mL/hr) possessed suture retention and tensile strengths appropriate for hernia repair applications. The incorporation of aligned fibers or other patterned designs may improve tear resistance values of the 12%PCL, 10mL/hr and 12%PCL, 6mL/hr scaffold designs for preclinical testing in a hernia repair model.



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- ETP001 DEVELOPMENT OF AN INTRACAVITARY PERFUSION DEVICE FOR LAPAROSCOPIC HEPATECTOMY WITH WATER-FILLED ENDOSCOPIC SURGERY (WAFLES) Minoru ISHIDA, BA, Yuma EBIHARA, MD PhD, Takashi SAITOH, Takeshi SASAKI, MD PhD, Shunichi OKUSHIBA, MD PhD, Hiroyuki KATOH, MD PhD, Tatsuo IGARASHI (Chiba university), MD PhD, Sapporo Tonan Hospital
- ETP002 INITIAL EXPERIENCE WITH A MODIFIED MINI LAPAROSCOPIC TECHNIQUE FOR CHOLECYSTECTOMY Florias A Morfesis, MD FACS, Brian P Rose, BS, Kelly M Van Fossen, DO, Dominic Storto, DO, East Carolina University and Owen Drive Surgical Clinic of Fayetteville
- ETP003 TROCAR SITE FASCIA CLOSURE DEVICE <u>Scott H Heneveld</u>, <u>Founder</u>, Suture Ease, LLC
- ETP004 THE PATCH ESOPHAGOPLASTY: ESOPHAGEAL RECONSTRUCTION USING BIOLOGICAL SCAFFOLDS. <u>Alejandro Nieponice, MD PhD</u>, Fabio Nachman, MD, Blair A Jobe, MD, Tsohitaka Hoppo, MD, Stephen F Badylak, DVM PhD MD, Adolfo E Badaloni, MD, Fundacion Favaloro, University of Pittsburgh
- ETP005 PORT-LESS LAPAROSCOPIC DISTAL GASTRECTOMY. <u>Hajime Kawagoe</u>, <u>MD</u>, Hitoshi Inagaki, MD, Satomi Uno, MD, Toshihiko Kajima, MD, Department of Surgery, Gifu Central Hospital
- ETP006 ROLE OF KSARASUTRA MANAGEMENT IN HIGH ANAL FISTULA WITH A HISTO-PATHOLOGICAL STUDY <u>MARTHA BHASKAR M RAO, PhD, S.V.AYURVEDIC COLLEGE</u>
- ETP007 MULTI-CENTER STUDY OF KSHARASUTRA IN THE MANAGEMENT OF HIGH ANAL FISTULA-A CLINICAL STUDY Dr.Martha Bhaskar M Rao, title, Dr. Balarama Raju, title, S.V.MEDICAL COLLEGE AND S.V.AYURVEDIC COLLEGE, TIRUPATHI
- ETP008 A NOVEL PROCEDURE FOR INTRODUCING A LARGE GAUZE INTO THE CORPOREAL CAVITY WITH A SLIM TROCAR (TORNADO PROCEDURE) <u>Yuen Nakase, MD PhD</u>, Tsuyoshi Takagi, MD PhD, Kanehisa Fukumoto, MD PhD, Takuya Miyagaki, MD PhD, Department of Surgery, Nishijin Hospital, Kyoto, Japan
- ETP009 NOTES TRANSANAL ENDOSCOPIC RECTOSIGMOID AND LEFT COLON RESECTION USING AN INNOVATIVE STERILE SIGMOID ACCESS PLATFORM WITH INTEGRATED ENDOSCOPIC OVERTUBE <u>Kevin E Woods</u>, <u>MD MPH</u>, Han S Kyung, MD, Varun Kapur, MD, David W Rattner, MD, Patricia Sylla, MD, Department of Medicine, Gastrointestinal Unit and Department of Surgery, Division of Gastrointestinal and General Surgery, Massachusetts General Hospital, Harvard Medical School, Boston, MA 02114, United States
- ETP010 AUGMENTED REALITY TELEMENTORING (ART) PLATFORM: AN INTUITIVE METHOD FOR TEACHING LAPAROSCOPIC SKILLS <u>Michael A Russo, MD</u>, Shawn TTsuda, MD, University of Nevada School of Medicine Las Vegas, NV
- ETP011 FLUORESCENT AUGMENTATION OF BILE DUCTS' VISUALIZATION AT LAPAROSCOPIC CHOLECYSTECTOMY BY USING FLUORESCEIN AND ULTRAVIOLET GENERATING AND CONDUCTING DEVICE <u>Amr A Mohsen, MD FRCSEd</u>, Mahmoud S Elbasiouny, MD PhD FRCS, Yasser S Fawzy, PhD, Cairo University, Egypt
- ETP012 FUNCTIONAL RESULTS OF LOWER ESOPHAGEAL SPHINCTER MECHANISM FOLLOWING DIFFERENT TECHNIQUES USED FOR CRURORAPHY FOR LAPAROSCOPIC HIATAL HERNIA REPAIR; EARLY RESULTS OF RANDOMIZED CONTROLLED TRIAL Ediz ALTINLI, MD, Aziz Serkan SENGER, MD, Ersan EROGLU, MD, Aziz SUMER, MD, Aysun SIMSEK CELIK, MD, Osman YUCEL, MD, 1-Ministry of Health, Haydarpasa Numune Training and Research Hospital, 2.General Surgery Unit, Istanbul, Turkiye. 2-Yuzuncu Yil University, Department of General Surgery, Van, Turkiye
- ETP013 ARM SUPPORT DEVICE FOR SURGEONS <u>mohamed seleem</u>, Cairo university
- ETP014 REAL-TIME 2D-3D IMAGE CONVERTING SOFTWARE WITH A MONOCULAR SMALL CAMERA TOWARD THE LESSER INVASIVE LAPAROSCOPIC SURGERY <u>Takuro Ishii, MSc</u>, Satoki Zenbutsu, BS, Yukio Naya, MD PhD, Tatsuo Igarashi, MD, Graduate School of Engineering, Chiba University, Chiba, Japan; Department of Urology, Teikyo University Chiba Medical Center, Chiba, Japan
- ETP015 NEW TECHNOLOGY FOR MINIMALLY-INVASIVE TREATMENT OF SYMPTOMATIC GRADE I AND II HEMORRHOIDS: PROSPECTIVE PILOT STUDY WITH 1-YEAR FOLLOW-UP. <u>Gregory Piskun, MD</u>, New York Methodist Hospital, Brooklyn, New York

- ETP016 FEASIBILITY OF ENDOSCOPIC TRANSUMBILICAL THORACIC SURGICAL LUNG BIOPSY AND PERICARDIAL WINDOW CREATION <u>Yun-Hen Liu</u>, <u>MD</u>, Yen Chu, Phd, Yi-Cheng Wu, MD, Chang Gung Memorial Hospital, Linko, Chang Gung University
- ETP017 EVALUATION OF NEW OPERATION FOR MORBID OBESITY <u>abdou</u> <u>elbana</u>, <u>PhD</u> <u>professor of surgery</u>, Nader Taweela, Professor of surgery, Elsayed Hamdt, Professor of surgery, Alhossainy Abdelfattah, Associate professor of surgery, Ibrahim Sabry, Lecturer of surgery PhD, Mahmoud Shaker, Consultant surgeon PhD FRCSI, Alazhar school of medicine
- ETP018 DEVELOPING AND VALIDATING AN IPAD BASED LAPAROSCOPIC TRAINER <u>Ali N Bahsoun, Mr</u>, Mohsan M Malik, Mr, Oussama ElHage, Mr, Kamran Ahmed, Mr, Prokar Dagupta, Mr, Guy's and St Thomas' Hospital
- ETP019 LAPAROSCOPIC BILE DUCT EXPLORATION USING VIDEO-GASTROSCOPE Ahmed S Kawashti, University Professor of Surgery, Nader H Taweela, University Professor of Surgery, Abdouh E ElBanna, University Professor of Surgery, ElSayed Hamdy, University Professor of Surgery, The department of Surgery, Al-azhar University, Cairo, Egypt.
- ETP020 THROUGH-THE-SCOPE BALLOON CRYOABLATION DEVICE FOR TREATING BARRETT'S ESOPHAGUS <u>Kimberly S Grant, MD</u>, Steven R DeMeester, MD, Michael Hermansson, MD, Shahin Ayazi, MD, Daniel Oh, MD, Evan Alicuben, BA, Jeffrey Hagen, MD, University of Southern California Keck School of Medicine
- ETP021 THE IMPACT OF USE OF A NOVEL SUTURE 'V-LOC' IN ROUX EN Y GASTRIC BYPASS (RYGB) IN A RECOGNISED BARIATRIC CENTRE OF EXCELLENCE. <u>Ali A Warsi, Mr Dr</u>, Lauren Heptinstall, Ms, Fabiola Passafiume, Ms, Monea Jaw, Ms, Marco Barecca, Mr, Douglas Whitelaw, Mr, Vigyan Jain, Mr, Luton and Dunstable Teaching Hospital, Luton, U.K.
- ETP022 HEPATIC INFLOW RESTRICTION DEVICE <u>Jonathan A Coe</u>, David Gal, Stanford University School of Medicine
- ETP023 A NOVEL FLEXIBLE OVER-TUBE FOR ADVANCED ENDOSCOPIC INTERVENTION UNDER STABILIZED VISUALIZATION WITH ADJUSTABLE TISSUE TRACTION <u>Kiyokazu Nakajima, MD FACS</u>, Satoru Umehara*, BEc, Makoto Yamasaki, MD, Masashi Hirota, MD, Motohiko Kato, MD, Naoki Kawai**, MD, Masaki Mori, MD FACS, Yuichiro Doki, MD, Department of Surgery, Osaka University, Osaka, Japan; *Kohan, Co., Ltd., Kobe, Japan; **Department of Gastroenterology, Osaka Police Hospital, Osaka, Japan
- ETP024 DUODENAL BALLOON OCCLUSION SYSTEM FOR HYBRID-NOTES <u>Masanobu Hagiike, MD PhD</u>, Hironori Mori, MD, Seiji Noge, MD, Jun Uemura, MD, Norikatsu Maeda, MD, Minoru Ohshima, MD, Hirotaka Kashiwagi, MD, Naoki Yamamoto, MD, Shintaro Akamoto, MD, Masao Fujiwara, MD, Shinichi Yachida, MD, Takehiro Takama, MD, Keiichi, Faculty of Medicine, Kagawa University, Japan
- ETP025 USEFULNESS OF LAPAROSCOPIC COLOR DOPPLER SONOGRAPHY IN IDENTIFYING VASCULAR STRUCTURES DURING LAPAROSCOPIC OPERATION OF COLORECTAL CANCER <u>Atsushi Urakami</u>, <u>MD</u>, Kazuki Yamashita, MD, Hideo Okumura, MD, Yasuo Oka, MD, Toshihiro Hirai, MD, Masafumi Nakamura, MD, Kawasaki Medical School
- ETP026 DESIGN AND EVALUATION OF PERMANENT MAGNET-BASED PROBE HAVING ADJUSTABLE MAGNETIC FORCE FOR BOWEL RETRACTION IN LAPAROSCOPIC SURGERY <u>Z Wang, PhD</u>, A Schmidt, S I Brown, PhD, A Brown, D McLean, G J Florence, PhD, P Andre, PhD, A Cuschieri, MD PhD, Universities of Dundee & St Andrews, UK
- ETP027 MULTI-INSTITUTIONAL EXPERIENCE OF MINIMALLY INVASIVE INGUINAL LYMPH NODE DISSECTION (MILND) FOR MELANOMA <u>Travis E Grotz</u>, <u>MD</u>, Andrea M Abbott, MD, Natasha M Rueth, MD MS, Roberto C Hernandez Irizarry, BS, James W Jakub, MD, Todd M Tuttle, MD MS, Department of Surgery, Mayo Clinic, Rochester, MN and Department of Surgery University of Minnesota Minneapolis, MN USA.
- ETP028 NEEDLE FOR ABDOMINAL WALL CLOSURE Alcides J Branco, Md, <u>Nilton T Kawahara, MD</u>, João A Schemberk Jr., MD, Luís S Nassif, MD, Daniel E Dalledone Siqueira, MD, André G Weiss, Lucas T Nassif, Luís Felipe P Oliveira, MD, Santa Casa de Curitba, HC-FMUSP
- ETP029 MEASURING TISSUE OXIMETRY AS A METHOD FOR EVALUATING ACUTE TISSUE RESPONSE TO COMPRESSION Ross Segan, MD, Sally Carter, MS, Andrew Miesse, MS, Marisha Godek, PhD, Dwight Bronson, MS, Covidien
- ETP030 SLEEVE TUBE: NOVEL TOOL TO STANDARDIZE LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) <u>Chandra Hassan, MD</u>, Kumaran Chinnappan, MD, Mohammed Asad, MD, Jawaid Kalim, MD, Nilesh Bhoot, MD, Bala Thatigotla, MD, Parma Community General Hospital

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- ETP032 TRANSVAGINAL INSERTION OF INTERNAL RETRACTOR FOR HYBRID NOTES (NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY) TRANSVAGINAL CHOLECYSTECTOMY. Carlos Galvani, MD, Ulises Garza, MD, Angela Echeverria, MD, Amit Kaul, MD, University of Arizona, Minimally Invasive and Robotic Surgery
- ETP033 UTILIZING MODERN MEDICAL INFORMATICS TO IMPROVE PERFORMANCE AND CLINICAL RESEARCH <u>Michael G Doorly, MD MS</u>, Anthony J Senagore, MD MS MBA, Keck School of Medicine of USC
- ETP034 A NEW DEVICE FOR THE ASSESSMENT OF MINIMALLY INVASIVE SURGICAL PERFORMANCE –THE VALIDITY OF SEQUITOR. Ralph V Smith, Andrew R Day, Timothy A Rockall, Michael E Bailey, Iain c Jourdan, Minimal Access therapy Training Unit, University of Surrey
- ETP035 EXPERIENCED LAPAROSCOPIC SURGEONS GAIN SIGNIFICANT ADVANTAGES USING 3D PASSIVE POLARISING DISPLAYS Ralph V Smith, Andrew R Day, Timothy A Rockall, Michael E Bailey, Iain C Jourdan, Minimal Access therapy Training Unit, University of Surrey
- ETP036 LEVERAGING MOBILE HEALTH TECHNOLOGY IN A MODEL FOR HOME-BASED PRIMARY CARE: A DEMONSTRATION PROJECT <u>Richard B Hilburn, MD</u>, Harry Burke, MD, Walter Reed National Military Medical Center
- ETP037 PVDF TO DETECT AND AUTONOMOUSLY PREVENT SLIP DURING RETRACTION IN LAPAROSCOPIC SURGERY A Brown, S I Brown, PhD, <u>Z</u> Wang, PhD, D McLean, A Cuschieri, MD PhD, University of Dundee
- ETP038 TRANSANAL ENDOSCOPIC DA VINCI SURGERY (TEDS): RESULTS OF CADAVERIC EXPERIMENTS <u>Roel Hompes, MD, Neil</u> J Mortensen, MD FRCS, Monika E Hagen, MA MD, Stephen M Rauh, MD, department of colorectal surgery, John radcliffe hospitals, Oxford
- ETP039 CONCURRENT LIMITED INCISION ILEOSTOMY REVERSAL AND CHOLECYSTECTOMY VIA FLEXIBLE LAPAROSCOPIC PLATFORM Justin Hunt, Resident, Clarence Clark, Assistant Professor of Surgery, Robert Carpenter, Assistant Professor of Surgery, Texas A&M Health Science Center/Scott and White Hospital
- ETP040 MODIFIED CIRCULAR STAPLER FOR LAPAROSCOPIC INTRACORPOREAL COLORECTAL ANASTOMOSES <u>Francesco Stipa, MD PhD</u>, Antonio Burza, MD, Valentina Giaccaglia, MD, Ettore Santini, MD, Department of Surgery, San Giovanni Hospital, Rome, Italy
- ETP041 A MODIFIED BUESS RECTOSCOPE FOR TEM <u>Francesco Stipa</u>, <u>MD PhD</u>, Antonio Burza, MD, Valentina Giaccaglia, MD, Ettore Santini, MD, Department of Surgery, San Giovanni Hospital, Rome, Italy
- ETP042 ENDOLUMENAL FULL-THICKNESS COLON-WALL RESECTION USING AN OVER-THE-SCOPE-CLIP: THREE TECHNIQUES COMPARED IN A PORCINE SURVIVAL STUDY <u>Erwin Rieder, MD</u>, Ildiko Mesteri, MD, Emily J Bolton, Connor F Mathews, Gregory B Timmel, DVM, Mark H Whiteford, MD, Lee L Swanstrom, MD, 1) Minimally Invasive Surgery Program, Legacy Health, Portland, OR; 2) Medical University of Vienna, Austria
- ETP043 SUMOTM SYSTEM FACILITATES MUCOSOTOMY AND SUBMUCOSAL TUNNEL CREATION FOR PER-ORAL ESOPHAGEAL MYOTOMY (POEM) <u>Ashwin Kurian, MD</u>, Christy Dunst, MD, Neil Bhayani, MD, Ahmed Sharata, MD, Kevin Reavis, MD, Lee Swanstrom, MD, Providence Portland Cancer Center, Oregon Clinic GMIS Division
- ETPO44 DDESTM FLEXIBLE SINGLE INCISION OPERATING PLATFORM FACILITATES AN EXTENDED THORACIC LYMPHADENECTOMY VIA A TRANS-HIATAL APPROACH. <u>Ashwin Kurian, MD</u>, Christy Dunst, MD, Neil Bhayani, MD, Ahmed Sharata, MD, Kevin Reavis, MD, Lee Swanstrom, MD, Providence Portland Cancer Center, Oregon Clinic GMIS Division
- ETP045 DEVELOPMENT OF METALLIC REUSABLE PORT FOR SINGLE PORT SURGERY: POSSIBILITY OF ENHANCEMENT OF OPERABILITY AND OPERATION COST REDUCTION <u>Takeshi Ohdaira</u>, <u>Prof</u>, Makoto Hashizume, Prof, Kyushu University, Advanced Medical Innovation Center
- ETP046 NEW QUALITY IN SINGLE PORT SURGERY AN INNOVATIVE SURGICAL TECHNIQUE WITH FULLY REUSABLE INSTRUMENTS <u>Lutz Meyer, MD</u>, Matthias Jäger, MD, Andreas Metzig, MD, Kay Kohlhaw, PhD MD, HELIOS Vogtland Hospital Plauen, Germany, Dpt. of General and Visceral Surgery; HELIOS Hospital Borna, Germany, Dpt. of General, Visceral, Minimally invasive and Vascular Surgery
- ETP047 GASTRECTOMY AND HEPATECTOMY BY MULTI PIERCING SURGERY USING 3-MM DIAMETER ELECTRONIC CONTROL FORCEPS <u>Takeshi Ohdaira, Prof</u>, Makoto Hashizume, Prof, Kyushu University, Advanced Medical Innovation Center

- ETP048 ELECTRICAL STIMULATION THERAPY (EST) OF THE LOWER ESOPHAGEAL SPHINCTER (LES) EMERGING TREATMENT FOR PREVENTING GERD IN ACHALASIA PATIENTS TREATED WITH LES MYTOMY Leonardo Rodriguez, MD, Patricia Rodriguez, RN, Beatriz Gómez, MS, Juan C Ayala, MD, Alberto Perez-Castilla, MD, Danny O Reisberg, Clinic Indisa, Santiago, Chile
- ETP049 NOVEL CMOS IMAGE SENSOR TECHNOLOGY IMPROVES DIAGNOSTIC ACCURACY AND ENABLES ECONOMIC VIABILITY OF DISPOSABLE MEDICAL IMAGING DEVICES <u>James Lei</u>, <u>PhD</u>, Omnivision Technologies
- ETP050 THE SUBXIPHOID APPROACH TO THYROIDECTOMY USING THE DDES, A FLEXIBLE, ARTICULATING, SINGLE-INCISION PLATFORM Neil H Bhayani, MD MHS, Shaghayegh Aliabadi-Wahle, MD, Ashwin A Kurian, MD, Ahmed Sharata, MD, Kevin M Reavis, MD, Christy M Dunst, MD, Lee L Swanstrom, MD, Providence Portland Cancer Center, Oregon Clinic GMIS Division
- ETP051 VERROTOUCH: DETECTION OF INSTRUMENT VIBRATIONS FOR HAPTIC FEEDBACK AND SKILL ASSESSMENT IN ROBOTIC SURGERY Ernest D Gomez, BS BSE, Karlin Bark, PhD, William McMahan, MS, Charlotte Rivera, Austin Remington, David I Lee, MD, Katherine J Kuchenbecker, PhD, Perelman School of Medicine at the University of Pennsylvania; University of Pennsylvania School of Engineering and Applied Sciences; Dept. of Surgery, Division of Urology, Penn Presbyterian Medical Center, Philadelphia, PA.
- ETP052 NEW AREA IN LAPAROSCOPIC HERNIA REPAIR: DEVICES FOR MESH INTRODUCING, PLACING AND DEPLOYING <u>Moshe Dudai, MD-FACS</u>, Centers for Laparoscopic Surgery
- ETP053 EARLY EXPERIENCE WITH PERORAL ENDOSCOPIC MYOTOMY (POEM) <u>Rachel A Jones, MD</u>, Nathan E Conway, MD, David J Desilets, MD, John R Romanelli, MD, David B Earle, MD, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA, USA
- ETP054 WEARABLE TECHNOLOGY ENABLES HIGH DEFINITION WIRELESS AUDIO-VIDEO (AV) COMMUNICATION TO THE OPERATING ROOM Brian J Dunkin, MD, Calvin Lyons, MD, Peter Renzi, MS, <u>Vid Fikfak, MD</u>, Eddie Mitchell, BS, Mike Donovan, BS, The Methodist Institute for Technology, Innovation, and Education
- ETP055 A VIRTUAL ELECTROSURGERY SIMULATOR FOR TEACHING AND TRAINING IN SAFE USAGE OF ENERGY Woojin Ahn, PhD, Tansel Halic, MS, Omar Y Kudsi, MD, <u>Ganesh Sankaranarayanan, PhD</u>, Daniel B Jones, MD MS, Steven Schwaitzberg, MD, Suvranu De, ScD, Center for Modeling, Simulation and Imaging in Medicine, Rensselaer Polytechnic Institute, Beth Israel Deaconnes Medical Center, Cambridge Health Allicance, Harvard Medical School
- ETP056 LIMITED INCISION ILEORECTAL ANASTOMOSIS AND CHOLECYSTECTOMY: A CASE REPORT <u>Justin T Hunt, MD</u>, Clarence Clark, MD, Robert Carpenter, MD, Scott and White
- ETP057 NOVEL MESH DEPLOYMENT DEVICE IMPROVES EFFICIENCY OF LAPAROSCOPIC VENTRAL HERNIA REPAIR <u>Drew H Reynolds, MD</u>, Margaret Plymale, RN, Daniel Davenport, PhD, J. Scott Roth, MD, University of Kentucky
- ETP058 THE SEALED INCISION MULTIPORT (SIMPORT) FOR LAPAROENDOSCOPIC SURGERY Ronan A Cahill, title, European Institute of Surgical Research and Innovation (EISRI)
- ETP059 SAFETY OF CLIP-LESS HOOK DIATHERMY DIVISION AGAINST STANDARD CLIPPED DIVISION OF CYSTIC ARTERY IN LAPAROSCOPIC CHOLECYSTECTOMY <u>KUMERAN RAVINDRAN</u>, FRCS, ROOPESH KHANNA J, DNB, Apollo Firstmed Hospitals, Chennai India
- ETP060 BACK TO THE FUTURE: OPEN CHOLECYSTECTOMY 'HYBRID' MODEL DEVELOPED THROUGH HISTORICAL RE-ENACTMENT. <u>Jason Maroothynaden, PhD</u>, Jessica Tang, PhD, Laura Coates, MRCS, Roger Kneebone, PhD, Imperial College, London, UK
- ETP062 ACTIVE LAPAROSCOPE MANIPULATOR WITH EMBEDDED IMAGE PROCESSING ALGORITHM PRELIMINARY RESULTS <u>Amir Szold MD</u>, Assia Medical Group, Assuta Medical Center, MST Ltd.
- ETP063 INTRA-CORPOREAL ANCHOR SYSTEM FOR SINGLE PORT SURGERY AND REDUCED PORT SURGERY <u>Jun-ichi Tanaka MD, FACS</u>, Tomokatsu Omoto MD, Kenta Nakahara MD, Daisuke Takayanagi MD, Yusuke Takehara MD, Yoko Wada MD, Chiyo Maeda MD, Shumpei Mukai MD, Eiji Hidaka MD, Shungo Endo MD, Fumio Ishida MD, Shin-ei Kudo MD, Showa University Northern Yokohama Hospital





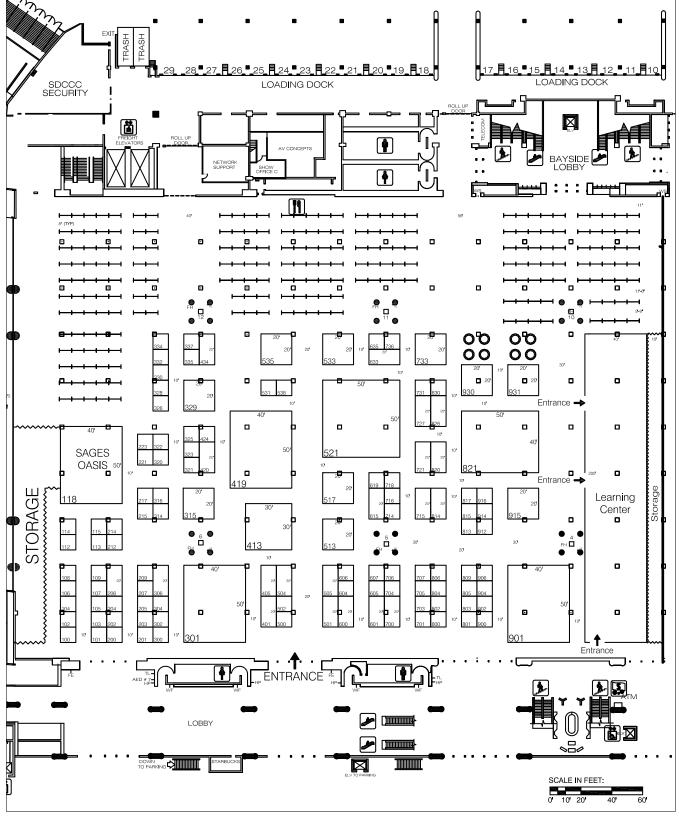
Notes

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BARIATRIC TIMES

#217 **BOSTON SCIENTIFIC**

#504

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#405

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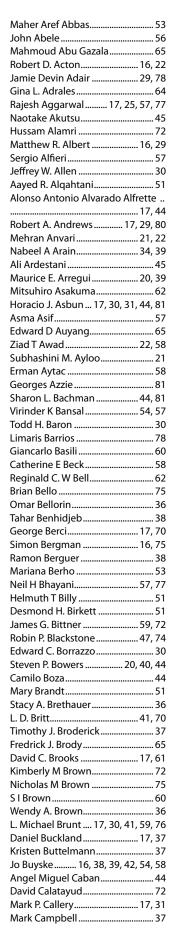
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