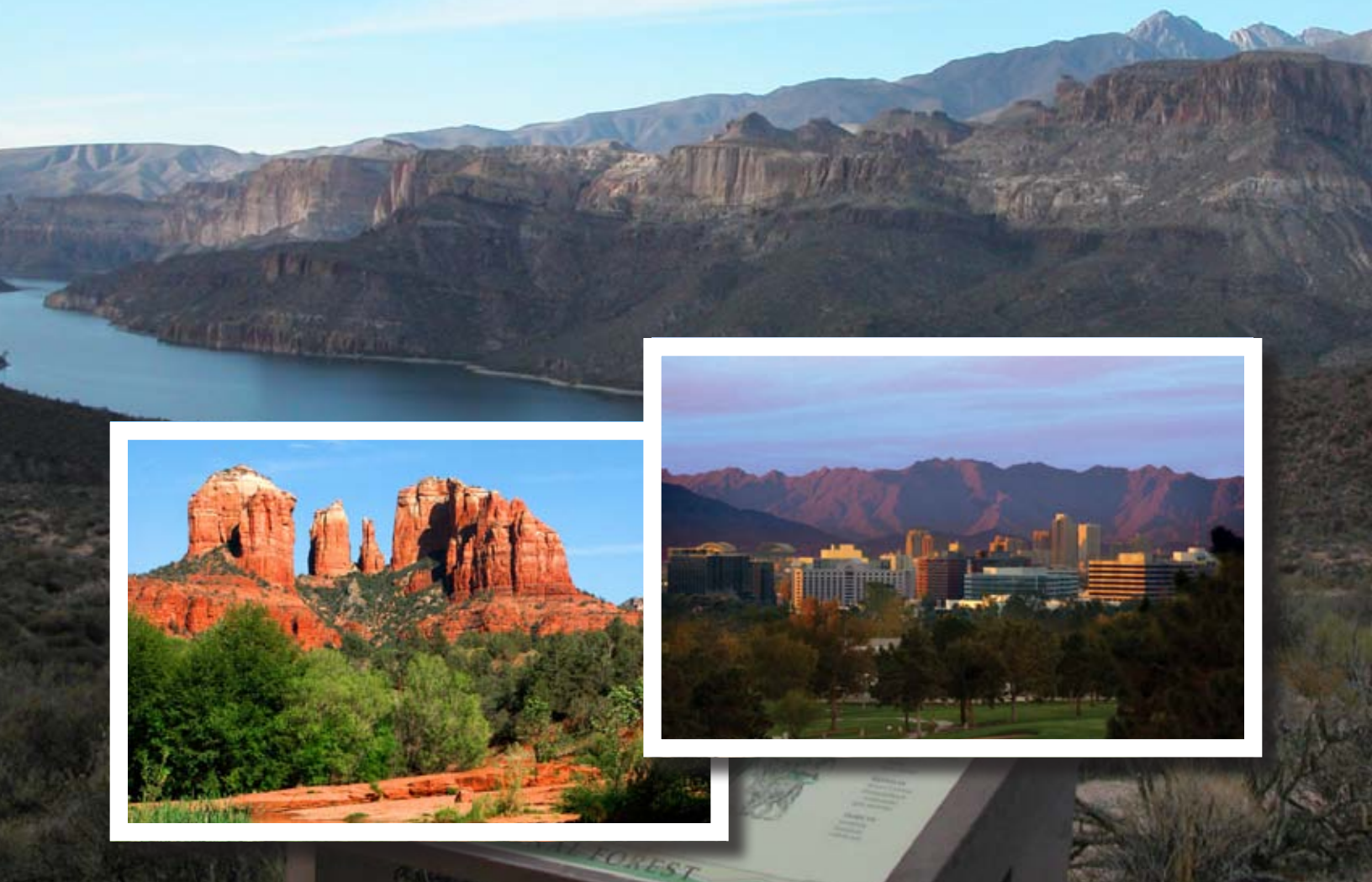


2009 Surgical Spring Week

SAGES

Scientific Session & Postgraduate Courses

Society of American Gastrointestinal and Endoscopic Surgeons



Final Program

April 22 - 25, 2009

Phoenix Convention Center, Phoenix, Arizona

Table of Contents

- 1 Exhibit Times, SAGES Cyber Café
- 2 General Information, Registration Hours, SAGES Past Presidents
- 3 SAGES Meeting Leaders
- 4-5 SAGES Schedule at a Glance
- 6 SAGES Accreditation Worksheet
- 7 Conflict of Interest/Commercial Bias
- 8 Patient Safety Highlights
- 9, 11 Maps & Floorplans
- 13 Wednesday, April 22, 2009**
- 15 Colorectal Postgraduate Course
- 16 Hernia Postgraduate Course
- 17 Flexible Endoscopy Postgraduate Course
- 17 SAGES-ALACE International Webcast
- 18-22 SAGES Education & Research Foundation Awards Luncheon
- 23 Laparoscopic Colorectal Hands-On Course
- 24 Endolumenal/NOTES® Hands-On Course
- 25 FLS Hands-On Course: Train the Trainers & Proctors
- 26 SAGES/ASMBS Bariatric Surgery Postgraduate Course
- 27 Laparoscopic Cholecystectomy Postgraduate Course: Clinical Outcomes
- 28 SAGES/ALACE International Joint Symposium
- 30 Thursday, April 23, 2009**
- 30 SERF Meets Turf 3K Run/Walk
- 31, 46 Industry Education Events
- 32 SS01: Colorectal I
- 34 Foregut Postgraduate Course: The SAGES Grand Rounds Master Course
- 35 Advanced Laparoscopic Techniques Postgraduate Course
- 36 Equipping the Surgeon – Training the Jedi: My Training is Over, Now What?
- 36 SAGES/IPEG Joint Breakfast Video Session: Hepatobiliary & Solid Organ
- 37 SAGES/MIRA Robotics Panel
- 37 SS02: Bariatric I
- 38 Allied Health Patient Safety Symposium—The Role of Non-Physician Team Members
- 38 SAGES/APDS/ASE Surgical Educators Forum
- 39 Educators Luncheon: Surgical Education – From Here to Beyond...
- 40 Laparoscopic Foregut Surgery Hands-On Course
- 41 Advanced Laparoscopic Techniques Hands-On Course
- 42 SAGES/ASGE NOTES®/Endolumenal Symposium
- 43 The Changing Landscape of Recertification in Surgery Panel
- 44 SS03: Best of SAGES Posters
- 45 Controversies & Techniques in Solid Organ Surgery
- 45 SS04: Education/Simulation I
- 46 SS05: Hernia I
- 46-47 Industry Education Events
- 47 The Great Presidential Debates
- 48 Friday, April 24, 2009: SAGES Scientific Session**
- 50 SS06: Single Incision/Single Port Laparoscopy
- 51 SS07: Esophageal/Gastric Surgery
- 52 Surgical Treatment of Type II Diabetes/Metabolic Syndrome Panel
- 53 Guidelines Panel: Evidence-Based Guidelines
- 53 SAGES/ASCRS Laparoscopic Colorectal Surgery Panel
- 54 SS08 Plenary Session I
- 54 SAGES Presidential Address
- 55 Gerald Marks Lecture
- 55 SS09: Colorectal II
- 58 SS10: Basic Science
- 58 Re-Operation for Laparoscopic Complications Panel
- 59 Global Initiative and Opportunities for Surgeons in Service Panel
- 59 From FLS to the Web Learning Center Panel
- 61 Surgeons in Service Luncheon
- 61-62 Friday Afternoon at the Movies: I. SAGES Video Classics Session II. SAGES/JSES International Olympic MIS Video Session
- 63 Creating the Future of Surgery Session: From Medical Device to Field Development
- 63 Joint SAGES/AHS Case Discussion Panel: Hernia Problems
- 64 Resident/Fellows Scientific Session
- 65 Best Practices for Surgical Treatment of Obesity Session
- 65 SS11: Ergonomics/Instrumentation/Robotics
- 66 SS12: New Tech./Surgical Innovation
- 66 SS13: Complications
- 67 SAGES/IPEG Joint Session: Urgent and Emergent Acute Care Problems
- 67 SAGES "GameTime" 2009
- 68 IPEG/SAGES Simulator Session
- 70 Saturday, April 25, 2009: SAGES Scientific Session**
- 71 SS14: Plenary Session II
- 71 Health Policy Lecture
- 72 Karl Storz Lecture
- 73 SS15: Endolumenal/NOTES
- 74 Patient Safety Panel: Strategies for Reducing Errors in Surgical Care
- 74 SAGES/SLS Panel: What Do I Do Now? Unexpected Findings at Laparoscopy
- 75 SAGES/SSAT Upper GI Neoplasms Panel
- 76 SAGES General Membership Meeting
- 76 SAGES Technology Luncheon
- 77 Fellowship Council Lunch
- 77-78 Emerging Technologies Session
- 79 SS16: Solid Organ
- 79 SS17: Hernia
- 80 SS18: NOTES/Single Incision Video
- 80 SS19: Hepatobiliary/Pancreatic
- 81 SS20: Flexible Endoscopy
- 81 SS21: Bariatric II
- 82 SS22: Education/Simulation II
- 82 SS23: MIS Potpourri
- 84 2009 Learning Center
- 90 SAGES Faculty
- 98-110 SAGES Faculty Disclosures
- 111 SAGES/IPEG Social Programs & Tours
- 114 Scientific Session Oral Abstracts
- 149 Resident/Fellow Session Abstracts
- 152 Scientific Session Video Abstracts
- 162 Video Channel Loop Listing
- 163 Best of SAGES Oral Poster Abstracts
- 169 Poster Listing
- 189 Emerging Technology Abstracts
- 195 Emerging Technology Poster Listing
- 198 SAGES 2009 Exhibitors
- 208 Index of Faculty & Presenters

SAGES Corporate Supporters (as of March, 2009)

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Exhibit Dates and Times

Wednesday, April 22, 2009

Opening Reception 5:00 PM - 7:00 PM

Thursday, April 23, 2009

Hall Open 9:30 AM - 3:30 PM

Friday, April 24, 2009

Hall Open 9:30 AM - 3:30 PM

Saturday, April 25, 2009

HALL CLOSED
Posters & Learning Center
still open 9:30 AM - 1:30 PM

SAGES & IPEG exhibits will take place at the Phoenix Convention Center in North Exhibit Hall D-E.

SAGES Cyber Café

SAGES is hosting a free Cyber Café for all attendees and exhibitors. Located in the North 300 Foyer outside the exhibit hall, it will be open during normal registration hours. **No message center is available this year.**

Please leave the following numbers with your offices and families, in case they cannot reach you on your cell phone:

SAGES On-Site Office
Phone: 602-626-8704
Fax: 602-626-8729





General Information



SAGES Annual Meeting – Surgical Spring Week

Where?

Phoenix Convention Center
100 North Third Street, Phoenix, AZ 85004

Meeting Hotels

SAGES

Sheraton Phoenix Downtown Hotel
(Headquarters Hotel)
340 North 3rd Street, Phoenix, Arizona
85004, Phone: (602) 262-2500

Hyatt Regency Phoenix (Co-Headquarters Hotel)

122 North Second Street, Phoenix,
Arizona, 85004, Phone: (602) 252-1234

Hotel San Carlos

202 N. Central Ave, Phoenix, AZ 85004,
Phone: (866) 253-4121

Who?

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
Email: sagesweb@sages.org
Website: www.sages.org

SAGES Registration Hours

Tuesday, April 21, 2009:
12:00 PM - 5:00 PM

Wednesday, April 22, 2009:
6:30 AM - 6:00 PM

Thursday, April 23, 2009:
7:00 AM - 6:00 PM

Friday, April 24, 2009:
6:30 AM - 6:00 PM

Saturday, April 25, 2009:
7:00 AM - 2:00 PM

SAGES Board of Governors Executive Committee



President: Mark A. Talamini, MD

President-Elect: C. Daniel Smith, MD

1st Vice President:

Steven D. Schwaitzberg, MD

2nd Vice President: Daniel M. Herron, MD

Secretary: W. Scott Melvin, MD

Treasurer: Gerald M. Fried, MD

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*Steve Eubanks, MD

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Fredrick J. Brody, MD

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Mark P. Callery, MD

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Michael D. Holzman, MD

Karen D. Horvath, MD

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Eli Lerner, MD, AMA HOD Representative

*Bruce V. MacFadyen Jr, MD

Jeffrey M. Marks, MD

Ninh T. Nguyen, MD

Brant K. Oelschlager, MD

Adrian E. Park, MD

*David W. Rattner, MD

William O. Richards, MD

Raul J. Rosenthal, MD

Philip R. Schauer, MD

*Bruce D. Schirmer, MD,

ABS Representative

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*Nathaniel J. Soper, ACS Representative

*Steven D. Wexner, MD

Tonia M. Young-Fadok, MD

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Edward L. Felix, MD

Morris E. Franklin Jr., MD

Denise W. Gee, MD

Daniel M. Herron, MD

Michael D. Holzman, MD

Santiago Horgan, MD, Co-Chair

Dimitrios A. Linos, MD

John H. Marks, MD

Brent Matthews, MD

Marian P. McDonald, MD

Michael S. Nussbaum, MD

Dmitry Oleynikov, MD

Adrian E. Park, MD

Edward H. Phillips, MD

Gretchen P. Purcell Jackson, MD, PhD

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William S. Richardson, MD

Raul J. Rosenthal, MD

Christopher M. Schlachta, MD

Daniel J. Scott, MD

Paul A. Severson, MD

Neal E. Seymour, MD

C. Daniel Smith, MD

David R. Urbach, MD

Carl J. Westcott, MD

Manabu Yamamoto, MD

Tonia M. Young-Fadok, MD

Natan Zundel, MD

SAGES Past Presidents

Gerald Marks, MD	1981 - 1983	Greg Stiegmann, MD	1996 - 1997
Kenneth Forde, MD	1983 - 1984	Desmond Birkett, MD	1997 - 1998
Thomas L. Dent, MD	1984 - 1985	John Hunter, MD	1998 - 1999
James A. Lind, MD	1985 - 1986	Jeffrey H. Peters, MD	1999 - 2000
John A. Coller, MD	1986 - 1987	Nathaniel J. Soper, MD	2000 - 2001
Theodore R. Schrock, MD	1987 - 1988	L. William Traverso, MD	2001 - 2002
Talmadge A. Bowden, MD	1988 - 1989	Bruce D. Schirmer, MD	2002 - 2003
Lee E. Smith, MD	1989 - 1990	Lee Swanstrom, MD	2003 - 2004
Jeffrey Ponsky, MD	1990 - 1992	David Rattner, MD	2004 - 2005
Frederick L. Greene, MD	1992 - 1993	Daniel Deziel, MD	2005 - 2006
George Berci, MD	1993 - 1994	Steven Wexner, MD	2006 - 2007
Bruce V. MacFadyen, Jr., MD	1994 - 1995	Steve Eubanks, MD	2007 - 2008
Col. Richard M. Satava, MD	1995 - 1996		

SAGES 2009 Meeting Leaders



Program Chair:
L. Michael Brunt, MD

2009 SAGES Annual Meeting Unit Coordinators

Program Chair:	L. Michael Brunt, MD
Director of Program Operations:	Brian Dunkin, MD
Associate Director of Program Operations:	Ninh Nguyen, MD
Poster Chair:	Aurora Pryor, MD
Poster Co-Chair:	Donald Selzer, MD
Video Chair:	Brent Matthews, MD
Video Co-Chair:	John Sweeney, MD
Learning Center Chair:	Dmitry Oleynikov, MD
Learning Center Co-Chair:	Allan Okrainec, MD
Colon HO Course Chair:	Tonia Young-Fadok, MD
Colon HO Course Co-Chair:	Sonia Ramamoorthy, MD
Endolumenal/NOTES® HO Course Chair:	W. Scott Melvin, MD
Endolumenal/NOTES® HO Course Co-Chair:	Robert Hawes, MD
Foregut Surgery HO Course Chair:	Brant Oelschlager, MD
Foregut Surgery HO Course Co-Chair:	Leena Khaitan, MD
Adv. Lap. Techniques HO Course Chair:	Daniel Scott, MD
Adv. Lap. Techniques HO Course Co-Chair:	Paul Curcillo, MD
FLS Train the Trainers HO Course Chair:	Matthew Ritter, MD
FLS Train the Trainers HO Course Co-Chair:	Nathaniel Soper, MD
Colon PG Course Chair:	Peter Marcello, MD
Colon PG Course Co-Chair:	Jaap Bonjer, MD
Hernia PG Course Chair:	Brent Matthews, MD
Hernia PG Course Co-Chair:	Michael Rosen, MD
Flexible Endoscopy PG Course Chair:	Thadeus Trus, MD
Flexible Endoscopy PG Course Co-Chair:	Klaus Thaler, MD
SAGES/ASMBS Bariatric PG Course Chair:	Matthew Hutter, MD
SAGES/ASMBS Bariatric PG Course Co-Chair:	Kelvin Higa, MD
Lap. Chole PG Course Chair:	Steven Schwaitzberg, MD
Lap. Chole PG Course Co-Chair:	L. Michael Brunt, MD
Foregut PG Course Chair:	C. Daniel Smith, MD
Foregut PG Course Co-Chair:	Brant Oelschlager, MD
Adv. Lap. Techniques PG Course Chair:	Daniel Scott, MD
Adv. Lap. Techniques PG Course Co-Chair:	Santiago Horgan, MD
NOTES®/Endolumenal Symposium Chair:	Santiago Horgan, MD
NOTES®/Endolumenal Symposium Co-Chair:	David Rattner, MD
Educator's Lunch Coordinator:	Rajesh Aggarwal, MD
Educator's Lunch Co-Coordinator:	Neal Seymour, MD
Surgeons in Service Lunch Coordinator:	Raul Rosenthal, MD
Technology Lunch Coordinator:	Christopher Schlachta, MD
Fellowship Council Lunch Symposium Chair:	Samer Mattar, MD
Emerging Technology Session Chair:	Daniel Herron, MD
Emerging Technology Session Co-Chair:	Gretchen Purcell Jackson, MD, PhD
Resident's Day Coordinators:	Eric Hanly, MD & David McClusky, MD

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

- SAGES/ALACE Session:** Natan Zundel, MD & Raul Rosenthal, MD
- Equipping the Surgeon/Jedi Session:** Karen Horvath, MD & Simon Bergman, MD
- Patient Safety (Allied Health) Symposium:** Michael Holzman, MD & Donna Stanbridge, RN
- SAGES/IPEG HPB & Solid Organ Video Session:** Benno Ure, MD, PhD & Kent Kercher, MD
- SAGES/MIRA Robotics Panel:** Michael Marohn, MD & Mehran Anvari, MD
- SAGES/APDS/ASE Surgical Educators Forum:** John Mellinger, MD & Gary Dunnington, MD
- MOC Panel:** Vic Velanovich, MD & John Morton, MD
- Solid Organ Controversies Video Session:** Horacio Asbun, MD & Eric Poulin, MD
- The Great Presidential Debates:** Adrian Park, MD & Bruce Schirmer, MD
- Guidelines Panel:** Robert Fanelli, MD & Liane Feldman, MD
- SAGES/ASCRS Colorectal Debates:** Conor Delaney, MD & John Marks, MD
- ReOperation for Lap. Complications Panel:** David Easter, MD & Niazy Selim, MD
- Go Global Panel:** Ramon Berguer, MD & Raymond Price, MD
- FLS Panel:** Gerald Fried, MD & Michael Brunt, MD
- SAGES Video Classics Session:** Frederick Greene, MD & Kenneth Forde, MD
- Int'l Olympic MIS Video Session:** Lee Swanstrom, MD & Manabu Yamamoto, MD
- Device to Development Session:** Steve Eubanks, MD & Raymond Onders, MD
- SAGES/AHS Hernia Panel:** Edward Felix, MD & Shirin Towfigh, MD
- Surgical Treatment of Obesity Session:** Daniel Jones, MD & Jonathan Gould, MD
- SAGES/IPEG Urgent & Emergent Care Panel:** John Sweeney, MD & Klaas Bax, MD
- Patient Safety Panel:** Dennis Fowler, MD & Fredrick Brody, MD
- SAGES/SLS Panel:** Barry Salky, MD & David Earle, MD
- SAGES/SSAT Upper GI Neoplasms Panel:** Chandrakanth Are, MD & Vivian Strong, MD
- SAGES Game Time 2009 Session:** James "Butch" Rosser, MD & Shawn Tsuda, MD
- SAGES/ASMBS Metabolic Panel:** Alfonso Torquati, MD & Atul Madan, MD





SAGES 2009 Schedule at a Glance

All courses, sessions and panels take place at the Phoenix Convention Center unless otherwise noted.



Wednesday, April 22, 2009	Time	Room
Half Day Colorectal Postgraduate Course	7:30 AM - 12:00 PM	West 301A Ballroom
Half Day Hernia Postgraduate Course	7:30 AM - 12:00 PM	West 301B-C Ballroom
Half Day Flexible Endoscopy Postgraduate Course	7:30 AM - 12:00 PM	North 221A-C Ballroom
SAGES Foundation Awards Luncheon	12:00 - 1:00 PM	North 120A Ballroom
Half Day Colorectal Hands-On Course	1:00 - 5:00 PM	offsite – Science Care Lab
Half Day Endolumenal/NOTES® Hands-On Course	1:00 - 5:00 PM	North Exhibit Hall A
Half Day FLS Train the Trainers and Proctors Hands-On Course	12:30 - 5:00 PM	Lectures: North 222A-C Ballroom Lab: North Exhibit Hall A
Half Day SAGES/ASMBS Bariatric Surgery Postgraduate Course	1:00 - 5:00 PM	West 301A Ballroom
Half Day Laparoscopic Cholecystectomy Postgraduate Course	1:00 - 5:30 PM	West 301B-C Ballroom
Half Day SAGES/ALACE Session	1:00 - 3:30 PM	North 221A-C Ballroom
SAGES/IPEG Evening Exhibit Opening Reception	5:00 - 7:00 PM	North Exhibit Hall D-E

Thursday, April 23, 2009	Time	Room
Industry Education Events	6:00 - 7:15 AM	Covidien: North 224A-B Ballroom Covidien: North 229A-B Ballroom
SERF Meets Turf 3K Run/Walk	6:45 - 7:30 AM	Meet at Sheraton Hotel Lobby
SS01: Colorectal I	7:30 - 9:00 AM	North 222A-C Ballroom
Half Day Foregut Postgraduate Course	7:30 - 11:30 AM	West 301B-C Ballroom
Half Day Advanced Laparoscopic Techniques Postgraduate Course	7:30 - 11:30 AM	West 301A Ballroom
Equipping the Surgeon/Training the Jedi Session	7:30 - 9:30 AM	North 221A-C Ballroom
IPEG/SAGES Joint Breakfast Video Session: HPB & Solid Organ	7:45 - 8:45 AM	West 301D Ballroom
SAGES/MIRA Robotics Panel	8:00 - 9:30 AM	North 224A-B Ballroom
SS02: Bariatric I	9:00 - 10:30 AM	North 222A-C Ballroom
Exhibits, Posters & Learning Center Open	9:30 AM - 3:30 PM	North Exhibit Hall B-E
Patient Safety (Allied Health) Symposium	9:30 - 11:30 AM	North 224A-B Ballroom
SAGES/APDS/ASE Surgical Educators Forum	9:30 - 11:30 AM	North 221A-C Ballroom
BREAK: Exhibits, Posters & Learning Center	11:30 AM - 1:00 PM	North Exhibit Hall B-E
Educators Lunch: Surgical Education	11:30 AM - 1:00 PM	North 229A-B Ballroom
Half Day Laparoscopic Foregut Surgery Hands-On Course	1:00 - 5:00 PM	Offsite - Science Care Lab
Half Day Advanced Laparoscopic Techniques Hands-On Course	1:00 - 5:00 PM	North Exhibit Hall A
Half Day SAGES/ASGE NOTES® & Endolumenal Symposium	1:00 - 5:15 PM	West 301A Ballroom
Recertification/Outcomes Panel	1:00 - 2:30 PM	West 301B-C Ballroom
SS03: Best of SAGES Posters	1:00 - 2:30 PM	North 222A-C Ballroom
Solid Organ Surgery Session	2:30 - 5:00 PM	West 301B-C Ballroom
SS04: Education / Simulation I	2:30 - 3:30 PM	North 222A-C Ballroom
SS05: Hernia I	3:30 - 5:00 PM	North 222A-C Ballroom
Industry Education Events	5:15 - 7:00 PM	Covidien: North 224A-B Ballroom Davol: North 229A-B Ballroom Karl Storz & Ethicon: North 221A-C Ballroom
The Great Presidential Debates	7:00 - 9:00 PM	West 301B-C Ballroom



SAGES 2009 Schedule at a Glance



Friday, April 24, 2009	Time	Room
SS06: Single Incision / Single Port Laparoscopy	7:00 - 8:30 AM	North 222A-C Ballroom
SS07: Esophageal / Gastric Surgery	7:00 - 8:30 AM	North 224A-B Ballroom
Diabetes and Metabolic Syndrome Panel	7:00 - 8:30 AM	West 301B-C Ballroom
Evidence Based Guidelines Panel	7:00 - 8:30 AM	North 221A-C Ballroom
SAGES/ASCRS Laparoscopic Colorectal Surgery Panel	7:00 - 8:30 AM	West 301A Ballroom
SS08: Plenary Session I	8:30 - 9:30 AM	West 301A Ballroom
Exhibits, Posters & Learning Center Open	9:30 AM - 3:30 PM	North Exhibit Hall B-E
SAGES Presidential Address: Mark Talamini, MD	9:30 - 10:00 AM	West 301A Ballroom
SAGES Gerald Marks Lecture: John Cameron, MD	10:00 - 10:30 AM	West 301A Ballroom
SS09: Colorectal II	10:30 - 11:30 AM	West 301A Ballroom
SS10: Basic Science	10:30 - 11:30 AM	North 224A-B Ballroom
Re-Operative Complications Panel	10:30 AM - 12:00 PM	West 301B-C Ballroom
Global Initiative Panel	10:30 AM - 12:00 PM	North 221A-C Ballroom
From FLS to the Web Learning Center Panel	10:30 - 11:30 AM	North 222A-C Ballroom
BREAK: Exhibits, Posters & Learning Center	11:30 AM - 1:00 PM	North Exhibit Hall B-E
FREE Lunch in Exhibit Hall for All Attendees	12:00 - 1:00 PM	North Exhibit Hall D-E
Surgeons in Service Lunch	12:00 - 1:00 PM	North 229A-B Ballroom
Friday Afternoon at the Movies:		West 301A Ballroom
SAGES Video Classics Session	1:00 - 3:00 PM	
SAGES/JSES International Olympic MIS Video Session	3:00 - 5:00 PM	
From Medical Device to Field Development Session	1:00 - 3:30 PM	West 301B-C Ballroom
SAGES/AHS Hernia Case Discussion Panel	1:00 - 2:30 PM	North 222A-C Ballroom
Resident & Fellows Scientific Session	1:00 - 3:30 PM	North 221A-C Ballroom
Best Practices for Surgical Treatment of Obesity Session	1:00 - 3:30 PM	North 224A-B Ballroom
SS11: Ergonomics / Instrumentation / Robotics	2:30 - 3:30 PM	North 222A-C Ballroom
SS12: New Technology / Surgical Innovation	3:30 - 5:00 PM	North 221A-C Ballroom
SS13: Complications	3:30 - 4:30 PM	North 222A-C Ballroom
SAGES/IPEG Joint Panel: Urgent and Emergent		
Acute Care Problems in Pediatric and Adult Patients	3:30 - 5:00 PM	North 224A-B Ballroom
SAGES Game Time	4:30 - 5:30 PM	West 301B-C Ballroom
Meet the Leadership Reception (for residents, fellows & new members)	6:00 - 7:00 PM	Phoenix Sheraton Hotel Valley of the Sun Room
SAGES/IPEG Main Event & International Sing-Off	7:30 - 11:00 PM	Corona Ranch
Saturday, April 25, 2009	Time	Room
SS14: Plenary Session II	7:30 - 8:30 AM	West 301A Ballroom
SAGES Health Policy Lecture: Catherine DeAngelis, MD	8:30 - 9:00 AM	West 301A Ballroom
SAGES Karl Storz Lecture in New Technology: Dave Williams, MD	9:00 - 9:30 AM	West 301A Ballroom
Posters & Learning Center Open (Exhibits Closed)	9:30 AM - 1:30 PM	North Exhibit Hall B-C
SS15: Endolumenal / NOTES	9:30 - 11:30 AM	West 301B-C Ballroom
Patient Safety Panel	9:30 - 11:30 AM	West 301A Ballroom
SAGES/SLS Panel: Unexpected Findings at Laparoscopy	9:30 - 11:30 AM	North 221A-C Ballroom
SAGES/SSAT Upper GI Neoplasms Panel	9:30 AM - 12:00 PM	North 222A-C Ballroom
SAGES Annual General Membership Business Mtg.	11:30 AM - 12:00 PM	West 301B-C Ballroom
BREAK: Posters & Learning Center	11:30 AM - 1:00 PM	North Exhibit Hall B-C
Technology Lunch: Industry/Surgeon Partnerships in Promoting Surgical Innovation	11:30 AM - 1:00 PM	North 229A-B Ballroom
Fellowship Council Lunch: Integrating ABS Training Curriculum into the MIS Fellowship	12:00 - 1:00 PM	North 224A-B Ballroom
Emerging Technologies Session	1:00 - 4:00 PM	West 301A Ballroom
SS16: Solid Organ	1:00 - 2:30 PM	North 221A-C Ballroom
SS17: Hernia II	1:00 - 2:00 PM	North 222A-C Ballroom
SS18: NOTES / Single Incision Video	1:00 - 2:00 PM	West 301B-C Ballroom
SS19: Hepatobiliary / Pancreatic	2:30 - 4:00 PM	North 221A-C Ballroom
SS20: Flexible Endoscopy	2:00 - 3:00 PM	North 222A-C Ballroom
SS21: Bariatric II	2:00 - 3:00 PM	West 301B-C Ballroom
SS22: Education / Simulation II	3:00 - 4:00 PM	North 222A-C Ballroom
SS23: MIS Potpourri	3:00 - 4:00 PM	West 301B-C Ballroom



SAGES 2009 Accreditation

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. SAGES designates this Continuing Education activity for a maximum of **42.0 AMA PRA Category 1 Credit(s)™**. Physicians should only claim credit commensurate with the extent of their participation in the activity.

CME Worksheet for SAGES 2009 Meeting:

This is not your CME credit form. Please use the worksheet below to track the number of CME hours you attend for each activity. Your CME credit form can be found inside your registrant bag, along with your meeting evaluation form. You may turn in your CME form at registration to have your CME certificate mailed to you or you may print your CME certificate on-site at special CME kiosks near the registration area.

Wednesday, April 22, 2009

Activity	Credits Available	Hours Attended
Colorectal Postgraduate Course	4.0	
Flexible Endoscopy Postgraduate Course	4.5	
Hernia Postgraduate Course	4.5	
Laparoscopic Cholecystectomy Postgraduate Course	4.25	
Colorectal Hands-on Course (Lab)	4.0	
Endolumenal/NOTES Hands-on Course (Lab)	4.0	
FLS Train the Trainers and Proctors Hands-On Course	3.75	
SAGES/ASMBBS Bariatric Surgery Postgraduate Course	3.75	
SAGES/ALACE Symposium	2.5	

Thursday, April 23, 2009

Activity	Credits Available	Hours Attended
Scientific Sessions (abstract presentations)	4.0	
SAGES/IPEG HPB and Solid Organ Video Session	1.0	
Advanced Laparoscopic Techniques Postgraduate Course	3.5	
Foregut Postgraduate Course	3.75	
Equipping the Surgeon/Training the Jedi Session	2.0	
SAGES/MIRA Robotics Panel	1.5	
SAGES/APDS/ASE Surgical Educators Forum	2.0	
Patient Safety (Allied Health) Symposium	2.0	
Educator's Luncheon: Surgical Education-From Here to Beyond	1.5	
Laparoscopic Foregut Surgery Hands-on Course (Lab)	4.0	
Advanced Laparoscopic Techniques Hands-On Course (Lab)	4.0	
MOC/Recertification/Outcomes Analysis Panel	1.5	
Solid Organ Surgery Session	1.5	
SAGES/ASGE NOTES & Endolumenal Therapies Symposium	3.75	
Great Presidential Debates	2.0	

Friday, April 24, 2009

Activity	Credits Available	Hours Attended
Scientific Sessions (abstract presentations including plenary)	8.0	
SAGES/ASCRS Colorectal Debates	1.5	
Guidelines Panel	1.5	
Diabetes and Metabolic Syndrome Panel	1.5	
Re-Operative Complications Panel	1.5	
Global Initiative Panel	1.5	
From FLS to the Web Learning Center Panel	1.0	
Surgeons in Service Lunch	1.0	
Friday Afternoon at the Movies	4.0	
From Medical Device to Field Development Session	2.5	
SAGES/AHS Hernia Panel	1.5	
Residents & Fellows Scientific Session	2.5	
Best Practices for the Surgical Treatment of Obesity Session	2.5	
SAGES/IPEG Urgent/Emergent Care Problems Panel	1.5	

Saturday, April 25, 2009

Activity	Credits Available	Hours Attended
Learning Center	3.0	
Scientific Sessions (abstract presentations including plenary)	7.0	
Patient Safety Panel	2.0	
SAGES/SLS Panel: Unexpected Findings at Laparoscopy Panel	2.0	
SAGES/SSAT Upper GI Neoplasms Symposium	2.5	

TOTAL CREDITS: _____

SAGES Policy on Conflict of Interest

Approved by the SAGES Board of Governors, October 11, 2006

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 that is sent to the committee in advance of the 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.
3. Invited faculty for CME activities must provide their financial disclosures upon invitation to serve as faculty. This information is forwarded to the Course Director, who is then responsible for determining whether or not a conflict exists.
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.
2. Requiring the Course Director to agree in writing that a wide range of perspectives will be provided during the course and that balanced presentations will be provided.
3. Requiring the presenter to agree in writing that they agree to present the best available evidence during their presentation with no reference to product names.
4. Requiring the presenter to agree in writing that they will not present any non-evidence based clinical recommendations related to a product or company with which they have a financial relationship.
5. Requiring the presenter to submit their presentation to a peer reviewer (eg Course Director) in advance of the activity.
6. Referral to the Conflict of Interest Task Force for further review and recommendations.

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. If an educational presentation certified for CME includes bias of any commercial interests*, please obtain and complete a Bias Reporting Form from registration.

*Commercial interest is defined by the ACCME as an entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients.





SAGES Highlights Patient Safety in 2009 Meeting Program



Enhancing patient safety in GI and minimally invasive surgery is the overriding theme of the 2009 SAGES meeting. Each day the meeting will have at least one session with a primary focus on patient safety related issues in surgical care. In addition, safety considerations will be woven into various postgraduate courses, panels and other sessions throughout the meeting. In doing so, SAGES goal is to fulfill our CME mission to enhance the knowledge and skill of practicing surgeons in the field and to improve the delivery of patient care in gastrointestinal and endoscopic surgery

Wednesday April 22

Laparoscopic Cholecystectomy PG Course: Best Practices for Optimizing Clinical Outcomes

Chair: Steven D. Schwaitzberg, MD

Co-Chair: L. Michael Brunt, MD

Thursday April 23

Allied Health Patient Safety Symposium: The Role of Non-Physician Team Members in Enhancing Safety in Surgical Care

Chair: Michael Holzman, MD

Co-Chair: Donna Stanbridge, RN

Friday April 24

Guidelines Panel: Evidence Based Guidelines – They’re More Important Than You Think

Chair: Robert D. Fanelli, MD

Co-Chair: Liane S. Feldman, MD

Best Practices for Surgical Treatment of Obesity

Chair: Daniel B. Jones, MD

Co-Chair: Jon Gould, MD

Saturday April 25

Karl Storz Lecture: “The Role of Technology in Enhancing Patient Safety”

David Williams, MD

Patient Safety Panel: Strategies for Reducing Errors in Surgical Care.

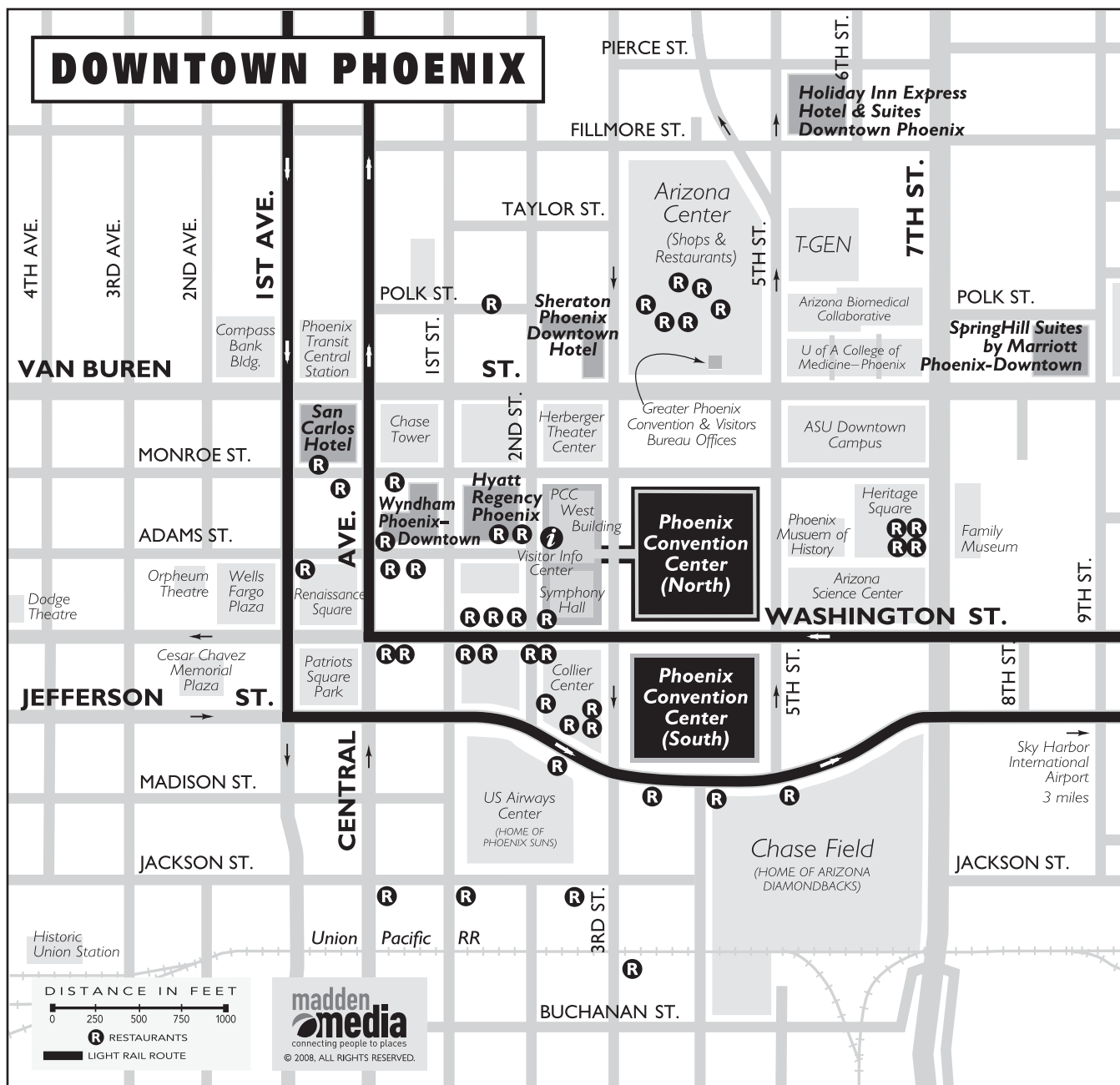
Chair: Dennis Fowler, MD

Co-Chair: Fred Brody, MD

Downtown Phoenix Map



SAGES
2009



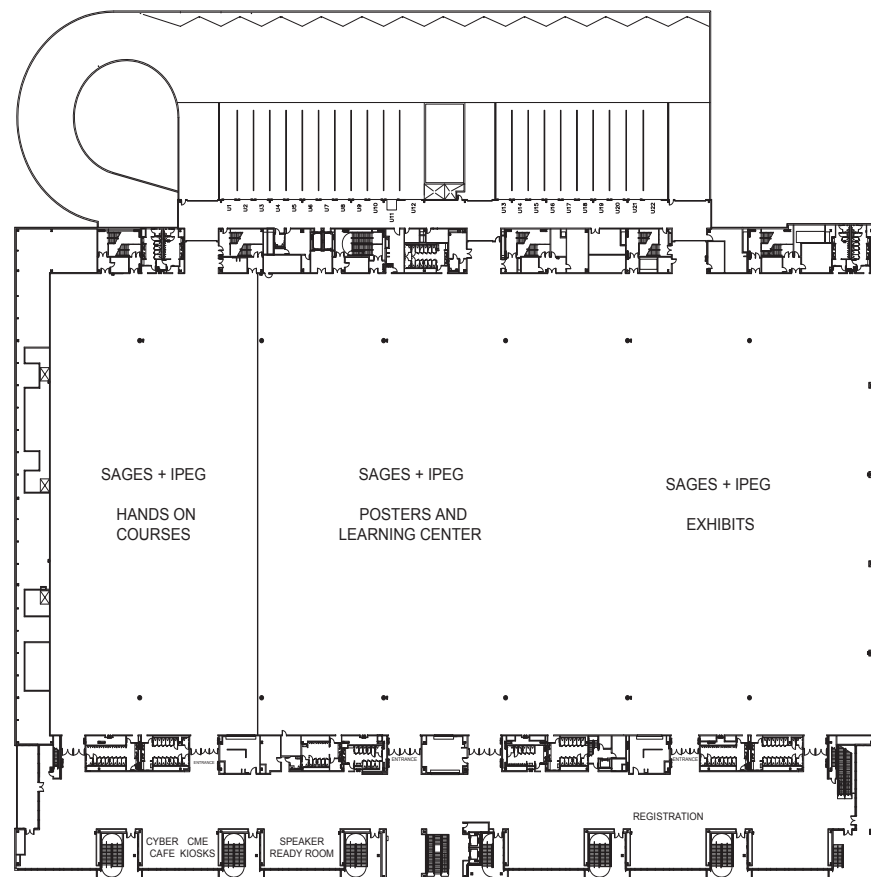
A Gentle Reminder About Safety/Security:

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 laptop, phone or PDA on the floor or out of your sight in a darkened room
- Be aware of your surroundings in the Phoenix Convention Center, hotels and downtown area.

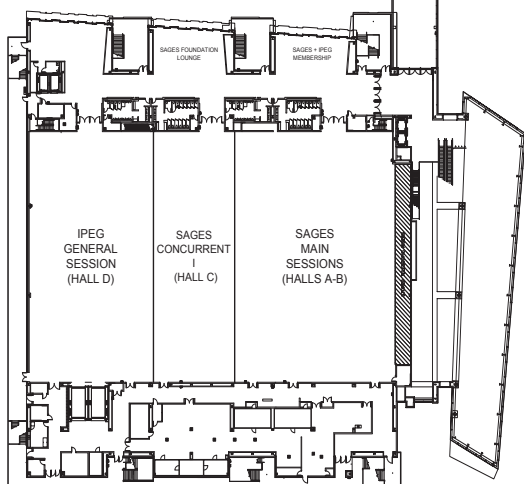
Have a safe & secure meeting!

Floorplans



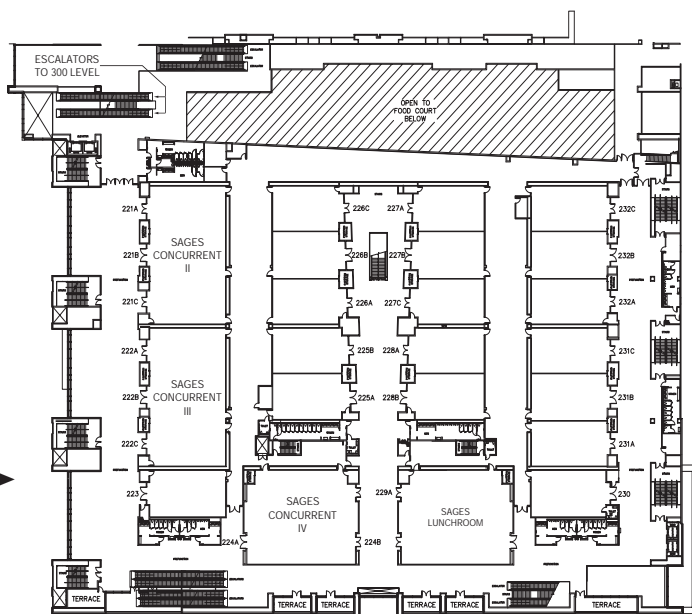
Phoenix Convention Center North & West 300 Levels

- SAGES Exhibits
- Posters, Learning Center
- Hands-On Labs
- Registration
- SAGES Booth/Information
- Main and Concurrent I Sessions



Phoenix Convention Center North 200 Level

- SAGES Concurrent II, III & IV Sessions
- Lunch Session Room



Wednesday-at-a-Glance

All courses, sessions and panels take place at the Phoenix Convention Center unless otherwise noted.

Wednesday, April 22, 2009	Time	Room
Half Day Colorectal Postgraduate Course	7:30 AM - 12:00 PM	West 301A Ballroom
Half Day Hernia Postgraduate Course	7:30 AM - 12:00 PM	West 301B-C Ballroom
Half Day Flexible Endoscopy Postgraduate Course	7:30 AM - 12:00 PM	North 221A-C Ballroom
SAGES Foundation Awards Luncheon (Ticketed Event)	12:00 - 1:00 PM	North 120A Ballroom
Half Day Colorectal Hands-On Course	1:00 - 5:00 PM	Offsite – Science Care Lab
Half Day Endolumenal/NOTES® Hands-On Course	1:00 - 5:00 PM	North Exhibit Hall A
Half Day FLS Train the Trainers and Proctors Hands-On Course	12:30 - 5:00 PM	Lectures: North 222A-C Ballroom Lab: North Exhibit Hall A
Half Day SAGES/ASMBS Bariatric Surgery Postgraduate Course	1:00 - 5:00 PM	West 301A Ballroom
Half Day Laparoscopic Cholecystectomy Postgraduate Course	1:00 - 5:30 PM	West 301B-C Ballroom
Half Day SAGES/ALACE Session	1:00 - 3:30 PM	North 221A-C Ballroom
SAGES/IPEG Evening Exhibit Opening Reception	5:00 - 7:00 PM	North Exhibit Hall D-E

Revised SAGES Mission Statement

SAGES Board of Governors recently approved a revised mission statement, which will be approved by the membership:

“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 25 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.

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 laptop, phone or PDA on the floor or out of your sight in a darkened room
- Be aware of your surroundings in the Phoenix Convention Center, hotels and downtown area.

Have a safe & secure meeting!



Wednesday, April 22, 2009

7:30 AM - 12:00 PM

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

Colorectal Postgraduate Course

Location: West 301A Ballroom

Chair: Peter W. Marcello, M.D.; **Co-Chair:** Jaap Bonjer, M.D.

This course will focus on current areas of interest and controversy in colon and rectal surgery. We will debate the current treatment of diverticulitis, discussing both operative and nonoperative approaches. We will review quality measures in colorectal cancer, discussing the technique of open TME, lymph node harvest, and the results of randomized laparoscopic trials. We will debate the treatment of early distal rectal cancer and finally discuss safety and quality issues both in the OR and for our patient which includes energy sources in the OR, simulation training in the OR, and the management of C. difficile colitis. An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

After attending this course, attendees will be able to:

- Describe the operative and non-operative approaches to diverticulitis
- List the current issues in quality measures for colorectal cancer
- Review the management options for early distal rectal cancer
- Review quality and safety issues in the OR and for our patients

SCHEDULE

7:30 AM	Introduction	Peter W. Marcello, M.D. & Jaap Bonjer, M.D.
	Debate: Optimal Management of Perforated Diverticulitis	
7:35 AM	Non-Operative Approach	Matthew Mutch, M.D.
7:50 AM	Laparoscopic Drainage	Morris Franklin, M.D.
8:05 AM	Laparoscopic/open Hartmann Resection	Joseph Mamazza, M.D.
8:20 AM	Discussion	
	Controversies in Colorectal Cancer	
8:35 AM	Lymph Node Harvest: What are the Data?	Nancy Baxter, M.D.
8:50 AM	Total Mesorectal Excision for Rectal Cancer: What Defines a Quality Resection?	Christopher Schlachta, M.D.
9:05 AM	Prospective Randomized Trials of Laparoscopic Colorectal Surgery: Are the Results the Reality?	Jaap Bonjer, M.D.
9:20 AM	Discussion	
9:35 AM	Break	
	Debate: Optimal Management of T1 Distal Rectal Cancer	
10:00 AM	Total Mesorectal Excision (TME)	Richard L. Whelan, M.D.
10:15 AM	Transanal Endoscopic Microsurgery (TEM)	John Marks, M.D.
10:30 AM	Laparoscopic TME vs. TEM: A Prospective, Randomized Trial Update	Emmanuel Lezoche, M.D.
10:45 AM	Discussion	
	Quality and Safety in the OR	
11:00 AM	Energy in the OR: What are the Risks?	Peter W. Marcello, M.D.
11:15 AM	Simulation Training for Laparoscopic Colon Resection	Daniel B. Jones, M.D.
11:30 AM	C. difficile Colitis: What the Surgeon Should Know	Rocco Ricciardi, M.D.
11:45 AM	Discussion	

SAGES acknowledges unrestricted educational grants in support of this course from Covidien, Ethicon Endo-Surgery, Inc. and Olympus-Gyrus ACMI

STI 2009: SAGES Technology Initiative

For the fifth year, STI '09 continues to be a mechanism to bring new and emerging technologies to the front of the annual meeting, as well as to the attention of the Society. During the 2009 SAGES Meeting, STI includes the Wednesday Endolumenal/NOTES™ Hands-On Course; Thursday Advanced Laparoscopic Techniques Course & Lab (incl. SILS), Robotics Panel, Educators Luncheon on Simulation-Team Training and NOTES™/Endolumenal Symposium; and Saturday Emerging Technology Session and Technology Luncheon.





Wednesday, April 22, 2009

7:30 AM - 12:00 PM

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

Hernia Postgraduate Course

Location: West 301B-C Ballroom

Chair: Brent Matthews, M.D.; Co-Chair: Michael Rosen, M.D.

Hernias are ubiquitous and all SAGES meeting attendees will benefit from this half-day postgraduate course. The popularity of this course at previous SAGES meetings is a testament to the continued clinical challenges facing surgeons managing hernia disease and the evolving techniques and technologies available for open and laparoscopic hernia repair. The SAGES Hernia Postgraduate Course will focus on providing an evidence-based assessment of hernia surgery to guide clinical practice and surgical decision-making in the care of patients with ventral, inguinal and diaphragmatic hernias. Evolving techniques in minimally invasive surgery to repair abdominal wall and diaphragmatic hernias will be reviewed by leading authorities in herniorrhaphy. Provocative, yet frequently asked questions in the management of hernia patients will be addressed to provide practical insight into unique topics or clinical scenarios. An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

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

- Assess a tailored approach in the management of patients with an inguinal hernia
- Provide an evidence-based review of lightweight, biologic and barrier coated meshes as well as fixation devices for inguinal and ventral hernia repair
- Present an update on novel techniques in laparoscopic inguinal, ventral and diaphragmatic hernia repair
- Discuss controversial topics in hernia patients related to informed consent, mesh recalls, connective tissue disorders and pregnancy

SCHEDULE

7:30 AM	Introduction	Brent Matthews, M.D. & Michael Rosen, M.D.
	Session 1 – Evidence-Based Hernia Surgery	
7:35 AM	Is Lightweight Mesh Appropriate for All Inguinal and Ventral Hernia Repairs?	Kristi Harold, M.D.
7:50 AM	Is Watchful Waiting Suitable for Minimally Symptomatic Ventral Incisional Hernias	Robert Fitzgibbons, M.D.
8:05 AM	Clinical Assessment of Absorbable Barrier Coated Meshes for Intraperitoneal Placement	Brent Matthews, M.D.
8:20 AM	Metallic Constructs, Absorbable Fixation Devices and Sealants for Laparoscopic Ventral Hernia Repair – Why All the Confusion?	Kent Kercher, M.D.
8:35 AM	Laparoscopic versus Open Inguinal Hernia Repair: Which Operation for Which Patient Performed by Which Surgeon?	Michael Holzman, M.D.
8:50 AM	Biologic Meshes for Ventral Hernia Repair – Do They Work?	Scott Roth, M.D.
9:05 AM	Discussion	
9:25 AM	Break	
	Session 2 – The Evolution of Minimally Invasive Hernia Surgery	
9:35 AM	Laparoscopic Ventral Hernia Repair: Primary Defect Closure	Morris Franklin, M.D.
9:45 AM	Laparoscopic Inguinal Hernia Repair: Mesh Fixation with Fibrin Sealant	Guy Voeller, M.D.
9:55 AM	Laparoscopic Suprapubic Hernia Repair: Bladder Mobilization and Bone Anchor Fixation	Alfredo Carbonell, M.D.
10:05 AM	Laparoscopic Paraesophageal Hernia Repair: The Role of Biologic Mesh	Deron Tessier, M.D.
10:15 AM	Endoscopic Myofascial Advancement of the Rectus Abdominus for Ventral Hernia Repair	Michael Rosen, M.D.
10:25 AM	Discussion	
	Session 3 – Unique Considerations in Hernia Surgery	
10:45 AM	Informed Consent: Cultural and Religious Issues Associated with the Use of Biologic Mesh	Abdel Nimeri, M.D.
11:00 AM	The Mesh I Used Has Been Recalled: Physician Responsibilities for an FDA-Recalled Mesh	Bruce Ramshaw, M.D.
11:15 AM	Biomaterial Selection for Ventral Incisional Hernia Repair in the Reproductive Female: Does a Future Pregnancy Alter Mesh Selection?	Gina Adrales, M.D.
11:30 AM	Connective Tissue Disorders in Hernia Patients – What Do We Know and What Can and Should We Do?	B. Todd Heniford, M.D.
11:45 AM	Discussion	

SAGES acknowledges unrestricted educational grants in support of this course from Covidien and Gore & Associates

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.

Wednesday, April 22, 2009

7:30 AM - 12:00 PM

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

Flexible Endoscopy Postgraduate Course

Location: North 221A-C Ballroom

(part of SAGES/ALACE International Webcast)

Chair: Thadeus Trus, M.D.; Co-Chair: Klaus Thaler, M.D.

With our goal to perform less invasive gastrointestinal surgery, flexible endoscopy is becoming more important in the surgeon's armamentarium. There is a gap between the need and the actual number of surgeons who perform flexible endoscopy in their daily routine. Reasons for the gap include lack of awareness, knowledge, and training. Attempts to close this gap are beginning to surface, such as increasing the use of flexible endoscopy in surgical residency and fellowships programs, and the proctoring of practicing surgeons.

This course will teach basics and specifics of flexible gastrointestinal endoscopy and adhere to Institute of Medicine, ACGME and ABMS competencies. Experts in the field will address indications and techniques of upper and lower GI endoscopy, treatment modalities and management of complex situations and complications. The course will also cover ERCP for surgeons to get familiar with the basics. In the light of evolving therapeutic options, speakers will also tackle new endolumenal modalities for Barrett's, neoplasia and bariatric patients including the use of stents.

Attendees will be able to test their knowledge by interactive electronic feedback after individual blocks of lectures and by Q/A self-assessment attached to each lecture in the course syllabus.

Objectives:

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

- Describe indications and techniques for diagnostic and therapeutic flexible endoscopy of the gastrointestinal tract
- Identify difficult scenarios and complications and discuss how to manage them
- List current requirements to start flexible endoscopy and how to set it up in their practice
- Be familiar with new modalities in diagnosis and treatment

SCHEDULE

7:30 AM	Introduction	Thadeus Trus, M.D. & Klaus Thaler, M.D.
7:35 AM	History of Flexible Endoscopy: The Surgeon's Role	Paresh Shah, M.D.
7:55 AM	Diagnostic and Therapeutic Upper Endoscopy: Management of Bleeding	Edward Lin, M.D.
8:15 AM	Diagnostic Colonoscopy	Tonia M. Young-Fadok, M.D.
8:35 AM	Therapeutic Colonoscopy: Polypectomy and Bleeding	Conor P. Delaney, M.D.
8:55 AM	Discussion	
9:10 AM	Basics of ERCP	Brian J. Dunkin, M.D.
9:25 AM	Management of Difficult Endoscopic Scenarios and Complications	Richard I. Rothstein, M.D.
9:45 AM	Intraoperative Endoscopy	Michael R. Marohn, M.D.
10:05 AM	Advanced Upper Endoscopy: Treatment of GERD, Barrett's and Neoplasia	Jeffrey W. Hazey, M.D.
10:25 AM	Discussion	
10:40 AM	Endoscopic Treatment of Complications After Gastrointestinal and Bariatric Surgery	Brent W. Miedema, M.D.
11:00 AM	What are the Requirements to Get Privileges and How to Set Up a Practice	John D. Mellinger, M.D.
11:20 AM	Future of Surgical Endoscopy: New Modalities in Diagnosis and Treatment	Jeffrey M. Marks, M.D.
11:40 AM	Discussion	

SAGES acknowledges an unrestricted educational grant in support of this course from Olympus-Gyrus ACMI

2009 SAGES – ALACE and Rural Surgeons International Webcast Sessions – Part of the SAGES Go Global Initiative

International SAGES Members - Sign-up your institution TODAY to be part of the 2009 SAGES meeting by participating in the SAGES International Webcast Sessions. For registration information, please contact Jacqueline Narváez via email at jacqueline@sages.org

Wednesday, April 22, 2009

TIME	SESSION	CHAIR (S)/SPEAKER
7:30am - 11:30am	SAGES Flexible Endoscopy Postgraduate Course	Chair: Thadeus Trus, MD Co-Chair: Klaus Thaler, MD
1:00pm - 3:30pm	ALACE Session	Chair: Natan Zundel, MD Co-Chair: Raul Rosenthal, MD

Thursday, April 23, 2009

TIME	SESSION	CHAIR (S)/SPEAKER
1:00pm - 4:30pm	SAGES/ASGE NOTES®/Endolumenal Session	Chair: Santiago Horgan, MD Co-Chair: David Rattner, MD

SAGES gratefully acknowledges the following companies and individuals for their generous support towards the SAGES Go Global Initiative:

Covidien, Ethicon Endo-Surgery, Inc. and SAGES Education & Research Foundation

SAGES gratefully acknowledges the following individuals for their generous contributions in kind:

Karl Storz Endoscopy in collaboration with Premium Medical, Horacio Asbun, MD, Ramon Berguer, MD, David Earle, MD, Mark Pleatman, MD, Julio Teixeira, MD



Wednesday, April 22, 2009

12:00 - 1:00 PM

SAGES Education and Research Foundation Awards Luncheon

Location: North 120A (1st Floor, North Building)

Purpose: To recognize distinguished leaders for their work in minimally invasive surgery and to raise funds that will keep patient safety in the forefront and advance minimal access surgical methods.

Cost: \$125 per ticket – Please register on-site by Wednesday morning

Please bring your ticket or name of company hosting you.

SAGES Foundation thanks the following sponsors of this event:

Adolor, Applied Medical, Atrium Medical, Covidien, Ethicon Endo-Surgery, Karl Storz Endoscopy, Symbionix, Stryker

2009 SAGES Traveling Fellowship Awards

Presented by: Raul Rosenthal, MD, International Liaison Group Chair & Representatives of Ethicon Endo-Surgery.

Fernando Arias, MD, Fundacion Santa de Bogota, Colombia

Marcos Berry, MD, Clinica Las Condes, Santiago, Chile

Pankaj Garg, MD, Fortis Super Specialty Hospital, Panchkula, Chandigarh, Haryana, India

XinXiang Li, MD, Fundan University Cancer Hospital, Shanghai, China

Sudep Udomsawaengsuo, MD, Chulalongkorn University, Thailand

Victor Manuel Moreira da Costa, MD, Agostonho Neto Hospital, Praia, Cape Verde

SAGES acknowledges a generous educational grant in support of these awards from Ethicon Endo-Surgery, Inc.

2009 Gerald Marks Rectal Cancer Award – A SAGES Foundation Award



Recipient: Morris E. Franklin, Jr., MD, FACS

Presented by: Gerald Marks, MD & Frederick Greene, 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 Gerald Marks, our first President and one of the founders of SAGES.

Dr. Morris Franklin is known to be one of the pioneers in the field of laparoscopic surgery, and has enormous experience in laparoscopic colorectal surgery, both for benign and malignant disease. He earned his medical degree at the University of Texas Southwestern Medical School in Dallas, TX and completed his General Surgery Residence at the University of Texas Health Science Center at San Antonio, where he was appointed Clinical Professor of Surgery. He is also the founder and the Director of the Texas Endosurgery Institute. Over the past ten years, Dr. Franklin has trained surgeons from all over the world. While Dr. Franklin's main interest is laparoscopic techniques in colorectal diseases, he is also known in other fields in laparoscopic surgery, such as biliary surgery and common bile duct exploration, antireflux procedures for GERD and Barrett's esophagus, abdominal wall surgery, laparoscopic treatment of bowel obstruction and microlaparoscopy.

He has served frequently as a SAGES faculty member and has chaired more than one postgraduate course. He is also invited faculty at the European Institute of Tele Surgery (EITS-IRCAD) in Strasbourg, France.

This award supported by Dr. Gerald Marks and the SAGES Foundation.

2009 Jeffrey L. Ponsky Master Educator in Endoscopy Award – A SAGES Foundation Award



Recipient: Bruce V. MacFadyen, Jr., MD, FACS

Presented by: David Duppler, MD, Frederick Greene, MD and Jeffrey Marks, MD

Chairman, Department of Surgery, Professor and Chief, Section of General Surgery

Director, Minimally Invasive Surgery Department of Surgery, Medical College of Georgia

The Master Educator in Endoscopy Award is given to a surgeon who has dedicated his/her career to surgical education. The award was established and named in honor of Dr. Jeffrey L. Ponsky, a recognized international leader in surgical endoscopy and education.

Bruce MacFadyen has always seen educating other surgeons as a major responsibility in his surgical life, after completing his own extraordinary surgical education. He graduated from Hahnemann Medical College and Hospital in 1968, completed internship and residency programs at the Hospital of the University of Pennsylvania and The University of Texas Medical School, Houston. He completed two fellowships: Clinical Fellow, American Cancer Society and M.D. Anderson Cancer Center. Then, he returned for training in Gastrointestinal Endoscopy, Biliary Tract Endoscopy - ERCP, Papillotomy, and Biliary Tract Stents. Bruce MacFadyen has dedicated his affiliation with SAGES to bringing knowledge and enlightenment to his students and peers. He has served as or on:

- Co-Editor of Surgical Endoscopy since 1998 in addition to serving as editor of 8 other journals
- President of SAGES (1994-95)

Wednesday, April 22, 2009

- SAGES Educational Resources, Program, Resident Education, Program, Standards of Practice and Publications Committees
- Board of Governors
- SAGES Foundation Board of Directors

His awards and honors take two pages on his CV. Related specifically to education he was the recipient of Teaching Excellence Awards in: 1983-84; 1984-85; 1985-86, 1986-87, 1988-89, 1989-90

He has written 65 peer review papers, 48 chapters and 4 books.

More than just an educator, Bruce has been a role model for all who work with him, dedicating many summers of his life to operating on patients in developing nations. He is an inspiration to us.

This award supported by the SAGES Foundation

Gore & Associates Outstanding Achievement Award – A SAGES Foundation Award

Recipients: B. Todd Heniford, MD & Adrian Park, MD

Presented by: Frederick Greene, MD, SAGES Foundation President

This Foundation award supported by a generous grant from Gore & Associates

SAGES Scholarship to Attend Leadership Program in Health Policy and Management at Brandeis University in June

Recipient: TBA

Presented by: Steven Schwaitzberg, MD, SAGES 1st Vice President

2009 SAGES Career Development Award & Research Grant Winners

**Presented by: Aurora Pryor, MD, Research Committee Chair &
Representatives of Supporting Companies as follows.**

Career Development Award – TBA

SAGES thanks the SAGES Foundation for their support of this award.

Research Grant Awards:

Name: Michael Rosen, MD

Institution: University Hospitals Case Medical Center

Title: Biologic mesh performance in the setting of infected ventral hernia repair
Supported by: Covidien

Name: Rajesh Aggarwal, MD

Institution: Imperial College of London

**Title: The Effect of SAGES Patient Information Brochures on Patient Satisfaction:
A Prospective Multi-Institutional Study**
Supported by: Covidien

Name: Manish Parikh, MD

Institution: Bellevue Hospital Center/NYU School of Medicine

**Title: Does a Preoperative Medically Supervised Weight Loss Program Improve Bariatric Surgery Outcomes:
A Pilot Randomized Study**
Supported by: Covidien

Name: Richard L. Whelan, MD

Institution: Columbia University Medical Center / New York Presbyterian Hospital

**Title: A murine study to assess the feasibility and efficacy of combined Polyphenon E and
Silibinin therapy during the perioperative period after laparotomy or CO2 pneumoperitoneum.**
Supported by: Ethicon Endo-Surgery, Inc.

Name: Dimitrios Stefanidis, MD

Institution: Carolinas Medical Center

Title: Do motion metrics lead to improved skill acquisition on simulators?
Supported by: Ethicon Endo-Surgery, Inc.

Name: Virinder Bansal, MD

Institution: All India Institute of Medical Sciences

**Title: 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**
Supported by: Karl Storz Endoscopy-America

Name: Andrew Wright, MD

Institution: University of Washington

Title: Validation of a Modified Skills Station for Single Site Laparoscopic Surgery
Supported by: SAGES Foundation





Wednesday, April 22, 2009

Name: Bin Zheng, MD
Institution: University of British Columbia
Title: *Spatial Alignment between Images, Hands, and Tools in Single Port Access Surgery: Problems and Solutions*
Supported by: SAGES Foundation

Name: Edward Auyang, MD
Institution: Northwestern University
Title: *Deconstruction of NOTES for Training and Simulations Development*
Supported by: SAGES Foundation

2009 SAGES Young Researcher Award Winner



Recipient: Michael Rosen, MD
Presented by: Aurora Pryor, MD, Research Committee Co-Chair & representative from Olympus/Gyrus ACMI

SAGES bestows an annual "Young Researcher Award" which is intended to encourage young surgeons to continue their interest and investigation in minimal access surgery. It is presented for excellence in endoscopic surgical research to a SAGES member who is either in surgical training or who has completed training within the last five years. The selection is based on research submitted to SAGES, evidence of current and previous investigation, and a demonstrated interest in becoming an active participant in the

SAGES organization.

Michael Rosen is currently Assistant Professor of Surgery, Division of General Surgery, Case Western Reserve. He also serves as Chief, Division of Gastrointestinal and General Surgery Director, Case Comprehensive Hernia Center, Associate Program Director, Case Surgery. He has completed two fellowships in minimally invasive surgery. Those were at Carolinas Medical Center, Charlotte, NC and Cleveland Clinic Foundation, Cleveland, OH.

Only three years out from training, Michael already serves as an Editor for the *World Journal of Hernia Surgery* and reviewer for *Surgical Endoscopy*, *Surgical Innovations*, *Surgical Laparoscopy Endoscopy and Percutaneous Techniques* and *American Journal of Surgery*. He is a member of eight professional societies, has won a SAGES Research grant as well as the best SAGES resident abstract in 2001.

He has written an incredible 59 peer reviewed papers, edited one book and written 15 book chapters. His list of presentations takes two full pages. It leads us to wonder what his CV will look like when he is no longer defined as a "young" researcher.

SAGES gratefully acknowledges Olympus-Gyrus ACMI for their support of the Young Researcher Award.

2009 SAGES IRCAD Fellowship Award Winner



Recipient: Timothy Kennedy, MD
Presented by: Lee Swanstrom, MD, Awards Committee Chair & representative from Karl Storz Endoscopy

SAGES, with the support of Karl Storz Endoscopy, bestows an annual award of a traveling fellowship to the IRCAD institute in Strasbourg, France. The purpose of this fellowship is to provide an opportunity to study at IRCAD, an institute dedicated to basic research against cancer. Selection for the award is based on SAGES membership, enrollment in a Fellowship Council recognized fellowship program, letters of recommendation from the nominees' program directors, nominees' statements, and upon review of the

nominees' CV's.

Tim Kennedy has completed not one, but two fellowships, one in Oncology at Memorial Sloan Kettering Cancer Center, New York, NY and one in minimal access surgery at Legacy Health System, Portland, OR. His research experience includes two years at Northwestern University, Gastrointestinal Oncology Research Center, as a Research Scientist Pancreatic and Colon Cancer Development; one year at Georgetown University, Department of Biology, Washington, DC as Research assistant and lab coordinator, Invertebrate Zoology doing a thesis project on mechanism of action of nematocyst discharge and the effects on the neuromuscular and cardiovascular systems of its prey; and one year at Rockefeller University, Department of Investigative Dermatology, New York, NY as Research assistant studying cell culture of keratinocytes and fibroblasts for use in psoriasis research. This is a man who likes to study! He has written 10 peer reviewed articles and made more than a dozen presentations worldwide. In his spare time he runs marathons and plays rugby. We know he will bring his considerable energy and expertise to his IRCAD Institute fellowship.

SAGES gratefully acknowledges Karl Storz Endoscopy-America for their support of the IRCAD Fellowship Award.

Wednesday, April 22, 2009

2009 SAGES Pioneer in Endoscopy Award Winner



Recipient: Robert Croce, Founder of Ethicon

Presented by: Barry Salky, MD

The Pioneer in Endoscopy Award is granted to a physician or person in industry "for significant, long-term scientific and technological contribution to the field of surgical endoscopy." This award is not given every year, but bestowed only when SAGES identifies a worthy nominee whose efforts have substantively changed and improved the field of endoscopy.

When we first met Bob Croce, he was busy inventing Ethicon Endo-Surgery and WE (SAGES) were trying to invent the new world of minimal access surgery. He made our path a great deal easier.

During several decades Bob Croce created and managed two successful multi-billion dollar businesses for Johnson & Johnson: Ethicon Endo-Surgery Inc. and Cordis Corporation. While President of Ethicon, Inc., he had the vision to recognize the value of laparoscopic surgery and founded Ethicon Endo-Surgery. Part of that vision included creation of an Institute to facilitate "physicians training physicians" in new procedures. Thousands of surgeons have been trained at the institute by their peers. He led the company toward becoming a worldwide force in the development of laparoscopic surgical devices and mechanical stapling products.

Subsequent to his work with Ethicon Endo-Surgery he integrated Cordis Corporation into Johnson & Johnson and formed four different medical device businesses including Cordis Cardiology, Cordis Endovascular and Cordis Neurovascular. He is responsible for the integration of the technologies of Biosense and Webster to make advances in the electrophysiology ablation area.

Thought leaders in any industry drive the development of new product. Bob Croce was and is a unique pioneer because he understood the marriage between new devices, surgeon training and patient safety.

2009 SAGES Distinguished Service Award Winner



Recipient: Lee Swanstrom, MD

Presented by: Barry Salky, MD, 2008 Distinguished Service Award Winner

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. Lee Swanstrom has served this society since his days as a resident.

Lee Swanstrom is one of those rare honest-to-goodness renaissance men. Who would have thought that a man with a Masters degree in Medieval studies would be one of the founding innovators of FLS? He is a man who has both taught AND studied all over the world, enhancing his education in France and Canada. Just his current teaching titles count six institutions, including the NIH.

A past-president of SAGES (2003-2004), Lee served on a variety of committees and as a Board member from 1994 – 2006. He was Program Chairman of the 2002 World Congress in New York. He was one of the innovators who pushed us to adopt a competence testing program which later became FLS (Fundamentals of Laparoscopic Surgery). What began as a vision 10 years ago is now one of our most vital realities. He earned two SAGES research awards in 1995 and 1998 and is an Editor of *Surgical Endoscopy*, SAGES official journal. He serves as a Director of the SAGES Education and Research Foundation.

Caring about education outside of SAGES' perimeter, he has been a CESTE committee member of ACS since 2003, and is currently President of The Fellowship Council which he helped to found.

His other editorial responsibilities include: Editor in Chief - *Surgical Innovation*; Editor - *Archives of Surgery*, *Gastrointestinal Endoscopy*, *Journal of Gastrointestinal Surgery*, *Surgical Laparoscopy, Endoscopy and Percutaneous Techniques* and *Mexican Journal of Laparoendoscopic Surgery*.

Among his other accomplishments, we must credit him as one of the founding members of the SAGES Lap Rappers in 1992 proving that a sense of humor is a prime requisite for entrée into the SAGES leadership.





SAGES
2009

Wednesday, April 22, 2009

2009 SAGES Berci Lifetime Achievement Award Winner



Recipient: Jeffrey Ponsky, MD

Presented by: Lee Swanstrom, MD, Awards Committee Chair

The award is granted for a lifetime contribution as an innovator in the field of endoscopic surgery. This award is the highest honor as an acknowledgement of an individual whose efforts in education, research or technological innovation have significantly changed or advanced the field of endoscopy. It is named in honor of SAGES Past President, George Berci.

Jeff Ponsky's CV is 39 pages long in small type. It covers more than four decades in which he created a body of work that has benefited surgeons and hundreds of thousands of patients. The word "visionary" is probably used too often. Jeff Ponsky qualifies and then some. It says everything about his perspective and his character that he has served as President of both SAGES and ASGE.

While well known for his creation of the Percutaneous Endoscopic Gastrostomy (PEG) tube as well as the PEG/PEJ technique, his ground-breaking work to assure that surgical residents learn and practice flexible endoscopy cannot be overstated. He wrote the first SAGES flexible education resident guidelines in the early 1980's and initiated its resident education programs in flexible endoscopy. More than 2,500 residents from almost every program in the U.S. and Canada have been trained at those courses. He was SAGES first representative to the American Board of Surgery where he rose to be its Chairman and helped guide them to increase the requirement for flexible endoscopy training during surgical residency.

At a time when most surgeons would be resting on their laurels or on their CV's, Jeff helped to lead the revolution in research and teaching Natural Orifice Translumenal Endoscopic Surgery (NOTES).

He has directed his own surgical endoscopy fellowship programs since 1980, a time when this was either unheard of or thought of as heretic. Jeff has dedicated his career to the education of surgeons in flexible and rigid endoscopy. Think of this: Almost every site offering advanced endoscopic training in the United States has an individual either directly trained by Jeff Ponsky or by one of his prior trainees! Along the way he wrote 191 peer reviewed articles, several books and 70 chapters.

To say he is a gifted speaker is to seriously understate his ability to educate, to move, to inspire, to honor and to give voice to innovation. His ability to bring people together is renowned. George Berci, for whom this award was named, considers him a brother, son, honored colleague and advisor.

SAGES Goes Green!

In an effort to support the environment, you will see less paper in Phoenix for the 2009 SAGES 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, digital posters, and Postgraduate course syllabi will be available on thumb drive for all attendees. The "SAGES Electronic Meeting Guide" will be completely navigational and searchable. Print kiosks will also be available throughout the Phoenix Convention Center, but we urge all attendees to conserve paper and protect the environment by not printing unnecessary copies.

*SAGES acknowledges a generous educational grant in support of SAGES Electronic Meeting Guide from
Ethicon Endo-Surgery, Inc.*

Save the Date!!

SAGES & CAGS host the 12th World Congress of Endoscopic Surgery

April 14 - 17, 2010, Gaylord National Resort & Convention Center, Landover, MD (just outside Washington, DC)

SAGES Scientific Session & Postgraduate Course

March 30 - April 2, 2011, San Antonio Convention Center, San Antonio, TX

SAGES Scientific Session & Postgraduate Course

March 7-10, 2012, San Diego Convention Center, San Diego, CA

FLS Testing Available All Week!

Wednesday, April 22 - Saturday, April 25, 2009

Location: North Room 228A

Call (310) 437-0544, ext. 121 or stop by the SAGES Membership Booth to schedule your test.

Wednesday, April 22, 2009

1:00 PM - 5:00 PM

*Separate registration fee

Laparoscopic Colorectal Surgery Hands-On Course

Location: Science Care, 2020 W. Melinda Lane, Phoenix, AZ Shuttles for faculty and course registrants will depart at 12:00 PM from the Phoenix Convention Center at 3rd Street and Monroe.

Chair: Tonia Young-Fadok, M.D.; **Co-Chair:** Sonia Ramamoorthy, M.D.

This half-day practical cadaver lab course is designed for general and colorectal surgeons, fourth year or chief residents and MIS or colorectal fellows. All applicants should be familiar with advanced laparoscopic techniques and wish to expand their skills in laparoscopic colon and rectal surgery. Techniques for bowel mobilization, vessel division, and intra- and extracorporeal anastomoses will be taught with an emphasis on oncologic principles. The course will emphasize common alternative approaches including lateral-to-medial, medial-to-lateral, and hand-assisted techniques, to facilitate resection of the entire intra-abdominal colon and the rectum.

Requirements:

- All participants are required to submit a letter from their Department Chair or Program Director, confirming that it is anticipated they can reasonably expect to perform at least 20 laparoscopic colorectal cases annually following this course. This letter must be sent to the attention of Yumi Hori (Fax: 310-437-0585 or Email: yumi@sages.org) at the time of registration. If the letter is not received, your space in this course may be given to the next eligible attendee.
- Participants will be asked to complete a pre-meeting survey to ascertain their learning needs. A post-meeting survey will also be distributed 6 months after the course to determine adoption of techniques.

Objectives:

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

- Discuss multiple approaches to mobilization, resection and anastomosis of the right and left colon
- List techniques, tips and tricks for total mesorectal dissection of the rectum
- Understand the principles in laparoscopic colorectal surgery for both benign and malignant disease

SCHEDULE

12:15 PM **Registration and Lunch at Science Care**

1:00 PM **Introduction**

Tonia Young-Fadok, M.D. & Sonia Ramamoorthy, M.D.

1:05 PM **Laparoscopic, Lateral-to-Medial Techniques for Right and Left Colon and Rectum** Tonia Young-Fadok, M.D.

1:20 PM **Hand-Assist, Medial-to-Lateral Techniques for Right and Left Colon and Rectum** Peter Marcello, M.D.

1:35 PM **Hands-On Lab**

Right Colectomy Techniques

Left Colectomy Techniques

Rectal Dissection Techniques

4:30 PM **Question and Answer Session**

5:00 PM **Shuttle departs for Phoenix Convention Center**

Lab Instructors

George Chang, M.D.

Daniel Geisler, M.D.

Peter Marcello, M.D.

Mark Whiteford, M.D.

Conor Delaney, M.D.

Steve Hunt, M.D.

Matthew Mutch, M.D.

Laurence Yee, M.D.

Jonathan Efron, M.D.

Matthew Kalady, M.D.

John Park, M.D.

SAGES acknowledges unrestricted educational grants in support of this course from Covidien, Ethicon Endo-Surgery, Inc., Olympus-Gyrus ACMI and Stryker Endoscopy

SAGES acknowledges contributions in-kind in support of this course from Covidien, Ethicon Endo-Surgery, Inc., Karl Storz Endoscopy-America, Microline-Pentax, Novare Surgical Systems, Olympus-Gyrus ACMI and Stryker Endoscopy

Evaluation & CME Credit Forms:

Please complete the meeting evaluation form and return to the registration desk or place in an "Evaluation Drop-Box" throughout the convention center.

Visit the CME print stations on the North 300 level to print your CME credit form on-site.

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Wednesday, April 22, 2009

1:00 PM - 5:00 PM

*Separate registration fee

Endolumenal/NOTES® Hands-On Course

Location: North Exhibit Hall A

Chair: W. Scott Melvin, M.D.; Co-Chair: Robert Hawes, M.D.

This will be a multiple station hands-on course that will allow a technical experience in a variety of endolumenal procedures and technology. This will also include an introduction to NOTES® and specifically, transvaginal and transgastric peritoneal access. The latest endolumenal tissue fixation devices, energy application devices and intraluminal stents will be included. Participants should have basic endoscopic skills and be willing to try new procedures and use new technology.

Objectives:

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

- Experience the use of modern endolumenal techniques for energy ablation (Argon plasma coagulation, heater probe, BICAP, etc.) and stent placement
- Demonstrate Techniques for Endoscopic Mucosal Resection (EMR)
- Recognize the principles of endolumenal tissue fixation
- Evaluate and practice transgastric and transvaginal approaches to peritoneal access (Natural Orifice Transluminal Endoscopic Surgery)

SCHEDULE

1:00 PM	Introduction	W. Scott Melvin, M.D. & Robert Hawes, M.D.
	Stations	
	Barrett's Ablation	Vic Velanovich, M.D. & V.K. Sharma, M.D.
	Endoscopic Mucosal Resection (EMR)	Robert Pompa, M.D. & Thadeus Trus, M.D.
	Endoscopic Fundoplication for GERD	Kevin Reavis, M.D. & William Kelley, M.D.
	Endoscopic Revision for Failed Gastric Bypass	Dean Mikami, M.D. & Christopher Thompson, M.D.
	Intraluminal Stents: Placement and Removal, Colonic and Esophageal	Jeffrey Marks, M.D. & John Marks, M.D.
	Energy Ablation: Argon Plasma Coagulation, Heater Probe, BICAP, Etc.	Jose Martinez, M.D. & Klaus Thaler, M.D.
	NOTES® Gastric Closure	Jeffrey Hazey, M.D. & Eric Hungness, M.D.
	NOTES® Transvaginal Closure & Transcolonic Closure	Garth Jacobsen, M.D. & Patricia Sylla, M.D.

SAGES acknowledges unrestricted educational grants in support of this course from

BÂRRX Medical, Boston Scientific, Covidien, CSA Medical, Inc.,

Karl Storz Endoscopy-America, Olympus-Gyrus ACMI and Stryker Endoscopy

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

Alveolus Inc., BÂRRX Medical, Boston Scientific, Cook, Covidien, Davol, Inc.,

Endogastric Solutions, Erbe, Karl Storz Endoscopy-America, Olympus-Gyrus ACMI and US Endoscopy.

Wednesday, April 22, 2009

12:30 PM - 5:00 PM

*Separate registration fee

FLS Hands-On Course: Train the Trainers & Proctors

Location: Lectures – North 222A-C Ballroom, Lab - North Exhibit Hall A

Chair: E. Matthew Ritter, M.D.; **Co-Chair:** Nathaniel Soper, M.D.

This course is designed for those responsible for introducing FLS into the curriculum of their surgical training programs, and those primarily responsible for the daily implementation of that training. Optimally, both the surgeon in charge of FLS training and the individual designated as the future FLS proctor would attend the course together, but this pairing is not a requirement. Participants should already be familiar with the FLS program content as this will not be extensively reviewed. The course will feature a very brief FLS overview of the design and validation of FLS but will focus on the nuts and bolts of integrating FLS into the institution's surgical training curriculum. Speakers will identify logistical needs to make the FLS systems functional, and relay practical and proven strategies for maximizing resident training with the FLS curriculum gained over several years of extensive experience. The majority of the course will be hands on and take participants through the setup and troubleshooting of the FLS trainer box and computer based exam, the correct setup and execution of each of the FLS training tasks, and the scoring process required to administer official FLS examinations. After completion of the course, those wishing to become Official FLS Test Proctors will have the opportunity to gain additional experience by administering FLS tests to SAGES meeting attendees during the subsequent days of the SAGES meeting under the guidance of a certified FLS Proctor Trainer. Those who successfully complete this additional proctored training will be certified as Official FLS Test Proctors. (Note: No one will be certified as an Official Test Proctor by only attending the course.)

Objectives:

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

- Discuss the rationale behind the development of the FLS program
- Describe the basic content of FLS and the process used to validate the FLS program
- Identify the logistical requirements of space, equipment, and personnel needed to implement FLS into their training curriculum
- Integrate proven FLS training strategies into their training curriculum
- Demonstrate correct assembly and troubleshooting of all components of the FLS Training Box
- Discuss proper setup and equipment needed for each of the 5 FLS Manual Skills tasks
- Identify allowable and non-allowable performance techniques for each of the 5 Manual Skills tasks
- Demonstrate correct setup and administration of the FLS computer based didactic test
- Correctly administer and score an FLS Manual Skills test
- Identify the material and information to be sent to the FLS Program office for formal evaluation and scoring

SCHEDULE

12:30 PM	Registration	
1:00 PM	FLS: Brief Background/Validation/Content Overview	Nathaniel Soper, M.D.
1:20 PM	What Do You Need for FLS Training and Testing? (Equipment/Support)	E. Matthew Ritter, M.D.
1:40 PM	Optimal Training Strategies for Didactic Content and Manual Skills	Daniel J. Scott, M.D.
2:00 PM	Break	
2:15 PM	FLS – The Setup: From Out of the Box to Functional Benchtop	Elisabeth Pimentel
2:45 PM	Skills Testing Administration Review/Demo	Lisa Jukelevics
3:15 PM	Skills Test Scoring Review/Demo	Carla Bryant
3:30 PM	Didactic Test Administration/Demo	Inga Brissman
3:45 PM	Proctoring Practice	All Faculty

*SAGES acknowledges unrestricted educational grants in support of this course from
Covidien, Karl Storz Endoscopy-America and Stryker Endoscopy*

SAGES acknowledges contributions in-kind in support of this course from Covidien and Karl Storz Endoscopy-America





Wednesday, April 22, 2009

1:00 PM - 5:00 PM

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

SAGES/ASMBS Bariatric Surgery Postgraduate Course Emerging Concepts & Technologies in Bariatric Surgery

Location: West 301A Ballroom

Chair: Matthew Hutter, M.D.; **Co-Chair:** Kelvin Higa, M.D.

This half-day bariatric course will provide expert commentary on some of the latest emerging concepts and technologies in bariatric surgery. Emerging concepts and techniques include laparoscopic sleeve gastrectomy as a primary weight loss operation, experimental metabolic surgery in the non-morbidly obese patients, and single laparoscopic incision transabdominal bariatric surgery. Emerging technologies to be examined include balloons, pacers/blockers, NOTES®, and purely endolumenal therapies for metabolic and bariatric patients. An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

Upon completion of this course, participants should be able to:

- Understand the role for sleeve gastrectomy as a primary weight loss operation.
- Be familiar with the emerging area of single laparoscopic incision transabdominal surgery.
- Understand the role of endolumenal obesity procedures and experimental metabolic procedures.
- Gain insight on the future of the field of bariatric and metabolic treatments from leaders in the field.

SCHEDULE

1:00 PM	Introduction	Matthew Hutter, M.D. & Kelvin Higa, M.D.
	Sleeve Gastrectomy	
1:05 M	Sleeve Gastrectomy as a Primary Weight Loss Operation: Technique with Video	Michel Gagner, M.D.
1:20 PM	Sleeve Gastrectomy – Mid to Longer Term Results	Gregg H. Jossart, M.D.
1:35 PM	Sleeve Gastrectomy – The Science Behind It	Samer Mattar, M.D.
1:50 PM	Discussion	
	Single Laparoscopic Incision Surgery and Adjustable Gastric Banding Update	
2:05 PM	US vs. European Experience with Bands	Philippe Mognol, M.D.
2:20 PM	Technique and Results of Hiatal Hernia Repair During Band Placement	Marina Kurian, M.D.
2:30 PM	Single Laparoscopic Incision Band and Sleeve Gastrectomy – Can or Should It Be Done?	Ninh Nguyen, M.D.
2:45 PM	Discussion	
3:00 PM	Break	
	Experimental Treatments –	
	Metabolic Surgery, Endolumenal and NOTES® Procedures, Blockers, and Balloons	
3:15 PM	Duodenal Jejunal Bypass for Non-Obese Diabetics	Ricardo Cohen, M.D.
3:30 PM	NOTES® and Endolumenal Therapies	Santiago Horgan, M.D.
3:45 PM	Neuromodulation – The Future of Pacers/Blockers	TBA
4:00 PM	Balloons and Endolumenal Sleeves	John Morton, M.D.
4:15 PM	Medical Treatment – Any Promise for the Future?	Philip Schauer, M.D.
4:30 PM	Looking at Your Crystal Ball – In 10 Years, What Treatments Will be Offered for Which Patients	All Presenters
4:50 PM	Discussion	

SAGES acknowledges unrestricted educational grants in support of this course from Covidien, Ethicon Endo-Surgery, Inc. and Gore & Associates

Wednesday, April 22, 2009

1:00 PM - 5:30 PM

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

Laparoscopic Cholecystectomy Postgraduate Course Best Practices for Optimizing Clinical Outcomes

Location: West 301B-C Ballroom

Chair: Steven D. Schwartzberg, M.D.; Co-Chair: L. Michael Brunt, M.D.

Laparoscopic cholecystectomy is one of the most common operations performed worldwide. Despite a broad experience, common bile duct and other injuries continue to occur, stone management is highly variable, and difficult cases challenge surgeons everywhere. New access methods for cholecystectomy are also being developed and how these possibilities will impact surgical practice is an area of active interest.

This course will review all aspects of performing cholecystectomy including the factors that lead to biliary injury, various techniques used to minimize injuries, and what to do should a bile duct injury or other complication should occur. Cholangiography technique and interpretation, difficult cholecystectomy scenarios, management of CBD stones, and other aspects of safe cholecystectomy will also be reviewed. The evolution of new techniques for performing cholecystectomy via single incision (LESS SCAR, SILS, SPA) and NOTES® techniques, and if and how these techniques should be introduced into clinical practice will also be discussed. An audience response system will be used to assess course attendees approach to a variety of clinical scenarios and to challenge surgeons' knowledge of cholangiogram interpretation. An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

At the completion of this course the participant should be able to:

- Review biliary anatomy and the critical view technique for performing laparoscopic cholecystectomy
- Describe the role of cholangiography, interpretation of cholangiograms, and management of bile duct stones in patients undergoing cholecystectomy
- Recognize the patterns of biliary injury associated with cholecystectomy and discuss strategies for prevention and management of biliary injury and other complications of cholecystectomy
- Assess factors to determine the optimal timing and execution for challenging cholecystectomy and review open techniques for cholecystectomy
- Discuss new techniques for performing cholecystectomy and when, how, and if these should be introduced into clinical practice

SCHEDULE

Background and Review		
1:00 PM	Overview and Background – Problems in Cholecystectomy	Steven D. Schwartzberg, M.D.
1:05 PM	Review of Biliary Anatomy	L. Michael Brunt, M.D.
Operative Technique and Injury Prevention		
1:10 PM	Strategies for Safe Access and Avoiding Enterotomy	John Cosgrove, M.D.
1:20 PM	The Critical View Technique and Prevention of Biliary Injury	Steven Strasberg, M.D.
1:35 PM	Cholangiography and Biliary Injury – What's the Evidence?	John Hunter, M.D.
1:45 PM	Cholangiography Technique and Interpretation	Scott Helton, M.D.
2:00 PM	Best Practices Program for Cholecystectomy in the Netherlands	Mark I. Van Berge Henegouwen, M.D.
2:15 PM	Discussion and Audience Response: Cholangiogram Quiz	John Cosgrove, M.D.
2:30 PM	Break	
Challenging Patient Scenarios		
2:45 PM	The Difficult Cholecystectomy	Daniel Deziel, M.D.
3:00 PM	Open or Converted Cholecystectomy: Techniques and Tips	Mark Callery, M.D.
3:10 PM	Common Bile Duct Stones: Leave Them, Get Them, or Refer Them?	Mark Watson, M.D.
3:20 PM	Could Your Patient Have Gallbladder Cancer?	Reid Adams, M.D.
3:30 PM	Discussion and Audience Response: Difficult Cases	Steven Schwartzberg, M.D.
Complication Management		
3:45 PM	Early Recognition of Postoperative Complications	Kenric Murayama, M.D.
3:55 PM	You've Injured the Common Bile Duct: What Do You Do Now?	Steven Strasberg, M.D.
4:10 PM	Minor Ductal Injuries are Not So Minor	Steven D. Schwartzberg, M.D.
4:20 PM	Outcomes and Quality of Life After Biliary Injury	William Traverso, M.D.
4:30 PM	Medical-Legal Implications of Biliary Injury	Nathaniel Soper, M.D.
4:40 PM	Discussion and Audience Response: Complications Cases	L. Michael Brunt, M.D.
Alternative Approaches to Traditional Laparoscopic Cholecystectomy		
4:55 PM	Are Single Incision Approaches as Safe as Conventional Laparoscopic Cholecystectomy?	Paul Curcillo, M.D.
5:05 PM	NOTES® Cholecystectomy: Will It Have a Future Role?	Lee Swanstrom, M.D.
5:15 PM	Discussion and Audience Response: Laparoscopic Cholecystectomy of the Future – What Will You Do?	
5:30 PM	Adjourn	

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





Wednesday, April 22, 2009

1:00 PM - 3:30 PM

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

SAGES/ALACE International Joint Symposium

(part of SAGES/ALACE International Webcast)

Location: North 221A-C Ballroom

Chair: Natan Zundel, M.D.; **Co-Chair:** Raul Rosenthal, M.D.

As a result of SAGES growth and evolution, our society has become one of the world's leaders in minimally invasive and endoscopic surgery. The practice and evolution of minimally invasive surgery has been enriched by SAGES members from around the globe, and it is important to recognize the diversity of surgical contributions that have occurred outside the United States. To highlight the international relationships and partnerships within SAGES, this symposium will feature leading surgeons and surgical innovators from Latin American who are members of SAGES and ALACE (the Association of Latin American Endoscopic Surgeons) and who have made major contributions to the field of general, laparoscopic, and endoscopic surgery.

Objectives:

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

- Understand sentinel contributions and important innovations in minimally invasive surgery that have arisen in Latin America.
- Identify contributions made by Latin American surgeons who are currently practicing in the United States.
- Discuss the impact and application of new surgical techniques that have been developed in Latin America

SCHEDULE

1:00 PM	Introduction	Natan Zundel, M.D. & Raul Rosenthal, M.D.
1:05 PM	GERD Surgery Myths and Facts	Natan Zundel, M.D.
1:15 PM	Esophagectomy Indications and Results	Aureo DePaula, M.D.
1:25 PM	Esophageal Achalasia: State of the Art	Raul Rosenthal, M.D.
1:35 PM	Organ Transplantation in Children	Carlos Podesta, M.D.
1:45 PM	Is Laparoscopy a Choice for the Pancreas?	Horacio Asbun, M.D.
1:55 PM	CBD Injuries: Prevention and Management	Ricardo Rossi, M.D.
2:05 PM	Discussion	
2:20 PM	Metabolic Surgery: Where are We?	Aureo De Paula, M.D.
2:30 PM	NOTES®: World Experience	Manoel Galvao, M.D.
2:40 PM	Training and Education for MIS	Alberto Chousleb, M.D.
2:50 PM	Trauma and Minimally Invasive Surgery: Our Experience	Jesus Vasquez, M.D.
3:00 PM	Early Decompression in Acute Gallstone Pancreatitis: An Evidence-Based Review	Juan Acosta, M.D.
3:10 PM	Discussion	

Please join us for the...

SAGES/IPEG Welcome Exhibit Opening Reception

Location: North Exhibit Hall D-E

Time: 5:00 PM - 7:00 PM

Free for all SAGES & IPEG Registrants & Guests

SAGES and IPEG exhibits will take place at the Phoenix Convention center in North Exhibit Halls D-E.

SAGES Learning Center and SAGES/IPEG Posters will NOT be open until Thursday.

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.



Thursday-at-a-Glance

All courses, sessions and panels take place at the Phoenix Convention Center unless otherwise noted.



Thursday, April 23, 2009	Time	Room
Industry Education Events	6:00 - 7:15 AM	Covidien – Hernia: North 224A-B Ballroom Covidien – SILS: North 229A-B Ballroom
SERF Meets Turf 3K Run/Walk	6:45 - 7:30 AM	Meet at Sheraton Hotel Lobby
SS01: Colorectal I	7:30 - 9:00 AM	North 222A-C Ballroom
Half Day Foregut Postgraduate Course	7:30 - 11:30 AM	West 301B-C Ballroom
Half Day Advanced Laparoscopic Techniques Postgraduate Course	7:30 - 11:30 AM	West 301A Ballroom
Equipping the Surgeon/Training the Jedi Session	7:30 - 9:30 AM	North 221A-C Ballroom
IPEG/SAGES Joint Breakfast Video Session: HPB & Solid Organ	7:45 - 8:45 AM	West 301D Ballroom
SAGES/MIRA Robotics Panel	8:00 - 9:30 AM	North 224A-B Ballroom
SS02: Bariatric I	9:00 - 10:30 AM	North 222A-C Ballroom
Exhibits, Posters & Learning Center Open	9:30 AM - 3:30 PM	North Exhibit Hall B-E
Patient Safety (Allied Health) Symposium	9:30 - 11:30 AM	North 224A-B Ballroom
SAGES/APDS/ASE Surgical Educators Forum	9:30 - 11:30 AM	North 221A-C Ballroom
BREAK: Exhibits, Posters & Learning Center	11:30 AM - 1:00 PM	North Exhibit Hall B-E
Educators Lunch: Surgical Education	11:30 AM - 1:00 PM	North 229A-B Ballroom
Half Day Laparoscopic Foregut Surgery Hands-On Course	1:00 - 5:00 PM	Offsite - Science Care Lab
Half Day Advanced Laparoscopic Techniques Hands-On Course	1:00 - 5:00 PM	North Exhibit Hall A
Half Day SAGES/ASGE NOTES® & Endolumenal Symposium	1:00 - 5:15 PM	West 301A Ballroom
Recertification/Outcomes Panel	1:00 - 2:30 PM	West 301B-C Ballroom
SS03: Best of SAGES Posters	1:00 - 2:30 PM	North 222A-C Ballroom
Solid Organ Surgery Session	2:30 - 5:00 PM	West 301B-C Ballroom
SS04: Education / Simulation I	2:30 - 3:30 PM	North 222A-C Ballroom
SS05: Hernia I	3:30 - 5:00 PM	North 222A-C Ballroom
Industry Education Events	5:15 - 7:00 PM	Covidien: North 224A-B Ballroom Davol: North 229A-B Ballroom Karl Storz & Ethicon: North 221A-C Ballroom
The Great Presidential Debates	7:00 - 9:00 PM	West 301B-C Ballroom

SERF Meets Turf 3K Run/Walk

Thursday, April 23, 2009 - 6:45 - 7:30 AM

Start your morning off right by participating in the inaugural SERF Meets Turf 3K Run/Walk to benefit the SAGES Education and Research Foundation (SERF). The route will begin at the Sheraton Phoenix and pass through the landmarks of the historical downtown area. Please meet at 6:30 AM in the Phoenix Sheraton Hotel Lobby.

ENTRY FEE: \$75.00 for participants

\$50.00 for sleepyheads who want to support the Foundation but would rather run the course in their dreams.

WHAT'S INCLUDED: Ribbons to the top three finishers in each category, t-shirts for all athletes, and the names of all participants will be listed on the SAGES Foundation website.

Please visit SAGES Registration Tuesday or Wednesday to sign-up on site. A portion of your contribution is tax-deductible to the extent permitted by law.

Special Thanks to Ethicon Endo-Surgery for supporting this event

Thursday, April 23, 2009

6:00 AM - 7:15 AM

Attendance is free for any SAGES attendee.

Industry Satellite Symposia

Please join selected industry partners for an informative evening of presentations on Thursday morning, immediately prior to SAGES sessions. **These events are not planned nor accredited for CME by SAGES.**

Covidien - "Innovations in Hernia Repair"

Location: North 224 A-B

Course Description

Hernia repair presents a wide range of clinical and procedural challenges, and a host of new techniques and technologies have been developed to address these challenges. This symposium will provide an opportunity to learn about evolving techniques and research and to discuss how best to incorporate them into a hernia repair practice.

Learning Objectives

- Understand advanced techniques for minimally invasive hernia repair procedures
- Review clinical data on hernia repair techniques and implant materials
- Discuss tips for incorporating procedural innovations

Agenda

Advanced Procedures for Improving Your Hernia Repair Practice

Michael Rosen, M.D., Director,
Case Comprehensive Hernia Center Assistant Professor of Surgery,
University Hospitals Case Medical Center, Cleveland, OH

Hernia Implant Materials – Overview and Advancements

Bruce Ramshaw, M.D., Director,
Missouri Hernia Institute, Chief, General Surgery,
University of Missouri, Columbia, MO

Interesting Cases and Evolving Techniques

Carl Doerhoff, M.D., F.A.C.S.,
General Surgery, Vascular Surgery,
SurgiCare of Missouri, P.C., Jefferson City, MO

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

Covidien – "Recent Advances in Laparoscopic Surgery with SILS™ (Laparoscopic Surgery Through A Single Incision): A Panel Discussion"

Location: North 229 A-B

Course Description

SILS™ procedures are gaining acceptance in the surgical community and are being driven by patient demand for improved cosmesis and the possibility of reduced post-operative pain. Surgeons across the country have been performing SILS™ cholecystectomy, SILS™ appendectomy, SILS™ Nissen Fundoplication, LAP-BAND® adjustable gastric banding, and various GYN procedures. This course will provide an update on the recent procedural and technological advances in SILS™ surgery as well as provide an opportunity for discussion on the future of SILS™ procedures.

Learning Objectives

- Review case experience and clinical data on SILS™ procedures
- Understand how SILS™ procedures differ from conventional multi-incision laparoscopic surgery
- Understand various techniques for SILS™ procedural adoption
- Discuss tips for incorporating procedural and technological innovations including the new SILS™ Port.

Faculty:

Homero Rivas, M.D., MBA, FACS, Assistant Professor of Surgery, UT Southwestern Medical Center, Dallas, TX
George DeNoto III, M.D., FACS, Chief of Laparoscopic Surgery, Department of Surgery, North Shore-LIJ, Lake Success, NY
Pratibha Vemulapalli, M.D., Assistant Professor, Department of Surgery, Montefiore Medical Center, Bronx, NY
Andrew S. Wright, M.D., FACS, Assistant Professor of Surgery, University of Washington Medical Center, Seattle, WA
James K. Elsey, MD, FACS, General Vascular Surgeon, Gwinnett Medical Center, Lawrenceville, GA
Michael Tarnoff, M.D., FACS, CMO & V.P. of Medical Affairs, Covidien, Waltham, MA

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

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





SAGES
2009

Thursday, April 23, 2009

7:30 AM - 11:30 AM

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

Scientific Session Concurrent Sessions (accepted oral & video presentations)

Description:

This section of the SAGES Meeting includes panels with invited faculty who will speak on specific topics, and sessions of oral & video presentations of abstracts selected by the SAGES Program Committee. Panel information is listed below.

What Is Included:

The SAGES Scientific Session is included in Registration SuperPass (Option A). Thursday sessions (concurrent only) are also included in Registration Option B. Friday/Saturday sessions and panels are included in Registration Option C.

7:30 AM - 9:00 AM

SS01: Colorectal I Location: North 222A-C

Moderators: Richard L. Whelan, MD & Tonia Young-Fadok, MD

S001 LAPAROSCOPIC LOW ANTERIOR RESECTION WITH TOTAL MESORECTAL EXCISION, 17 YEARS EXPERIENCE WITH 590 PATIENTS MORRIS E Franklin, MD, Guillermo R Portillo, MD, Jeffrey L Glass, MD, John J Gonzalez, MD, Eduardo A Perez, MD, Mike Renfrow, MD, Texas Endosurgery Institute, San Antonio, TX

V001 LAPAROSCOPIC ULTRALOW ANTERIOR RESECTION WITH INTERSPHINCTERIC DISSECTION FOR LOW RECTAL CANCER. Nicolás Rotholtz, MD, Maximiliano Bun, MD, Mariano Laporte, MD, Alejandro Canelas, MD, Sandra Lencinas, MD, Carlos Peczan, MD, Colorectal Surgery Section, General Surgery Department, Hospital Alemán de Buenos Aires, Argentina

S002 LAPAROSCOPIC SUBTOTAL COLECTOMY FOR MEDICALLY REFRACTORY ULCERATIVE COLITIS: THE TIME HAS COME Dana A Telem, MD, Anthony Vine, MD, Celia M Divino, MD, Mark Reiner, MD, Brian Jacob, MD, Michael T Harris, MD, Adrian J Greenstein, MD, Barry Salky, MD, Lester B Katz, MD, The Mount Sinai Hospital, New York, NY

V002 MEDIAL TO LATERAL SPLENIC FLEXURE MOBILIZATION FOR SIGMOID COLECTOMY Alessio Pigazzi, MD, City of Hope National Medical Center, Duarte, CA

V003 LAPAROSCOPIC TOTAL MESORECTAL EXCISION AND COLOANAL ANASTOMOSIS FOR CARPETING VILLOUS POLYP OF THE RECTUM Philippe Bouchard, MD, Jacques Heppell, MD, Jonathan Efron, MD, Tonia Young-Fadok, MD, Mayo Clinic Arizona, Scottsdale, AZ

S003 A COMPARISON OF THE CLINICAL AND ECONOMIC OUTCOMES FOR OPEN VERSUS MINIMALLY INVASIVE APPENDECTOMY AND COLECTOMY: EVIDENCE FROM A LARGE COMMERCIAL PAYER DATABASE Terrence M Fullum, MD, Joseph L Ladapo, MD, Bijan J Borah, PhD, Candace L Gunnarsson, PhD, Howard University College of Medicine; Harvard Medical School; Washington, DC

S004 LAPAROSCOPIC TRANSANAL ABDOMINAL TRANSANAL (TATA) RESECTION WITH SPHINCTER PRESERVATION FOR RECTAL CANCER OF THE DISTAL 3CM FOLLOWING NEOADJUVANT THERAPY John H Marks, MD, Benyamine Mizrahi, MD, Scott S Dalane, BA, Ikenna Nweze, MD, Gerald J Marks, MD, Lankenau Hospital and Institute for Medical Research: Section of Colorectal Surgery, Wynnewood, PA

V004 TRANSANAL ENDOSCOPIC MICROSURGERY (TEM): RESECTION OF A 3CM POLYPOID MASS ABOVE THE 2ND VALVE OF THE RECTUM John H Marks, MD, Benyamine Mizrahi, MD, Scott S Dalane, BA, Lankenau Hospital and Institute for Medical Research: Section of Colorectal Surgery

S005 A PROSPECTIVE STUDY COMPARING THE SURGICAL OUTCOMES BETWEEN LAPAROSCOPIC SURGERY FOR TRANSVERSE AND DESCENDING COLON CANCER AND LAPAROSCOPIC SURGERY FOR OTHER COLON CANCERS. Seiichiro Yamamoto, PhD, Takayuki Akasu, PhD, Shin Fujita, PhD, Yoshihiro Moriya, PhD, National Cancer Center Hospital

SAGES acknowledges an unrestricted educational grant in support of this session from Ethicon Endo-Surgery, Inc.

Videos in the Video Channel Loop can be viewed in the dedicated viewing area set up in the Exhibit Hall.

The viewing area will be next to the Learning Center. Look for the hanging sign "SAGES 2009 Video Channel Loop Viewing Area." Viewing hours are Thursday & Friday 9:30AM - 3:30PM, Saturday 9:30AM - 1:30PM. Video Channel Loop abstracts are on page 162.

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.



SAGES
2009

Thursday, April 23, 2009

7:30 AM - 11:30 AM

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

Foregut Postgraduate Course: The SAGES Grand Rounds Master Course

Location: West 301B-C Ballroom

Chair: C. Daniel Smith, M.D.; Co-Chair: Brant Oelschlager, M.D.

This course will consist of a series of lectures devoted to the state-of-art management of foregut diseases, with an emphasis on GERD, Barrett's esophagus, hiatal hernias, and both endoscopic and surgical management. Participants will not only have the opportunity to interact with the faculty giving these lectures during several discussion periods, but a full hour will be devoted to a panel discussion of several difficult and illustrative cases. This course is directed to the surgeon who is performing foregut operations currently, and who wants to learn more about some common complex topics and get "tips" in management of these challenging patients. This course will be filmed as a part of The SAGES Grand Rounds Master Series.

Objectives:

After attending this course, the attendee will be able to:

- List the current options in physiologic testing as it relates to the work-up of patients with surgical foregut diseases
- Review issues from complicated topics in GERD, such as obesity and associated airway diseases
- Describe the proper techniques for managing complex hiatal hernias and complications relating to foregut surgery
- Identify the complexities of the management of Barrett's esophagus, including both endoscopic as well as surgical management
- Review the current role of endoscopic methods for the treatment of GERD
- Review management options in complex cases and interact with a world-renowned, expert panel

SCHEDULE

7:30 AM	Introduction	C. Daniel Smith, M.D. & Brant Oelschlager, M.D.
	GERD Basics	
7:35 AM	Modern Foregut Physiology Testing – Who, What, When and How	Marco G. Patti, M.D.
7:50 AM	Outcomes of Laparoscopic Antireflux Surgery – Great Operation or Short-Term Sham? Only for Experts?	Steven P. Bowers, M.D.
8:05 AM	Great Results for Surgery with GERD – How to Get the Published Results	John Hunter, M.D.
	GERD – The Patients You Really See	
8:20 AM	GERD and the Airway – Implications for Surgical Treatment	Vic Velanovich, M.D.
8:35 AM	GERD and Obesity – Strategies for an Increasing Problem	Samer Mattar, M.D.
8:45 AM	Discussion	
9:00 AM	Break	
	Advanced Hiatal Surgery	
9:10 AM	Paraesophageal Hernia vs. Hiatal Hernia – Is There a Difference and Does it Matter?	Lee Swanstrom, M.D.
9:25 AM	Management of Common and Difficult Surgical Complications in Hiatal Hernia Repair and Fundoplication	Bernard Dallemagne, M.D.
	Where GI Meets Surgery	
9:40 AM	Endoscopic Therapy for GERD – Where are We, Where are We Going, and Will We Ever Get to Where We Want to Be?	David Rattner, M.D.
9:50 AM	Barrett's Esophagus 2009 – PPIs, Fundoplication, Ablation or Nothing?	W. Scott Melvin, M.D.
10:05 AM	Ideal Treatment for Barrett's with High Grade Dysplasia (HGD) – Endoscopy vs. Surgery	Blair Jobe, M.D.
10:15 AM	Discussion	
	What Would the Experts Do?	
10:30 AM	Case Presentations and Discussions:	John Hunter, M.D. Lee Swanstrom, M.D. Blair Jobe, M.D. Bernard Dallemagne, M.D. Moderator: C. Daniel Smith, M.D.

2009 Poster Session: Thursday - Saturday

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

The top posters will be recognized on-site.

SAGES acknowledges our Platinum Level Donors for their support of this session:

Allergan, Covidien, Ethicon Endo-Surgery, Inc., Karl Storz Endoscopy-America, Olympus-Gyrus ACMI

Thursday, April 23, 2009

7:30 AM - 11:30 AM

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

Advanced Laparoscopic Techniques Postgraduate Course: From Reduced Port and Single Incision to Hand Assist and Other Advanced Techniques

Location: West 301A Ballroom

Chair: Daniel J. Scott, M.D.; **Co-Chair:** Santiago Horgan, M.D.

This course will feature several topics regarding advanced techniques in laparoscopic surgery. One recent trend is towards minimizing the number of incisions required for major operations by accessing the abdomen through a single incision. These new approaches rely on articulating and other novel instruments and access platforms and introduce new constraints to the conventional laparoscopic working environment. Hand-assisted techniques may also be relevant for some MIS procedures, especially for some colon and solid organ cases. Finally, techniques for selecting and using currently available energy sources, skillfully accomplishing laparoscopic suturing, and creating anastomoses laparoscopically will be discussed. The topics discussed will complement the hands-on session in the afternoon. An interactive Audience Response System will be used to enhance discussion during this session. **This course will also feature a new interactive Q&A functionality. We encourage attendees to bring their WI FI enabled (802.11x) devices (laptops, etc.). More information will be provided at the course.**

Objectives:

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

- List the rationale, technical hurdles, and operative strategies for performing single incision laparoscopic surgery
- Identify cases in which hand-assisted techniques may be helpful
- Discuss energy sources, suturing techniques, and tricks for creating GI anastomoses

SCHEDULE

7:30 AM	Introduction	Daniel J. Scott, M.D. & Santiago Horgan, M.D.
	Single Incision Surgery: Less Invasion	
7:35 AM	Lights, Instruments, Access! Single Incision Surgery	Paul G. Curcillo II, M.D.
7:45 AM	Tools on the Horizon: Deployable Instruments, Magnets, and Purpose-built Platforms	Daniel J. Scott, M.D.
7:55 AM	Single Incision Lap Chole: Retraction, Operative Strategies, and Safety	Homero Rivas, M.D.
8:10 AM	Single Incision Lap Nissen: It's a Single Site Wrap	Alex Rosemurgy, M.D.
8:20 AM	Single Incision in Pediatric Surgery: Tiny Cuts for Tiny Tots	Sanjeev Dutta, M.D.
8:30 AM	Is There Any Benefit? 3 Years of Experience in Urology and General Surgery	Abhay Rane, M.S.
8:40 AM	Single Incision Adjustable Gastric Banding: Making the Most of Your Incision	Santiago Horgan, M.D.
8:50 AM	Single Incision/Port Surgery vs. NOTES® Debate – Complimentary or Competitive?	
	Pro NOTES®	Jeffrey Ponsky, M.D.
	Pro Single Incision/Single Port Surgery	Paul G. Curcillo II, M.D.
9:05 AM	Discussion	
9:20 AM	Break	
	HALS: Slightly More Invasion	
9:35 AM	Colon Resection: When Does the Hand Help?	James Fleshman, M.D.
9:50 AM	HALS Donor Nephrectomy: Getting the Organ Out Expeditiously	Michael Edye, M.D.
10:05 AM	HALS for Solid Organs: Spleen, Adrenal, and Pancreas	Kent Kercher, M.D.
10:20 AM	Discussion	
	Energy Sources, Suturing, and Anastomoses	
10:30 AM	Which Energy Source and When?	Daniel Herron, M.D.
10:45 AM	Suturing: Why, How, and When?	Patrick Reardon, M.D.
11:00 AM	Anastomoses: Stapling Techniques and Tricks	Morris Franklin, M.D.
11:15 AM	Discussion	

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

STI 2009: SAGES Technology Initiative

For the fifth year, STI '09 continues to be a mechanism to bring new and emerging technologies to the front of the annual meeting, as well as to the attention of the Society. During the 2009 SAGES Meeting, STI includes the Wednesday Endolumenal/NOTES™ Hands-On Course; Thursday Advanced Laparoscopic Techniques Course & Lab (incl. SILS), Robotics Panel, Educators Luncheon on Simulation-Team Training and NOTES™/Endolumenal Symposium; and Saturday Emerging Technology Session and Technology Luncheon.

FLS Testing Available All Week!

Wednesday, April 22 - Saturday, April 25, 2009

Location: North Room 228A

Call (310) 437-0544, ext. 121 or stop by the SAGES Membership Booth to schedule your test.





Thursday, April 23, 2009

7:30 AM - 9:30 AM

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

Equipping the Surgeon – Training the Jedi My Training is Over, Now What?

Location: North 221A-C Ballroom

Chair: Karen Horvath, M.D.; **Co-Chair:** Simon Bergman, M.D.

The purpose of this session is to provide residents and fellows with an overview of important decisions they will face following completion of their training. These issues impact career development and have both professional and personal implications. The topics discussed are meant to provide the participants with the tools and questions necessary to spark a successful and rewarding academic or private practice career.

Objectives:

Upon completion of this course, the participants will be able to:

- Develop strategies to better orient their clinical and/or academic career goals
- Appreciate how to conduct a successful job search, interview, and contract negotiation in the private and academic milieus
- Understand and overcome the hurdles to the introduction of endoscopy in their new practice
- Query their own resource base more precisely with newly formulated career development questions and concerns

SCHEDULE

7:30 AM	Introduction	Karen Horvath, M.D. & Simon Bergman, M.D.
	Finding the Perfect Job	
7:35 AM	Making the Case for Private Practice	Lily Chang, M.D.
7:50 AM	Making the Case for Academics	Blair Jobe, M.D.
8:05 AM	Mentorship and Career Planning	Adrian Park, M.D.
8:20 AM	Discussion	
	Building a Practice and Developing a Career	
8:35 AM	Developing a Clinical Program	Alan Harzman, M.D.
8:45 AM	Doing Endoscopy – Hurdles and Solutions	Steven Wexner, M.D.
8:55 AM	The Pathway to Success in Academics: How Do I Start?	Brent Matthews, M.D.
9:05 AM	Balancing Professional and Personal Time	Aurora Pryor, M.D.
9:15 AM	Discussion	

7:45 AM - 8:45 AM

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

IPEG/SAGES Joint Breakfast Video Session: Hepatobiliary and Solid Organ

Location: West 301D Ballroom

Chairs: Kent Kercher, MD & Benno Ure, MD, PhD

Description:

This session will focus on minimally-invasive approaches to solid organ surgery, including differences in the management of adult and pediatric disease processes requiring solid organ resection and/or ablation. The techniques described will include solid organ resection as well as the potential role for organ-preserving surgery. The session format will revolve around videos that describe the various techniques discussed. Video presentations will be supplemented with slides intended to address both the technical aspects of the various procedures as well as indications and outcomes.

Objectives:

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

- List the indications and techniques for splenic-preserving surgery in the pediatric population
- Describe the strategies available for combining minimally invasive hepatic resection and tumor ablation
- Explain the potential roles for minimally-invasive surgery in treating pediatric renal and adrenal tumors
- Discuss the techniques for live donor nephrectomy and understand the important considerations related to choosing the appropriate kidney for organ donation

SCHEDULE

7:45 AM	Introduction	Kent Kercher, M.D. & Benno Ure M.D., Ph.D.
7:50 AM	Laparoscopic Splenectomy in Children: Total or Partial Splenectomy?	Jacob C. Langer, M.D.
8:05 AM	Minimally Invasive Approaches to Liver Surgery: Combining Resection and Ablation	David Iannitti, M.D.
	Kidney and Adrenal Techniques for Laparoscopic Nephrectomy and Adrenalectomy	Gordon A. MacKinlay, M.D.
8:20 AM	The Role for Minimally Invasive Surgery for Wilms Tumor and Neuroblastoma	Gordon A. MacKinlay, M.D.
8:35 AM	Live Donor Nephrectomy: Which Technique, Which Kidney?	Kent Kercher, M.D.

IPEG acknowledges an unrestricted educational grant in support of this session from Covidien.

Thursday, April 23, 2009

8:00 AM - 9:30 AM

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

SAGES/MIRA Robotics Panel

Location: North 224A-B Ballroom

Chair: Michael Marohn, M.D.; **Co-Chair:** Mehran Anvari, M.D.

The Panel will review the current and emerging indications for use of robotics in general surgery, and the training and credentialing required for its use. There will also be presentations on the new robotic platforms being developed for NOTES® and single port surgery.

Objectives:

After attending this session, the attendee will be able to:

- Provide an update regarding the use of robotics in general surgery
- Review the SAGES/MIRA position paper on clinical use of robotic surgery
- Discuss the new robotic platforms under development for NOTES® and single port surgery
- Describe future directions in robotic development

SCHEDULE

8:00 AM	Introduction	Michael Marohn, M.D. & Mehran Anvari, M.D.
8:05 AM	Increasing Use of Robotics in General Surgery – Gastric and Esophageal	Santiago Horgan, M.D.
8:20 AM	Increasing Use of Robotics in General Surgery – Colorectal	Alessio Pigazzi, M.D.
8:35 AM	Training, Credentialing and Safety (SAGES/MIRA Position Paper)	Michael Marohn, M.D.
8:50 AM	New Robotic Platforms for NOTES® and Single Port Surgery	Mehran Anvari, M.D.
9:05 AM	Discussion	

9:00 AM - 10:30 AM

SS02: Bariatric I **Location:** North 222A-C

Moderators: Ninh Nguyen, MD & Mohammed Ali, MD

S006 A PROSPECTIVE, RANDOMIZED, DOUBLE-BLIND, PLACEBO CONTROLLED TRIAL OF DEXAMETHASONE IN PREVENTING POSTOPERATIVE NAUSEA IN THE LAPAROSCOPIC GASTRIC BYPASS PATIENT. Nia Zalamea, MD, Farida Bounoua, MD, Sarah Lee, MD, Todd Peterson, MD, David Thoman, MD, Santa Barbara Cottage Hospital, Santa Barbara, CA

V005 INCISIONLESS WEIGHT LOSS SURGERY. A NOVEL GASTRIC RESTRICTIVE PROCEDURE USING THE TRANSORAL GASTROPLASTY TECHNIQUE Gregg K Nishi, MD, Simon Lo, MD, Edward H Phillips, MD, Cedars-Sinai Medical Center, Los Angeles, CA

S007 LAPAROSCOPIC DUODENO-JEJUNAL BYPASS (LDJB) AS A SURGICAL TREATMENT FOR TYPE 2 DIABETES MELLITUS IN THE NON OBESE PATIENTS. EARLY EXPERIENCE. Marcos Berry, MD, Patricio Lamoza, MD, Lionel Urrutia, MD, Hector Conoman, MD, Rodolfo Lahsen, MD, Center for Nutrition and Obesity Surgery, Clinica Las Condes, Santiago, Chile

S008 THE INCIDENCE AND MANAGEMENT OF POST-OPERATIVE HEMORRHAGE AFTER LAPAROSCOPIC GASTRIC BYPASS Michael K Fishman, MD, Tejwant S Datta, MD, Alfred Trang, MD, George Eid, MD, Ramsey Dallal, MD, Albert Einstein Medical Center, Philadelphia, PA, University of Pittsburgh, Pittsburgh, PA

V006 LAPAROSCOPIC TREATMENT FOR BOWEL OBSTRUCTION AFTER GASTRIC BY-PASS Michel Vix, MD, Monica Gualtierotti, MD, Cynthia Solano, MD, Cosimo Callari, MD, Didier Mutter, PhD, Jacques Marescaux, MD, IRCAD-EITS, University Louis Pasteur, Strasbourg, France

S009 SINGLE SITE SERIES UTILIZING THE ENDOSURGICAL OPERATING SYSTEM (EOS) FOR REVISION OF POST ROUX-EN-Y GASTRIC BYPASS STOMAL AND POUCH DILATATION Frank J Borao, MD, Steven A Gorcey, MD, Michael Chaump, MD, Monmouth Medical Center

S010 MANAGEMENT OF POST GASTRIC BYPASS NONINSULINOMA PANCREATOGENOUS HYPOGLYCEMIA (NESIDIOBLASTOSIS) Viney Mathavan, MD, Maurice Arregui, MD, Chad Davis, MD, Kirpal Singh, MD, Veronica Martin, MD, James Meachem, MD, St Vincent Hospital, Indianapolis, IN

S011 HIGH VISCERAL ADIPOSE VOLUME IMPAIRS BETA-CELL FUNCTION AND MAY INFLUENCE SURGICAL OPTIONS Edward Lin, DO, Adeola Ayeni, MD, Zhe Liang, MS, William Torres, MD, John F Sweeney, MD, Thomas R Ziegler, MD, Lawrence Phillips, MD, Nana Gletsu-Miller, PhD, Emory Bariatrics and Endocrinology, Emory University School of Medicine, Atlanta, GA

S012 INCIDENCE AND IMPLICATIONS OF ABNORMAL GLUCOSE TOLERANCE TESTING FOLLOWING GASTRIC BYPASS R Andrews, MD, J H Oren, BSE, J Yatco, MD, P C Shah, MD, M S Roslin, MD, Lenox Hill Hospital, Department of Surgery, New York, NY

Evaluation & CME Credit Forms:

Please complete the meeting evaluation form and return to the registration desk or place in an "Evaluation Drop-Box" throughout the convention center.

Visit the CME print stations on the North 300 level to print your CME credit form on-site.





Thursday, April 23, 2009

9:30 AM - 11:30 AM

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

Allied Health Patient Safety Symposium— The Role of Non-Physician Team Members in Enhancing Safety in Surgical Care

Location: North 224A-B Ballroom

Chair: Michael Holzman, M.D.; **Co-Chair:** Donna Stanbridge, R.N.

Along with exciting advancements in surgical care have come increasing concerns and regulations regarding patient safety. Recommendations from medical societies, governing boards, and requirements from third party payors have led to the development of national databases to assist our efforts to improve patient safety by minimizing patient risks. The goals and objectives for this symposium are to introduce the members to the design and role of national databases such as NSQIP and SCIP and how they can help improve our practices. Current standards in three commonly encountered challenges in surgery will be discussed as examples of how guidelines, evaluations and improvement in patient care should be incorporated into our practices.

Objectives:

After attending this symposium attendees will:

- Better understand how national databases designed for quality improvement are implemented and utilized for improvements as well as benchmarking
- Discuss examples of how common co-morbid conditions are risk adjusted and how we can strive to minimize surgical risk in such patients
- Understand how this information can be used for process and quality improvement

SCHEDULE

9:30 AM	Introduction	Michael Holzman, M.D. & Donna Stanbridge, R.N.
9:35 AM	Patient Safety Measures (SCIP & NSQIP); What Do They Achieve?	Linda Groah, R.N., M.S.N.
9:55 AM	Minimizing OBESITY & Cardiac Risk Factors	Kevin Reavis, M.D.
10:05 AM	Surgical Site Infections	Garth Jacobsen, M.D.
10:15 AM	Deep Venous Thrombosis Prophylaxis	Simon Bergman, M.D.
10:25 AM	Electrical and Thermal Safety in the OR and Endoscopy Suite	Liane Feldman, M.D.
10:35 AM	Side/Site/Safety Handoffs – What is the Hype?	Donna Stanbridge, R.N.
10:50AM	National Standards/Benchmarking; Pros, Cons and at What Cost?	Benjamin Poulouse, M.D.
11:05 AM	Discussion	

SAGES acknowledges our Gold Level Donor for their support of this symposium: Stryker Endoscopy

9:30 AM - 11:30 AM

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

SAGES/APDS/ASE Surgical Educators Forum

Location: North 221A-C Ballroom

Chair: John Mellinger, M.D.; **Co-Chair:** Gary Dunnington, M.D.

This forum will review the new national skills curriculum, including its content, access, and how to implement it. Related issues including educational institute accreditation, skills center development and administration, the science supporting skills transfer, cognitive task analysis and its role in teaching skills, and SAGES offerings in minimally invasive skill development will be reviewed. Attendees should be well equipped after this forum to apply the material in their own institutional efforts in skills training across the spectrum of surgical learners.

Objectives:

Upon completion of this forum, attendees will be able to:

- Describe the components of the National Skills Curriculum
- Appreciate the goals and merits of ACS education institute accreditation
- Outline pitfalls and solutions in skills center development and organization
- Understand the scientific foundation of skills transfer
- Describe the process of cognitive task analysis and its role in teaching skills
- Review validated SAGES educational resources for skill development

SCHEDULE

9:30 AM	Introduction	John Mellinger, M.D. & Gary Dunnington, M.D.
9:35 AM	Overview of the National Skills Curriculum	Gary Dunnington, M.D.
9:50 AM	ACS Accredited Education Institutes: What, How and Why?	Mary Klingensmith, M.D.
10:05 AM	Lessons Learned in Developing and Administering a Skills Center	Andreas Meier, M.D.
10:20 AM	The Science Supporting Skill Transfer	Neal Seymour, M.D.
10:35 AM	Cognitive Task Analysis and Its Role in Teaching Technical Skills	Maura Sullivan, M.D.
10:50 AM	Update on SAGES Skill Curricular Programs: FLS and FES	Gerald Fried, M.D.
11:05 AM	Discussion	

Thursday, April 23, 2009

9:30 AM - 3:30 PM

SAGES/IPEG Exhibits & Posters Open; Learning Center Open

11:30 AM - 1:00 PM

BREAK: Exhibits, Posters, Learning Center

11:30 AM - 1:00 PM

***Separate registration fee: \$45**

Educators Luncheon Surgical Education – From Here to Beyond...

Location: North 229A-B Ballroom

Chair: Rajesh Aggarwal, M.D.; Co-Chair: Neal Seymour, M.D.

This program examines advances in surgical education and educational solutions to address patient safety issues. A panel of experts will discuss specific innovations that may have a significant near-term impact on the education of surgeons. This discussion will consist of an overview of the potential uses of innovative simulated surgical environments – both training laboratory-based and virtual – in surgical education, as well as the impact of human factors and education directed at these factors on performance in error-sensitive environments.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Recognize the present and future utility of simulated environments for surgical training
- Describe the importance of human factors considerations in facilitating safety in health care and surgery

SCHEDULE

11:30 AM **Introduction**

Rajesh Aggarwal, M.D. & Neal Seymour, M.D.

11:35 AM **Crisis and Team Training in the Simulated OR**

Daniel B. Jones, M.D.

11:50 AM **Virtual Worlds – A New Era for Simulation?**

Rajesh Aggarwal, M.D.

12:05 PM **The Role of Human Factors in the Future of Medical Simulation**

Mark Scerbo, M.D.

12:35 AM **Discussion**





SAGES
2009

Thursday, April 23, 2009

1:00 PM - 5:00 PM

***Separate registration fee**

Laparoscopic Foregut Surgery Hands-On Course

Location: Science Care, 2020 W. Melinda Lane, Phoenix, AZ

Shuttles for faculty and course registrants will depart at 11:45 AM from the Phoenix Convention Center at 3rd Street & Monroe.

Chair: Brant K. Oelschlager, M.D.; Co-Chair: Leena Khaitan, M.D.

This course will consist of a hands-on cadaver laboratory session in which participants will receive instruction by experts in laparoscopic esophageal and gastric surgery, including safe dissection of the hiatus, creation of various funduplications, Heller myotomy, and hiatal hernia repair, including complex hiatal repair with mesh placement. Participants will have the opportunity to use a variety of surgical devices used in these procedures for hemostasis, suturing, stapling, and various meshes. Lab stations will have a 1:3 faculty: participant ratio. Participants will also be exposed to the various equipment for esophageal function testing including high resolution manometry.

Objectives:

By the end of this session, participants will be able to:

- Technically describe how to safely perform laparoscopic foregut surgery
- Describe proper patient positioning and port placement for laparoscopic foregut operations
- List the key steps and operative sequencing for laparoscopic funduplications, hiatal hernia repair, and Heller myotomy.
- Review various approaches for both straightforward and complex situations in hiatal hernia repair
- Utilize greater understanding, exposure, and performance of foregut operations to improve patient safety and outcomes
- Discuss esophageal motility disorders and the technology available to diagnose these disorders

SCHEDULE

12:15 PM **Registration and Lunch at Science Care**

1:00 PM **Hands-On Lab (Instructor:Participant Ratio 1:3)**

1. Foregut dissection techniques
2. Heller myotomy
3. Hiatal closure and placement of mesh
4. Nissen fundoplication
5. Toupet fundoplication
6. Dor fundoplication
7. Esophageal lengthening procedures

5:00 PM **Shuttle departs for the Phoenix Convention Center**

Faculty

Gina Adrales, M.D.

Michael Holzman, M.D.

Roger Tatum, M.D.

Steven P. Bowers, M.D.

William Laycock, M.D.

Deron Tessier, M.D.

Fredrick Brody, M.D.

Edward Lin, M.D.

Ashley Vernon, M.D.

Lily Chang, M.D.

Raymond Onders, M.D.

Thomas Watson, M.D.

SAGES acknowledges unrestricted educational grants in support of this course from

Karl Storz Endoscopy-America and Stryker Endoscopy.

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

Cardinal Health, Cook, Cooper Surgical, Covidien, Davol Inc., Ethicon Endo-Surgery Inc., Ethicon Inc., Gore & Associates, Karl Storz Endoscopy-America, Microline-Pentax, Olympus-Gyrus ACMI, Stryker Endoscopy, Synovis Surgical

Do you have an upcoming course? Find out how to obtain SAGES endorsement

SAGES offers Course and Program Directors the opportunity to have their courses reviewed and endorsed by the SAGES Continuing Education Committee. Endorsement brings the following benefits to Course Directors:

1. Courses will be listed on the SAGES website
2. Courses will be included in SCOPE, the SAGES bi-annual newsletter.
3. SAGES Endorsed Course list will be mailed or faxed to interested surgeons upon request (average of 10-25 requests per month).
4. The Course Director may include the SAGES Endorsement Statement on promotional brochures and course materials.

SAGES has two applications for course endorsement: individual course endorsement and institutional course endorsement. For more information, please contact Aaron Goodman in the SAGES office at aaron@sages.org or visit the SAGES website: http://sages.org/education/endorsed_courses/applications.php

Thursday, April 23, 2009

1:00 PM - 5:00 PM

*Separate registration fee

Advanced Laparoscopic Techniques Hands-On Course: From Reduced Port and Single Incision to Hand Assist and Other Advanced Techniques

Location: North Exhibit Hall A

Chair: Daniel J. Scott, M.D.; **Co-Chair:** Paul G Curcillo II, M.D.

This course will consist of a hands-on animate porcine lab in which participants will receive instruction by experts in various advanced techniques in laparoscopic surgery, including single incision laparoscopic cholecystectomy, laparoscopic anastomosis creation, and hand-assisted splenectomy and nephrectomy. Participants will have the opportunity to use a variety of energy sources, suturing techniques, stapling devices, and novel devices for single incision minimal access surgery including articulating instruments and access ports. Lab stations will have a 1:3 faculty to participant ratio.

Objectives:

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

- Enhance their technical ability to perform single incision laparoscopic procedures
- Develop skills for hand-assisted operations, laparoscopic energy sources and suturing
- Understand key steps in creating anastomoses laparoscopically

SCHEDULE

1:00 PM **Introduction**
1:05 PM **Single Incision Cholecystectomy**
2:05 PM **Single Incision Lap Band or Nissen**
3:05 PM **Lap Gastrojejunostomy**
4:05 PM **HALS Splenectomy & Nephrectomy w/Energy Sources**
Box-trainer Suturing Stations (Concurrent with Each Segment)

Daniel J. Scott, M.D. & Paul Curcillo, M.D.

Faculty:

Animate Stations:

Homero Rivas, M.D.	Brent Matthews, M.D.	Santiago Horgan, M.D.
Alex Rosemurgy, M.D.	Eric Hungness, M.D.	Guillermo Dominguez, M.D.
Garth Jacobsen, M.D.	Abhay Rane, M.S.	Shawn Tsuda, M.D.
William Richardson, M.D.	Benjamin Poulouse, M.D.	Michael Rosen, M.D.
Ninh Nguyen, M.D.	Andrew Gumbs, M.D.	Casey Graybeal, M.D.
Marc Bessler, M.D.	Prashanth Rao, M.D.	

Suturing Stations:

Allan Okrainec, M.D.	Arsalla Islam, M.D.	Gregory Mancini, M.D.
Melina Vassiliou, M.D.	Simon Bergman, M.D.	

*SAGES acknowledges unrestricted educational grants in support of this course from
Aesculap Inc., Applied Medical, Covidien, Karl Storz Endoscopy-America,
Olympus-Gyrus ACMI, and Stryker Endoscopy.*

*SAGES acknowledges contributions in-kind in support of this course from
Aesculap Inc., Allergan, Applied Medical, Cardinal Health, Covidien,
Karl Storz Endoscopy-America, Novare Surgical Systems, Olympus-Gyrus ACMI and Stryker Endoscopy.*

2009 SAGES – ALACE and Rural Surgeons International Webcast Sessions – Part of the SAGES Go Global Initiative

International SAGES Members - Sign-up your institution TODAY to be part of the 2009 SAGES meeting by participating in the SAGES International Webcast Sessions. For registration information, please contact Jacqueline Narváez via email at jacqueline@sages.org

Wednesday, April 22, 2009

TIME	SESSION	CHAIR (S)/SPEAKER
7:30am - 11:30am	SAGES Flexible Endoscopy Postgraduate Course	Chair: Ted Trus, MD; Co-Chair: Klaus Thaler, MD
1:00pm - 3:30pm	ALACE Session	Chair: Natan Zundel, MD; Co-Chair: Raul Rosenthal, MD

Thursday, April 23, 2009

TIME	SESSION	CHAIR (S)/SPEAKER
1:00pm - 4:30pm	SAGES/ASGE NOTES/Endolumenal Session	Chair: Santiago Horgan, MD; Co-Chair: David Rattner, MD

SAGES gratefully acknowledges the following companies and individuals for their generous support towards the SAGES Go Global Initiative: Covidien, Ethicon Endo-Surgery, Inc. and SAGES Education & Research Foundation

*SAGES gratefully acknowledges the following individuals for their generous contributions in kind:
Karl Storz Endoscopy in collaboration with Premium Medical, Horacio Asbun, MD,
Ramon Berquer, MD, David Earle, MD, Mark Pleatman, MD, Julio Teixeira, MD*





Thursday, April 23, 2009

1:00 PM - 5:15 PM

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

SAGES/ASGE NOTES®/Endolumenal Symposium

(part of SAGES/ALACE International Webcast)

Location: West 301A Ballroom

Chair: Santiago Horgan, M.D.; **Co-Chair:** David Rattner, M.D.

This program will discuss the physiological underpinnings of NOTES® as well as update the participants on ongoing technology development. The world's experience in NOTES® to date will be presented and controversial areas will be discussed in a debate format by leading experts in the field.

Objectives:

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

- Describe the advantages and disadvantages of different natural orifice access routes to the peritoneal cavity
- List the areas in NOTES® that are in need of further device and technology development
- Discuss the worldwide human NOTES® experience to date

SCHEDULE

1:00 PM	Introduction	Santiago Horgan, M.D. & David Rattner, M.D.
	Physiologic Challenges in NOTES®	
1:05 PM	Contamination in NOTES® Procedures: How Much and Does it Matter?	W. Scott Melvin, M.D.
1:15 PM	Impact of Pneumoperitoneum, Pneumogastrum in NOTES®: Pain and Pressure	Jeffrey Marks, M.D.
1:25 PM	Is Transrectal Access Safe?	Antonio Lacy, M.D.
1:35 PM	Is Transvaginal Access Safe?	Emily S. Lukacz, M.D.
1:45 PM	Is Transgastric Access Safe?	Nathaniel Soper, M.D.
1:55 PM	Challenges in Pediatric Patients: Are They Any Different?	Steven Rothenberg, M.D.
2:05 PM	Discussion	
	Technology/Device Development for NOTES®	
2:15 PM	Platforms to Enhance Dexterity: Are They Needed?	Lee Swanstrom, M.D.
2:25 PM	Role of Robotics, Minirobots in NOTES®	Dmitry Oleynikov, M.D.
2:35 PM	Suturing, Closing, and Anastomotic Devices for NOTES®	Nicola Di Lorenzo, M.D.
2:45 PM	Magnets in NOTES®	Daniel J. Scott, M.D.
2:55 PM	Discussion	
3:05 PM	Break	
	Endolumenal Therapies for Obesity	
3:20 PM	Sleeve: Duodenal, Transgastric	Paul Swain, M.D.
3:30 PM	Pouch Reduction	Garth Jacobsen, M.D.
3:40 PM	Discussion	
	NOTES® Clinical Experience to Date	
3:50 PM	South America	Jose Speranza, M.D.
4:00 PM	United States of America	Santiago Horgan, M.D.
4:10 PM	Asia/India	Jimmy So, M.D.
4:20 PM	Europe	Karl H. Fuchs, M.D.
4:30 PM	The Future of NOTES® and NOSCART	David Rattner, M.D.
4:40 PM	Discussion	
	Concluding Debate	
4:50 PM	Why No to NOTES®?	Frederick Greene, M.D.
5:00 PM	Why Yes to NOTES®?	Mark A. Talamini, M.D.

SAGES acknowledges unrestricted educational grants in support of this course from Covidien, Ethicon Endo-Surgery, Inc., Olympus-Gyrus ACMI and Stryker Endoscopy.

Thursday, April 23, 2009

1:00 PM - 2:30 PM

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

The Changing Landscape of Recertification in Surgery Panel: Maintenance of Certification, Outcomes Analysis and the Practicing Surgeon

Location: West 301B-C Ballroom

Chair: Vic Velanovich, M.D.; Co-Chair: John Morton, M.D.

This panel will present information on recertification and maintenance of certification for the practicing surgeon. It will discuss different methods available for the practicing surgeon to successfully achieve recertification, maintain certification, and cultivate skills for quality improvement.

Objectives:

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

- Review the American Board of Surgery's process of recertification and policy on maintenance of certification
- Describe and access the surgeon-generated outcomes tracking databases available through the American College of Surgeons and SAGES
- Describe the administrative databases available for outcomes assessment and how the individual surgeon can use these databases
- Develop skills to use patient-centered data techniques to track outcomes
- Summarize the federal government's position on individual surgeon maintenance of certification and quality improvement

SCHEDULE

1:00 PM	Introduction	Vic Velanovich, M.D. & John Morton, M.D.
1:05 PM	Maintenance of Certification and Recertification: The American Board of Surgery's View	Jo Buyske, M.D.
1:20 PM	Blending the American College of Surgeons Practice-Based Initiative with the SAGES Outcomes Initiative Databases as a Means of Maintenance of Certification and Practicing Surgeon Performance Improvement	Howard Tanzman, B.S., M.B.A.
1:35 PM	Using Administrative Databases in Developing a Quality Improvement Program	John M. Morton, M.D.
1:50 PM	Patient-Centered Outcomes in Clinical Practice as a Means of Maintenance of Certification	Vic Velanovich, M.D.
2:05 PM	Discussion	

SAGES Goes Green!

In an effort to support the environment, you will see less paper in Phoenix for the 2009 SAGES 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, digital posters, and Postgraduate course syllabi will be available on thumb drive for all attendees. The "SAGES Electronic Meeting Guide" will be completely navigational and searchable. Print kiosks will also be available throughout the Phoenix Convention Center, but we urge all attendees to conserve paper and protect the environment by not printing unnecessary copies.

SAGES acknowledges a generous educational grant in support of SAGES Electronic Meeting Guide from Ethicon Endo-Surgery, Inc.

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.





Thursday, April 23, 2009

1:00 PM - 5:00 PM

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

Scientific Session Concurrent Sessions (accepted oral & video presentations)

1:00 PM - 2:30 PM

SS03: Best of SAGES Oral Posters Scientific Session Location: North 222A-C

Moderators: Aurora Pryor, MD and Donald Selzer, MD

P015 'LESSONS' LEARNED: SINGLE CENTRE EXPERIENCE OF SINGLE PORT CHOLECYSTECTOMY Prashanth P Rao, MD, Sonali Rao, MD, Pradeep Rao, MD, Mamata Hospital, India

P017 DEXTEROUS ROBOT FOR SINGLE INCISION ADVANCED MINIMALLY INVASIVE SURGERY Amy C Lehman, MS, Nathan A Wood, MS, Shane M Farritor, PhD, Matthew R Goede, MD, Dmitry Oleynikov, MD, University of Nebraska-Lincoln, University of Nebraska Medical Center

P005 EFFECTIVENESS OF A NEW TROCAR SYSTEM TO ENABLE NOTES Edward D Auyang, MD, Eric S Hungness, MD, Benjamin Yuh, BS, Renee Rowe BS, ME, Greg Bakos, MS, Michelle Lewis BBA, Suzanne Thompson DVM, MS, Brian Thompson MBA, Jeffrey W Hazey, MD, Department of Surgery, Northwestern University Feinberg School of Medicine, Department of Surgery, The Ohio State University College of Medicine, Columbus, OH

P006 PHYSIOLOGIC IMPACT OF PROLONGED INTRA-LUMINAL INSUFFLATION Cedric S Lorenzo, MD, Thai H Pham, MD, Kyle A Perry, MD, Blair A Jobe, MD, John G Hunter, MD, Charles R Phillips, MD, Robert O'Rourke, MD, Oregon Health and Science University, Portland, OR

P009 PATIENT SATISFACTION BEST DETERMINES THE MANAGEMENT OF RECURRENT DYSPHAGIA AFTER HELLER MYOTOMY FOR ACHALASIA Waleed Saleh, MD, Mathieu Rousseau, MD, Lorenzo E Ferri, MD, Liane S Feldman, MD, Donna Stanbridge, RN, Serge Mayrand, MD, Gerald Fried, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery, McGill University Health Centre, Montreal, Quebec, Canada

P008 LAPAROSCOPIC SURGERY FOR EPIPHRENIC DIVERTICULA: THE IDEAL APPROACH Renato V Soares, MD, Martin I Montenovo, MD, Carlos A Pellegrini, MD, Brant K Oelschlager, MD, University of Washington Medical Center, Seattle, WA

P012 LAPAROSCOPIC VERSUS OPEN RESECTION OF GASTROINTESTINAL STROMAL TUMORS (GISTS) Laleh G Melstrom, MD, Joseph Phillips, MD, David J Bentrem, MD, Jeffrey D Wayne, MD, Feinberg School of Medicine Northwestern University, Chicago, IL

P014 NEEDLESCOPIC RESECTION OF SMALL PULMONARY NODULE AFTER PREOPERATIVE DUAL LOCALIZATION WITH HOOK WIRE AND LIPIODOL Hyun Koo Kim, MD, Doo Young Kang, MD, Yoon Kyung Kim, MD, Hwan Seok Yong, MD, Young Ho Choi, MD, College of Medicine, Korea University Guro Hospital

P018 DIFFERENT APPROACHES FOR LAPAROSCOPIC ADRENALECTOMY LOOKING FOR A TAILORED ROUTE E Lezoche, MD, R Campagnacci, MD, AM Paganini, MD, M Coletta, MD, A Patrizi, MD, M Rimini, MD, M Guerrieri, MD, 1 Dpt of Surgery Paride Stefanini II Clinica Chirurgica, La Sapienza, Roma, Italy ; 2 Dpt of Metodologia Chirurgica University of Ancona, Italy

P019 LAPAROSCOPIC ADRENALECTOMY FOR PRIMARY HYPERALDOSTERONISM: COMPARISON OF CLINICAL RESPONSE BASED ON ADRENAL PATHOLOGY Jennifer E Keller, MD, Charles J Dolce, MD, K. Christian Walters, MD, Yuri W Novitsky, MD, Sathya G Jyothinagaram, MD, B. Todd Heniford, MD, Kent W Kercher, MD, Division of GI and Minimally Invasive Surgery, Carolinas Medical Center, Charlotte, NC

P016 BLUNT THYROID WORKING SPACE CREATION: A TOOL TO FACILITATE TRANSAXILLARY ENDOSCOPIC THYROIDECTOMY Suthep Udomsawaengsup, MD, Pornthep Prathanvanich, MD, Suppa-ut Pungpapong, MD, Chadin Tharavej, MD, Sopark Manasnayakorn, MD, Sirachai Jindarak, MD, Patpong Navicharern, MD, Chula Minimally Invasive Surgery Center, Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

P011 A PROSPECTIVE RANDOMIZED TRIAL COMPARING SINGLE STAGE VERSUS TWO STAGE MANAGEMENT OF PATIENTS WITH GALL STONES AND CBD STONES Virinder K Bansal, MS, M C Misra, MS, Manik Prabhu, MS, Parmod Garg, MD, Department of Surgical Disciplines and Gastroenterology, All India Institute of Medical Sciences, New Delhi, India

P013 A VALIDATED SUBJECTIVE RATING OF DISPLAY QUALITY: THE MARYLAND VISUAL COMFORT SCALE Jacob Seagull, PhD, Tommy Lee, MD, Erica Sutton, MD, Carlos Godinez, MD, Gysung Lee, PhD, Adrian Park, MD, University of Maryland School of Medicine, Baltimore, MD

P003 A NOVEL BASIC LAPSIM® CURRICULUM IMPROVES FUNDAMENTALS OF LAPAROSCOPIC SURGERY SKILLS PERFORMANCE IN SURGICAL INTERNS Jenny J Choi, MD, Nancy J Hogle, MS, Andrew J Duffy, MD, Tracey L Arnell, MD, Dennis L Fowler, MD, Columbia University, College of Physicians and Surgeons, Department of Surgery, New York, NY

P004 OUTCOMES OF FUNDAMENTALS OF LAPAROSCOPIC SURGERY (FLS) SKILLS TRAINING FOR SENIOR MEDICAL STUDENTS ENTERING SURGICAL RESIDENCY Richard A Pierce, MD, Debra Tiemann, RN, Brent D Matthews, MD, L Michael Brunt, MD, Department of Surgery and Institute for Minimally Invasive Surgery, Washington University School of Medicine, Saint Louis, MO

P010 PREOPERATIVE ENDOSCOPY IN THE EVALUATION OF PATIENTS BEFORE BARIATRIC SURGERY Fady Moustarah, MD, Joseph Talarico, MD, Jill Zink, MD, Allen Mikhail, MD, Shaneeta Johnson, Amy Cha, MD, Vasanth Stalin, MD, Stacy Brethauer, MD, Philip Schauer, BA, Bipan Chand, MD, Cleveland Clinic Foundation, Cleveland, OH

P001 A COMPARISON OF TOTAL LAPAROSCOPIC HEMI-COLECTOMY VS ASSISTED LAPAROSCOPIC AND LAPAROTOMY Gilberto Lozano-Dubernard, MD, Juan J Calva-Mercado, MD, Fidel Ruiz-Healy, MD, Ramon Gil-Ortiz, MD, Mauricio Rodriguez-Gonzalez, MD, Siegfried Figueroa-Barkow, MD, Hospital Angeles del Pedregal, Mexico City, Mexico

P002 COMPARISON OF INTRACORPOREAL VERSUS EXTRACORPOREAL ANASTOMOSIS IN LAPAROSCOPIC HEMICOLECTOMY Jayleen Grams, MD, Winnie Tong, MD, Alexander J Greenstein, MD, Barry Salky, MD, Mount Sinai Hospital, New York, NY

P007 USING VIBRATION TO PROVIDE FORCE INFORMATION IN SURGERY Audrey K Bell, BS, Steven D Schwartzberg, MD, Caroline G Cao, PhD, Tufts University, Cambridge Health Alliance, Cambridge, MA

Thursday, April 23, 2009

2:30 PM - 5:00 PM

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

Controversies and Techniques in Solid Organ Surgery A Video and Evidence Based Appraisal

Location: West 301B-C Ballroom

Chair: Horacio Asbun, M.D.; **Co-Chair:** Eric Poulin, M.D.

Minimal access approaches to solid organ surgery have been practiced for almost two decades. Controversy still exists in regards to certain surgical approaches as well as in regards to utilization of the laparoscopic approach in the presence of solid organ malignancy. This course addresses some of these controversial issues by giving a background on what the current evidence is for performing different techniques and by describing the technical steps of the surgical procedures.

Objectives:

At the completion of the session the course attendees should be able to:

- Identify the nature of current controversies in laparoscopic solid organ surgery
- Discuss the current data and the results to justify the different approaches used
- Review technical steps and tips on the surgical techniques
- Discuss tips in performing intra-operative hepatobiliary and pancreas ultrasound

SCHEDULE

2:30 PM	Introduction	Horacio Asbun, M.D. & Eric Poulin, M.D.
	Laparoscopic Adrenalectomy	
2:35 PM	Which is Best: Transabdominal or Retroperitoneal Approach?	
	Revisiting an Old Dilemma	
2:45 PM	Laparoscopic Transabdominal Adrenalectomy	Quan-Yang Duh, M.D.
2:55 PM	Laparoscopic Retroperitoneal Adrenalectomy	Barry Inabnet, M.D.
3:05 PM	Discussion	Martin Walz, M.D.
	Laparoscopic Surgery for Liver Malignancy	
3:20 PM	Malignancy of the Liver:	
	Are There Enough Data to Decide Laparoscopic Versus Open?	TBA
3:30 PM	Ultrasound of the Liver and Pancreas: Doing it Right	Allan Siperstein, M.D.
3:40 PM	Technical Steps in Laparoscopic Left Hepatectomy	T. Clark Gamblin, M.D.
3:50 PM	Technical Steps in Laparoscopic Right Hepatectomy	Brice Gayet, M.D.
4:00 PM	Discussion	
	Laparoscopic Surgery for Pancreatic Malignancy	
4:15 PM	Laparoscopic Pancreatectomy for a Pancreatic Body or Tail Mass:	Horacio Asbun, M.D.
	Current Status and Technique	
4:30 PM	Radical Antegrade Modular Pancreato-Splenectomy (RAMPS) Procedure:	
	Should It be the Preferred Operation for Distal Pancreatic Masses?	Steven Strasberg, M.D.
4:45 PM	Discussion	

2:30 PM - 3:30 PM

SS04: Education / Simulation I Location: North 222A-C

Moderators: Daniel Jones, MD and Nicole Fearing, MD

S013 GOALS-BASED ASSESSMENT OF RESIDENT SKILL IN ADVANCED LAPAROSCOPIC CASES Aku O Ude Welcome, MD, Nancy J Hogle, MS, Department of Surgery, Columbia University College of Physicians and Surgeons, New York, NY

S014 COMPUTER-BASED HAPTIC AND NONHAPTIC VIRTUAL REALITY SURGICAL SIMULATORS: PERFORMANCE CHARACTERISTICS AND PERCEPTIONS OF NEW USERS David W Lin, MD, Eyad M Wohaibi, MD, John R Romanelli, MD, Richard D Zlotnik, MD, Jay N Kuhn, MD, Rob W Bush, BS, Neal E Seymour, Baystate Medical Center Tufts University School of Medicine, Springfield, MA

S015 TESTING CONSTRUCT VALIDITY FOR A VIRTUAL REALITY COLONOSCOPY SIMULATOR: MODULE MATTERS Raad Fayeze, MD, Liane S Feldman, MD, Pepa Kaneva, MS, Gerald M Fried, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery, McGill University, Montreal, Quebec, Canada

S016 LAPAROSCOPIC COLON SIMULATOR Reza Rahbar, MD, Alexandre Derevianko, MD, Benjamin Schneider, MD, Deborah Nagle, MD, Beth Israel Deaconess Medical Center, Boston, MA

S017 DEVELOPMENT AND VALIDATION OF MENTAL PRACTICE AS A TRAINING STRATEGY FOR LAPAROSCOPIC SURGERY S Arora, BS, R Aggarwal, PhD, N Sevdalis, PhD, P Sirimanna, P Crochet, R Kneebone, PhD, A Moran, PhD, A Darzi, PhD, Imperial College, London, U.K.

S018 THE EFFECT OF VIDEOGAME "WARM-UP" ON PERFORMANCE OF LAPAROSCOPIC SURGERY TASKS James C Rosser, Jr., MD, Bjorn S Herman, MD, Paul Lynch, MD, Douglas Gentile, PhD, Beth Israel Medical Center, New York, NY; University of Miami School of Medicine; New York University; Iowa State University





Thursday, April 23, 2009

3:30 PM - 5:00 PM

SS05: Hernia I Location: North 222A-C

Moderators: Maurice Arregui, MD and Estuardo Behrens, MD

S019 LAPAROSCOPIC VENTRAL/INCISIONAL HERNIA REPAIR WITH TISSUE AUGMENTATION AND TRANSFASCIAL FIXATION, 17 YEARS FOLLOW UP Morris E Franklin, MD, Guillermo R Portillo, MD, Jeffrey L Glass, MD, John J Gonzalez, MD, Mike Renfrow, MD, Eduardo A Perez, MD, Texas Endosurgery Institute, San Antonio, TX

S020 PROSPECTIVE EVALUATION OF ADHESION CHARACTERISTICS TO INTRAPERITONEAL MESH AND ADHESIOLYSIS-RELATED COMPLICATIONS DURING LAPAROSCOPIC RE-EXPLORATION AFTER PRIOR VENTRAL HERNIA REPAIR Eric D Jenkins, MD, Victoria H Yom, BS, Lora Melman, L Michael Brunt, MD, Margaret M Frisella, RN, Brent D Matthews, MD, Department of Surgery, Section of Minimally Invasive Surgery, Washington University, St. Louis, Missouri

S021 LAPAROSCOPIC REPAIR OF UMBILICAL AND PARAUMBILICAL HAS THE LOWEST RATE OF RECURRENCE Tino A Solomon BSc, MBB, SP Wigneswaran, BS, Matthew Tutton, MD, ICENI Centre, Department of Laparoscopic Surgery, Colchester Hospital University NHS Foundation Trust, Essex, UK

V007 LAPAROSCOPIC MANAGEMENT OF SPIGELIAN HERNIAS Matthew Coates, MD, Chris Solis, MD, Ahmed Mahmoud, MD, San Joaquin General Hospital, French Camp, California

S022 LAPAROSCOPIC TOTAL EXTRAPERITONEAL REPAIR IN RECURRENT INGUINAL HERNIAS: COMPARING OUTCOME WITH PRIMARY HERNIA REPAIR IN 937 PATIENTS Pankaj Garg, MS, Shaanemeet, MS, Mohamed Ismail, MS, 1. MM Institute of Research and Medical Sciences, Mullana, Haryana, India 2. Shah Satnam ji Specialty Hospitals, Sirsa, Haryana, India 3. Moulana Hospital, Perianthalmanna, Kerala, India

V008 LAPAROSCOPIC REPAIR OF A RIGHT PARADUODENAL HERNIA Sebastian V Demyttenaere, MD, Scott Melvin, MD, The Ohio State University, Columbus, OH

V009 LAPAROSCOPIC GRYNFELT HERNIA REPAIR Karem Harth, MD, Michael J Rosen, MD, University Hospital at Case Medical Center, Cleveland, OH

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

5:30 PM - 7:00 PM

Attendance is Free for any SAGES attendee.

Industry Education Events (No registration required)

Please join selected industry partners for an informative evening of presentations on Thursday evening, immediately following the SAGES sessions. **These events are not planned nor accredited for CME by SAGES.**

Covidien – How Energy Enables Minimally Invasive Procedures – SILS in Lap Chole, Multimodal Device in Lap Colectomy, Microwave Ablation in Liver

Location: North 224 A-B

Moderator: Michael Stamos, MD, Chief, Division of Colon and Rectal Surgery, University of California, Irvine, Irvine, CA

Course Description

This course will cover the role energy plays in the ability to perform minimally invasive procedures. The participating physicians will present clinical data on the technology and procedural application of energy. The physicians will discuss surgical techniques that can provide safe and positive outcomes for various outpatient procedures. The session will conclude with a clinical data review, followed by a question and answer segment.

Learning Objectives

- Understand the role of electrosurgery and its application
- Review clinical data on energy as it relates to colorectal and general surgery
- Discuss the tips and techniques necessary to perform minimally invasive procedures
- Discuss patient benefits of using energy in MIS

How Energy Enables Minimally Invasive Procedures

Glenn Ault, MD, Colorectal Surgery, General Surgery, University of Southern California, Los Angeles, CA

Lap Cholecystectomy Using SILS

Adam Kurtin, MD, General Surgery, Port St. Lucy Hospital, Port St. Lucy, FL

Microwave Ablation in Liver

David A. Iannitti, MD, Chief, HPB Surgery, Carolinas Medical Center, Charlotte, NC

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

Davol, Inc. – The Evolution of Laparoscopic Ventral Hernia Repair: Evidence Based Discussion for Absorbable Fixation

Location: North 229 A-B

Speaker: John Olsofka, MD, FACS

Topics To Be Discussed:

- Data review of past and present laparoscopic ventral hernia repair techniques
- Material review of synthetic and biologic implants
- Material review of absorbable and non-absorbable fixation devices
- Preclinical review of absorbable fixation data

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

Thursday, April 23, 2009

Karl Storz Endoscopy-America and Ethicon Endo-Surgery, Inc. – The New Revolution in Minimally Invasive Surgery: Single Port Access (SPA™) and other Minimal Access Techniques – Why Do It?

Location: North 221 A-C

Speakers:

Paul G Curcillo II, MD, FACS, Vice Chairman, Department of Surgery

Director, Robotic and Minimally Invasive Surgery, Drexel University College of Medicine, Philadelphia, PA

Stephanie A King, MD, Associate Professor, Department of Obstetrics and Gynecology, Director, Division of Gynecologic Oncology, Drexel University College of Medicine, Philadelphia, PA

Wade Naziri, MD, Southern Surgical Associates and East Carolina University Clinical Faculty, Greenville, NC

Overview:

Karl Storz Endoscopy-America, Inc together with Ethicon Endo-Surgery, Inc will host this industry night symposium. Drs. Curcillo and King will discuss the development and evolution of the SPA™ technique, first introduced at SAGES in 2007. Since then, this new technique has gained momentum across many surgical specialties. SPA™ Banding is becoming increasingly popular in the world of Bariatric Surgery. Learn where we are today and where we are headed, from Dr. Wade Naziri.

Drawing from their two years of experience evolving this new technique, Drs. Curcillo and King will discuss the benefits and drawbacks of this new surgical platform. Attention to safety, instrumentation, access devices, future directions and the relationship of SPA with other emerging procedures such as NOTES will be presented.

You may already have all the tools you need to perform Single Port Access.

Find out more, at the SAGES industry night symposium.

*This is a non-CME activity presented and supported by
Karl Storz Endoscopy-America, Inc. and Ethicon Endo-Surgery, Inc.*

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

7:00 PM - 9:00 PM

***Included with Registration**

The Great Presidential Debates

Location: West 301A Ballroom

Chair: Adrian Park, M.D.; **Co-Chair:** Bruce Schirmer, M.D.

Through the presentations within this session, a broad range of issues (political, educational and clinical) relevant to SAGES surgeons will be addressed in an engaging manner and dynamic format. **Refreshments will be served.** An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

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

- Discuss the issues framing the Universal Healthcare debate
- Review the challenges of training general surgery residents in the 21st century
- List advances and concerns regarding mesh repair of hiatal hernias

SCHEDULE

7:00 PM	Introduction	Adrian Park, M.D. & Bruce Schirmer, M.D.
	Time to Hop Tracks in Surgical Training (4 and 2 vs. 5 years)	
7:05 PM	Pro	Nathaniel Soper, M.D.
7:20 PM	Con	Jeffrey Ponsky, M.D.
	Universal Healthcare: Can and Must Work (For Surgeons)	
7:35 PM	Pro	Gerald Fried, M.D.
7:50 PM	Con	Frederick Greene, M.D.
	Don't Mesh with the Hiatus	
8:05 PM	Pro	Jeffrey Peters, M.D.
8:20 PM	Con	John Hunter, M.D.
	Tastes Great vs. Less Filling	
8:35 PM	Tastes Great	Steve Eubanks, M.D.
8:45 PM	Less Filling	Daniel Deziel, M.D.
8:55 PM	Discussion	

SAGES acknowledges our Silver Level Donors for their support of this debate:

Boston Scientific
Davol, Inc.
Gore & Associates





Friday-at-a-Glance

All courses, sessions and panels take place at the Phoenix Convention Center unless otherwise noted.

Friday, April 24, 2009	Time	Room
SS06: Single Incision / Single Port Laparoscopy	7:00 - 8:30 AM	North 222A-C Ballroom
SS07: Esophageal / Gastric Surgery	7:00 - 8:30 AM	North 224A-B Ballroom
Diabetes and Metabolic Syndrome Panel	7:00 - 8:30 AM	West 301B-C Ballroom
Evidence Based Guidelines Panel	7:00 - 8:30 AM	North 221A-C Ballroom
SAGES/ASCRS Laparoscopic Colorectal Surgery Panel	7:00 - 8:30 AM	West 301A Ballroom
SS08: Plenary Session I	8:30 - 9:30 AM	West 301A Ballroom
Exhibits, Posters & Learning Center Open	9:30 AM - 3:30 PM	North Exhibit Hall B-E
SAGES Presidential Address: Mark Talamini, MD	9:30 - 10:00 AM	West 301A Ballroom
SAGES Gerald Marks Lecture: John Cameron, MD	10:00 - 10:30 AM	West 301A Ballroom
SS09: Colorectal II	10:30 - 11:30 AM	West 301A Ballroom
SS10: Basic Science	10:30 - 11:30 AM	North 224A-B Ballroom
Re-Operative Complications Panel	10:30 AM - 12:00 PM	West 301B-C Ballroom
Global Initiative Panel	10:30 AM - 12:00 PM	North 221A-C Ballroom
From FLS to the Web Learning Center Panel	10:30 - 11:30 AM	North 222A-C Ballroom
BREAK: Exhibits, Posters & Learning Center	11:30 AM - 1:00 PM	North Exhibit Hall B-E
FREE Lunch in Exhibit Hall for All Attendees	12:00 - 1:00 PM	North Exhibit Hall D-E
Surgeons in Service Lunch	12:00 - 1:00 PM	North 229A-B Ballroom
Friday Afternoon at the Movies:		West 301A Ballroom
SAGES Video Classics Session	1:00 - 3:00 PM	
SAGES/JSES International Olympic MIS Video Session	3:00 - 5:00 PM	
From Medical Device to Field Development Session	1:00 - 3:30 PM	West 301B-C Ballroom
SAGES/AHS Hernia Case Discussion Panel	1:00 - 2:30 PM	North 222A-C Ballroom
Resident & Fellows Scientific Session	1:00 - 3:30 PM	North 221A-C Ballroom
Best Practices for Surgical Treatment of Obesity Session	1:00 - 3:30 PM	North 224A-B Ballroom
SS11: Ergonomics / Instrumentation / Robotics	2:30 - 3:30 PM	North 222A-C Ballroom
SS12: New Technology / Surgical Innovation	3:30 - 5:00 PM	North 221A-C Ballroom
SS13: Complications	3:30 - 4:30 PM	North 222A-C Ballroom
SAGES/IPEG Joint Panel: Urgent and Emergent Acute Care Problems in Pediatric and Adult Patients	3:30 - 5:00 PM	North 224A-B Ballroom
SAGES Game Time	4:30 - 5:30 PM	West 301B-C Ballroom
Meet the Leadership Reception (for residents, fellows & new members)	6:00 - 7:00 PM	Phoenix Sheraton Hotel Valley of the Sun Room
SAGES/IPEG Main Event & International Sing-Off	7:30 - 11:00 PM	Corona Ranch

Videos in the Video Channel Loop can be viewed in the dedicated viewing area set up in the Exhibit Hall.

The viewing area will be next to the Learning Center. Look for the hanging sign "SAGES 2009 Video Channel Loop Viewing Area." Viewing hours are Thursday & Friday 9:30AM - 3:30PM, Saturday 9:30AM - 1:30PM. Video Channel Loop abstracts are on page 162.



Friday, April 24, 2009

Scientific Sessions & Panels

Description:

This section of the SAGES Meeting includes panels with invited faculty who will speak on specific topics, and sessions of oral & video presentations of abstracts selected by the SAGES Program Committee. Panel information is listed below.

What Is Included:

The SAGES Scientific Session is included in Registration SuperPass (Option A). Thursday sessions (concurrent only) are also included in Registration Option B. Friday/Saturday sessions and panels are included in Registration Option C.

7:00 AM - 8:30 AM

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

Concurrent Sessions: (accepted oral & video presentations)

7:00 AM - 8:30 AM

SS06: Single Incision / Single Port Laparoscopy Location: North 222A-C

Moderators: Desmond Birkett, MD and Brian Dunkin, MD

S023 SINGLE PORT ACCESS (SPA) CHOLECYSTECTOMIES: MULTI-INSTITUTIONAL REPORT OF THE FIRST 100 CASES

Andrew S Wu, MD, Erica R Podolsky, MD, Paul G Curcillo, II, MD, M Bessler, MD, L Cohen, MD, C Copper, MD, R Dunham, MD, S Fendley, MD, C Graybeal, MD, A Gumbs, MD, A Iannelli, MD, N Katkhouda, MD, W Kelley, MD, R Mason, MD, M Neff, MD, M Norton, MD, Department of Surgery, Drexel University, College of Medicine, Columbia University, College of Physicians, Kennedy Health System, Long Street Clinic, Richmond Surgical Group, University of Southern California, University of Nice-Sophia-Antipolis

S024 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY, INITIAL EVALUATION OF A LARGE SERIES OF PATIENTS

Homero Rivas, MD, Esteban Varela, MD, Daniel Scott, MD, Department of Surgery, University of Texas Southwestern Medical Center, Dallas, Texas

S025 LEARNING CURVE SEEN WITH SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY Pratibha Vemulapalli, MD,

Diego R Camacho, MD, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY

S026 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY IS SAFE AND FEASIBLE Chris A Edwards, MD, Alan

Bradshaw, MD, Pual Ahearne, MD, David Mauterer, MD, Peeter Soosaar, MD, Randall Johnson, MD, Ted Humble, MD, Pierre Dematos, Regional Surgical Specialists, Mission Hospitals, Asheville NC

S027 MICROLAPAROSCOPY: AN UNCOMPLICATED ALTERNATIVE TO NOTES AND SILS Keith Zuccala, MD, Pierre F

Saldinger, MD, Danbury Hospital, Danbury, CT

S028 TRANS-UMBILICAL SINGLE-PORT LAPAROSCOPIC APPENDECTOMY Tea-Ho Hong, MD, HL Kim, MD, YS Lee, MD, KH

Lee, MD, YK You, MD, JG Kim, MD, YH Kim, MD, Department of Surgery, The Catholic University of Korea

S029 SINGLE INCISION APPENDECTOMY FOR ACUTE APPENDICITIS: A PRELIMINARY EXPERIENCE Elie K Chouillard,

MD, Abe L Fingerhut, MD, Poissy Medical Center (FRANCE)

S030 SINGLE PORT ACCESS (SPA) SURGERY: INITIAL 150 CASES USING A NOVEL LAPAROSCOPIC SINGLE INCISION

APPROACH Paul G Curcillo, II, MD, Stephanie A King, MD, Erica R Podolsky, MD, Andrew S Wu, MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

S031 CHOPSTICK SURGERY: A NOVEL TECHNIQUE ENABLES USE OF THE DA VINCI ROBOT TO PERFORM SINGLE

INCISION LAPAROSCOPIC SURGERY (SILS) Rohan A Joseph, MD, Michael A Donovan, MS, Matthew G Kaufman, BS, Nilson A Salas, MD, Alvin Goh, MD, Brian Miles, MD, Patrick R Reardon, MD, Brian J Dunkin, Department of Surgery, The Methodist Hospital, Houston, Texas

SAGES acknowledges an unrestricted educational grant in support of this session from Covidien.

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.

2009 Poster Session: Thursday - Saturday

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

The top posters will be recognized on-site.

SAGES acknowledges our Platinum Level Donors for their support of this session:

Allergan, Covidien, Ethicon Endo-Surgery, Inc., Karl Storz Endoscopy-America, Olympus-Gyrus ACMI

Friday, April 24, 2009

7:00 AM - 8:30 AM

SS07: Esophageal / Gastric Surgery Location: North 224 A-B

Moderators: Nathaniel Soper, MD and Leena Khaitan, MD

S032 TRANSORAL INCISIONLESS FUNDOPLICATION FOR GERD: EARLY NORTH AMERICAN RESULTS Sebastian V Demyttenaere, MD, Simon Bergman, MD, Joel Anderson, MD, Rebecca Dettorre, BA, Dean J Mikami, MD, W Scott Melvin, MD, The Ohio State University Medical Centre, Columbus, OH

S033 MANAGEMENT OF ESOPHAGEAL PERFORATIONS Guido Schumacher, MD, Sven C Schmidt, MD, Sascha S Chopra, MD, Stefan Strauch, Wilfried Veltzke, MD, Peter Neuhaus, MD, Departments of General-, Visceral-, and Transplantation Surgery; Department of Gastroenterology, Charité University Hospital Berlin, Germany

V010 LAPAROSCOPIC TREATMENT OF BILATERAL ESOPHAGEAL EPIPHRENIC DIVERTICULA Emanuele Lo Menzo, MD, Alberto Iglesias, MD, Seth A Spector, MD, Jose M Martinez, MD, Diya Alaadeen, MD, Atul K Madan, MD, Gustavo Placencia, MD, Miami VA Healthcare System, University of Miami, Miami, FL

V011 LAPAROENDOSCOPIC SINGLE SITE HELLER MYOTOMY AND ANTERIOR FUNDOPLICATION Sharona B Ross, MD, Connor A Morton, BS, Emily Kramer, BS, John E Mullinax, MD, Alexander S Rosemurgy, MD, University of South Florida

V012 THORACOLAPAROSCOPIC IVOR LEWIS ESOPHAGOGASTRECTOMY WITH A HANDSEWN ANASTOMOSIS IN PRONE POSITION Giovanni Dapri, MD, Jacques Himpens, MD, Guy Bernard Cadiere, PhD, European School of Laparoscopic Surgery, Saint-Pierre University Hospital, Brussels, Belgium

S034 GASTRIC ELECTRIC STIMULATION FOR SEVERE GASTROPARESIS Steven M Yood, MD, Stacie E Perlman, MD, Marianne Ulcickas Yood, PhD, Rajan Chahal, MD, Hospital of Saint Raphael, New Haven, CT

V013 LAPAROSCOPIC COLLIS-NISSEN FUNDOPLICATION IN A PATIENT WITH TRACHEOESOPHAGEAL FISTULA REPAIR WITH RECURRENT HIATAL HERNIA AND GASTROESOPHAGEAL REFLUX Anthony C Chin*, MD, Steven S Rothenberg[^], MD, [^]Rocky Mountain Hospital for Children Denver, CO; *Childrens Memorial Hospital, Chicago, IL

S035 ISCHAEMIC CONDITIONING INFLUENCE FATE OF THE GASTRIC CONDUIT AND QUALITY OF LIFE OUTCOMES FOLLOWING MINIMALLY INVASIVE OESOPHAGECTOMY Darmarajah Veeramootoo, Rameev Parameswaran, Rakesh Krishnadas, Richard G Berrisford, MD, Saj A Wajed, MD, Department of Thoracic and Upper GI Surgery, Royal Devon and Exeter NHS Foundation Trust, UK

S036 A SIMPLIFIED TECHNIQUE FOR INTRATHORACIC STOMACH REPAIR: LAPAROSCOPIC FUNDOPLICATION WITH VICRYL MESH AND BIOGLUE CRURAL REINFORCEMENT Joerg Zehetner, MD, John C Lipham, MD, Shahin Ayazi, MD, Arzu Oezcelik, MD, Emmanuele Abate, MD, Weisheng Chen, MD, Steven R DeMeester, MD, Farzaneh Banki, MD, Jeffrey A Hagen, MD, Melissa Dickey, RN, Tom R DeMeester, MD, Division of Thoracic and Foregut Surgery, Department of Surgery, Keck School of Medicine, University of Southern California, Los Angeles, CA

SAGES acknowledges an unrestricted educational grant in support of this session from Karl Storz Endoscopy-America.



Save the Date!!

SAGES & CAGS host the 12th World Congress of Endoscopic Surgery

April 14 - 17, 2010, Gaylord National Resort & Convention Center, Landover, MD (just outside Washington, DC)

SAGES Scientific Session & Postgraduate Course

March 30 - April 2, 2011, San Antonio Convention Center, San Antonio, TX

SAGES Scientific Session & Postgraduate Course

March 7-10, 2012, San Diego Convention Center, San Diego, CA

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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 laptop, phone or PDA on the floor or out of your sight in a darkened room
- Be aware of your surroundings in the Phoenix Convention Center, hotels and downtown area.

Have a safe & secure meeting!



Friday, April 24, 2009

Scientific Sessions & Panels

7:00 AM - 8:30 AM

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

Surgical Treatment of Type II Diabetes and Metabolic Syndrome Panel: What Does the Science/Evidence Say?

Location: West 301B-C Ballroom

Chair: Alfonso Torquati, M.D.; **Co-Chair:** Atul Madan, M.D.

Bariatric surgery is the most effective and long lasting treatment for morbid obesity. However, now there is a growing body of substantial evidence supporting the efficacy of bariatric procedures in controlling type II diabetes and metabolic syndrome. These findings have sparked an intense scientific debate but several questions remain unanswered: Which surgical procedure produces the most significant clinical and biochemical improvement in glucose homeostasis? Which mechanisms are responsible for such remarkable metabolic response? Should the BMI restrictions for bariatric surgery be lifted in diabetic patients?

The invited speakers will provide an evidence-based overview of the literature to support their point and position in these controversial issues. An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

At the conclusion of this session, participants will be able to review and discuss both sides of the debate on three issues germane to the treatment of type II diabetes and metabolic syndrome:

- Role of surgery in the management of type II diabetes mellitus
- Metabolic hypotheses behind the change in glucose metabolism induced by bariatric procedures
- Surgery versus medical treatment in the management of type II diabetes in class 1 obesity (BMI 30-35)

SCHEDULE

7:00 AM	Introduction	Alfonso Torquati, M.D. & Atul Madan, M.D.
	Morbid Obesity with Type II Diabetes: Which Operation is Best?	
7:05 AM	Adjustable Gastric Banding	John Dixon, M.D.
7:15 AM	Roux-en-Y Gastric Bypass	Ninh Nguyen, M.D.
7:25 AM	Discussion	
	Surgical Mechanisms of Diabetes Improvement	
7:35 AM	Weight Loss Plays A Key Role in Diabetes Improvement	Eric DeMaria, M.D.
7:45 AM	Changes in Hormone Signaling from the Small Bowel are the Dominant Mechanisms	Lee Kaplan, M.D.
7:55 AM	Discussion	
	Diabetes in Class 1 Obesity (BMI 30-35 kg/m²): A Surgical or Medical Disease?	
8:05 AM	Time for Surgery	Philip Schauer, M.D.
8:15 AM	Surgeon Put Away Your Scalpel	TBA
8:25 AM	Discussion	

SAGES acknowledges an unrestricted educational grant in support of this panel from Covidien.

Evaluation & CME Credit Forms:

Please complete the meeting evaluation form and return to the registration desk or place in an "Evaluation Drop-Box" throughout the convention center.

Visit the CME print stations on the North 300 level to print your CME credit form on-site.

SAGES Goes Green!

In an effort to support the environment, you will see less paper in Phoenix for the 2009 SAGES 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, digital posters, and Postgraduate course syllabi will be available on thumb drive for all attendees. The "SAGES Electronic Meeting Guide" will be completely navigational and searchable. Print kiosks will also be available throughout the Phoenix Convention Center, but we urge all attendees to conserve paper and protect the environment by not printing unnecessary copies.

SAGES acknowledges a generous educational grant in support of SAGES Electronic Meeting Guide from Ethicon Endo-Surgery, Inc.



7:00 AM - 8:30 AM

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

Guidelines Panel: Evidence-Based Guidelines – They're More Important Than You Might Think

Location: North 221A-C Ballroom

Chair: Robert D. Fanelli, M.D.; **Co-Chair:** Liane S. Feldman, M.D.

This 90-minute session will use a combined presentation and panel discussion design to convey key points regarding the creation and use of SAGES evidence-based clinical practice guidelines. Legal experts will discuss the manner in which regulators, insurers, and attorneys use clinical practice guidelines, and surgeons who are members of the SAGES Guidelines Committee will discuss recently created clinical practice guidelines and how to access them. The session moderators, panelists, and presenters will facilitate discussions regarding guidelines implementation in surgical practice, the role of clinical practice guidelines in improving patient care and safety, and the importance of participating in the process of creating guidelines.

Objectives:

After attending this session surgeons will be able to:

- Restate the process by which SAGES guidelines are created
- Explain the benefits that SAGES guidelines provide, and the potential drawbacks
- Find the SAGES guidelines as well as other tools like the National Guidelines Clearinghouse, to find other society's guidelines
- Discuss how health insurers, regulators, and attorneys use guidelines
- Summarize the importance of guidelines, the value in using them, and the importance of participating in their creation

SCHEDULE

7:00 AM	Welcome and Introduction of Panelists	Robert D. Fanelli, M.D. & Liane S. Feldman, M.D.
7:05 AM	Introduction of Featured Speaker, W. Scott Liebert, Esq.	Robert D. Fanelli, M.D.
7:10 AM	The Legal and Regulatory Impact of Evidence-Based Clinical Practice Guidelines: How Insurers, Regulators, and Attorneys Use Guidelines	W. Scott Liebert, Esq.
7:35 AM	Discussion: Using Guidelines in Practice: Overcoming Implementation Hurdles	Moderator: Liane S. Feldman, M.D.
7:45 AM	SAGES Guidelines: How Are They Created? Where Can I Find Them?	Robert D. Fanelli, M.D.
7:50 AM	SAGES Guideline for Clinical Application of Laparoscopic Bariatric Surgery	Timothy M. Farrell, M.D.
8:00 AM	SAGES Guideline for Diagnosis, Treatment, and Use of Laparoscopy for Surgical Problems During Pregnancy	Raymond R. Price, M.D.
8:10 AM	SAGES Guideline on Prophylaxis Against Deep Venous Thrombosis During Laparoscopic Surgery	William S. Richardson, M.D.
8:20 AM	Discussion	

7:00 AM - 8:30 AM

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

SAGES/ASCRS Laparoscopic Colorectal Surgery Panel

Location: West 301A Ballroom

Chair: Conor Delaney, M.D., Ph.D.; **Co-Chair:** John Marks, M.D.

This session is designed to increase knowledge of the participants in laparoscopic colorectal surgery. State-of the art lectures will discuss current status and optimal surgical techniques for inflammatory bowel disease (covering ulcerative colitis and Crohn's disease), rectal cancer (specifically addressing optimal surgical techniques), difficult intra-abdominal conditions (dealing with abscesses, reoperation, fistulas and phlegmons), and an update on the current state of laparoscopy for colon cancer. The session will conclude with a debate on the very topical issue of the possible benefit of hand-assist techniques in colorectal surgery. Each talk will be given by well-recognized leaders in the field.

Objectives:

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

- Review the role of laparoscopic surgery in the management of inflammatory bowel disease
- Describe the best technique for low recurrence rates in the management of rectal cancer
- Discuss methods to deal with difficult inflammatory and re-operative intra-abdominal conditions

SCHEDULE

7:00 AM	Introduction	Conor Delaney, M.D., Ph.D. & John Marks, M.D.
7:05 AM	Current Status of Laparoscopy for Inflammatory Bowel Disease	Barry Salky, M.D.
7:20 AM	Laparoscopy for Re-Operation, Fistula and Abscess	Conor Delaney, M.D., Ph.D.
7:30 AM	Optimizing Laparoscopic Technique for Rectal Cancer	Eric Rullier, M.D.
7:45 AM	Laparoscopy is Better Than Open Surgery for Colon Cancer	John Marks, M.D.
	Debate: Hand-Assisted Techniques Improve Colorectal Surgical Outcomes	
8:00 AM	For	Robert Cima, M.D.
8:10 AM	Against	Anthony Senagore, M.D.
8:20 AM	Discussion	

SAGES acknowledges an unrestricted educational grant in support of this panel from Olympus-Gyrus ACMI

Fellowship Council General Membership Meeting (open to all FC members)

Friday, April 24th, 7:00 am - 8:30 am • Room North 229AB



Friday, April 24, 2009

8:30 AM - 9:30 AM

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

SS08: Plenary Session I Location: West 301A Ballroom

Moderators: C. Daniel Smith, MD and Abe Fingerhut, MD

S037 LAPAROSCOPIC COLECTOMY IS SAFER THAN OPEN COLECTOMY: A PROPENSITY SCORE MATCHED, RISK-ADJUSTED ANALYSIS FROM 183 HOSPITALS Robert T Lancaster, MD, David M Shahian, MD, Matthew M Hutter, MD, Codman Center for Clinical Effectiveness in Surgery, Massachusetts General Hospital, Boston, MA

S038 A POPULATION-BASED ANALYSIS OF EMERGENT VS. ELECTIVE HOSPITAL ADMISSIONS FOR AN INTRATHORACIC STOMACH Marek Polomsky, MD, Boris Sepesi, MD, Matthew C O'Connor, BA, Daniel P Raymond, MD, Virginia R Little, MD, Carolyn Jones, MD, Thomas J Watson, MD, Jeffrey H Peters, MD, University of Rochester School of Medicine and Dentistry, Rochester, NY

S039 SERUM LEPTIN LEVELS ARE INVERSELY CORRELATED WITH OMENTAL GENE EXPRESSION OF ADIPONECTIN AND ARE MARKEDLY DECREASE AFTER LAPAROSCOPIC GASTRIC BYPASS SURGERY Sarah Evans, MD, Jiegen Chen, PhD, Zehra Pamuklar, PhD, Alfonso Torquati, MD, Duke University, Department of Surgery, Durham, NC

S040 REGRESSION OF DYSLIPIDEMIA IN TYPE 2 DIABETIC PATIENTS WITH BMI BELOW 30 SUBMITTED TO THE LAPAROSCOPIC ILEAL INTERPOSITION Aureo L De Paula, PhD, Antonio L Macedo, MD, Cesar A Machado, MD, Vladimir Schraibman, MD, Luis Q Silva, MD, Bruno Mota, MD, ergio Vencio, Hospital de Especialidades, Goiania, Brazil

S041 TOTALLY LAPAROSCOPIC LIVER RESECTION FOR HEPATOCELLULAR CARCINOMA LOCATED IN ALL SEGMENTS OF THE LIVER Yoo-Soek Yoon, MD, Ho-Seong Han, MD, Jai Young Cho, MD, Keun Soo Ahn, MD, Department of Surgery, Seoul National University Bundang Hospital, Seoul, Korea

9:30 AM - 3:30 PM

SAGES/IPEG Exhibits and Posters Open SAGES Learning Center Open

KEYNOTE LECTURES:

9:30 AM - 10:00 AM

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

SAGES Presidential Address State of the SAGES Union

Location: West 301A Ballroom



Mark A. Talamini, MD

**Professor & Chairman, Department of Surgery,
University of California – San Diego, CA**

Dr. Mark Talamini is clearly one of the good, kind, smart, calm and brilliant "guys." He has served on the SAGES Board of Governors since 2001, as Treasurer from 2003-2007. He currently serves on the Awards, Finance, FLS, Joint Journal, NOTES and Publications Committees. Dr. Talamini is the M.J. Orloff Family Professor and Chairman of the Department of Surgery at the University of California at San Diego. He is widely published and is a member of many prestigious national surgical organizations, such as the American Surgical Association, The Halsted Society, The Society of University Surgeons, The Southern Surgical Association and The Society of Surgery for the Alimentary Tract. Dr. Talamini serves on numerous committees for the American College of Surgeons.

Dr. Talamini currently maintains an active surgical practice focusing on gastrointestinal surgery (particularly inflammatory bowel disease) with a particular emphasis on the use of minimally invasive technology to minimize pain and scarring. In the laboratory, Dr. Talamini's research team studies patient outcomes. To date, they have proved that patients really do recover more easily after minimally invasive surgery, learning how the body responds to operations where carbon dioxide gas is used for laparoscopy. Dr. Talamini's laboratory also studies the biology of minimally invasive surgery, learning how the body responds to operations where carbon dioxide gas is used for laparoscopy. His lab is involved in the development of robotic surgery and telemedicine with robotics. Further clinical and research interests include inflammatory bowel diseases (Crohn's disease, ulcerative colitis), gastro-esophageal reflux disease, pancreatic cancer, gastric cancer and colon cancer.

His dedication to SAGES does not end with his Presidential term. We applaud that he is willing to take on the job of American Editor-in-Chief of our journal, *Surgical Endoscopy* immediately following his presidency in June, 2009. We value his cool head, clear ideas and imaginative, but sensible leadership.

Friday, April 24, 2009

10:00 AM - 10:30 AM

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

Gerald Marks Lecture *The Surgeon as a Role Model*

Location: West 301A Ballroom



John Cameron, MD

**Alfred Blalock Distinguished Service Professor of Surgery,
The Johns Hopkins University School of Medicine, Baltimore, MD**

John Cameron has been a pillar of the surgical community for almost four decades. For two of those decades he served as the Chief of Surgery at The Johns Hopkins Hospital. Dr. Cameron earned his undergraduate degree from Harvard University in 1958, and his medical degree from The Johns Hopkins University School of Medicine in 1962. He is known for his expertise in alimentary tract diseases, specifically in pancreatic cancer. It is said that he has operated on more patients with pancreatic cancer, and done more Whipple resections than any other surgeon in the world. Dr. Cameron has served as President of the Society for Surgery of the Alimentary Tract, President of the Southern Surgical Association, President of the Society of Clinical Surgery, President of the Society of Surgical Chairmen, President of the Halsted Society, and President of the American Surgical Association. He was installed as the 89th President of the American College of Surgeons (ACS) in October, 2008. His list of honors would take an entire program book of its own. Suffice it to say, he is one of the most respected surgeons in the world and we are honored to have him as the 2009 Gerald Marks Lecturer.

SAGES acknowledges our Platinum Level Donors for their support of this lecture:

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The Marks Lecture – A History

1987	Prof. William Wolfe (not named Marks Lecture in '87)	1994	Prof. Alex Walt	2002	Prof. Hans G. Beger
1988	Prof. Worth Boyce	1995	Prof. Kenneth Forde	2003	Prof. R. Scott Jones
1989	Prof. Peter Cotton	1996	Prof. John Wickham	2004	Prof. Jeffrey L. Ponsky
1990	Prof. Alfred Cuschieri	1997	Prof. Thomas Dent	2005	Prof. Andrew L. Warshaw
1991	Prof. George Berci	1998	Prof. Jacques J. Perissat	2006	Prof. Gregory V. Stiegmann
1992	Prof. Theodore Schrock	1999	Prof. Michael Trede	2007	Prof. Lester Rosen
1993	Prof. John Terblanche	2000	Prof. Tom R. DeMeester	2008	Prof. James "Butch" Rosser
		2001	Prof. Layton F. Rikkers		

10:30 AM - 11:30 AM

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

Concurrent Sessions (accepted oral & video presentations)

10:30 AM - 11:30 AM

SS09: Colorectal II Location: West 301A

Moderators: Steven Wexner, MD and Antonio Lacy, MD

S042 IS NAVIGATION USEFUL IN LAPAROSCOPIC COLON RESECTION Maurits Debrauw, PhD, Anke Smits, PhD, Christiaan Vanswol, PhD, Rene Wiezer, PhD, Bert Vanramshorst, PhD, Antonius Mesos Hospital, Nieuwegein

V014 TITLE: MANAGEMENT OF INTRAOPERATIVE COMPLICATION DURING LAPAROSCOPIC PROCTECTOMY FOR SUBMUCOSAL RECTAL TUMOR Philippe Bouchard, MD, Cuong Nguyen, MD, Tonia Young-Fadok, MD, Jacques Heppell, MD, Jonathan Efron, MD, Mayo Clinic Arizona, Scottsdale, AZ

S043 LAPAROSCOPIC APPENDECTOMY IS AS COST EFFECTIVE AS OPEN APPENDECTOMY Vadim Nakhamiyayev, MD, Lars M Galldin, MSc, Mario Chiariello, MD, Angela Lumba, MD, Piotr J Gorecki, MD, Dept of Surgery, New York Methodist Hospital, NY

S044 AB PREP A NEW COLON CLEANSING Semaan M Abboud, MD, Cedar Tree Medical Center

S045 HOSPITAL COLECTOMY VOLUME AS A SURROGATE FOR ADVANCED LAPAROSCOPY Anand Singla, BA, Jessica P Simons, MD, James Carroll, MD, Sing Chau Ng, MS, Jennifer F Tseng, MD, Shimul A Shah, MD, Department of Surgery, Surgical Outcomes Analysis and Research, University of Massachusetts Medical School, Worcester, MA

S046 GASTROINTESTINAL RECOVERY AFTER LAPAROSCOPIC PARTIAL LARGE BOWEL RESECTION: RESULTS OF A PROSPECTIVE, OBSERVATIONAL, MULTICENTER STUDY Conor Delaney, Peter Marcello, Toyooki Sonoda, Paul Wise, Joel Bauer, Lee Techner, University Hospitals Case Medical Center, Lahey Clinic, Weill Cornell Medical Center, Vanderbilt University, Mt. Sinai School of Medicine

Underline denotes presenter.

SAGES Scientific Session & Postgraduate Courses | April 22 - 25, 2009

55





SAGES
2009

Friday, April 24, 2009

10:30 AM - 11:30 AM

SS10: Basic Science Location: North 224 A-B

Moderators: Gregory Stiegmann, MD and Namir Katkhouda, MD

S047 HEPATIC IRON OVERLOAD IN PATIENTS UNDERGOING RYGB Ravi J Chokshi, MD, G. Craig Wood, MS, Glenn Gearhart, PhD, Christopher Still, DO, Anthony T Petrick, MD, Geisinger Medical Center, Danville, PA – **SAGES Research Grant**

S048 HEPATIC ADIPONECTIN AND LEPTIN IN MORBIDLY OBESE PATIENTS A Katharine Hindle, MD, Claire Edwards, MD, Jason Kasza, MD, Marcos Rojkind, PhD, Sidney W Fu, MD, Fred Brody, MD, The George Washington University, Washington, DC – **SAGES Research Grant**

S049 HUMAN MONOCYTE ACTIVATION BY BIOLOGIC AND BIODEGRADABLE MESHES IN VITRO Sean Orenstein, MD, Don Kreutzer, PhD, Yuri Novitsky, MD, Department of Surgery, University of Connecticut Health Center, Connecticut Comprehensive Center for Hernia Repair

S050 A METASTATIC COLON CANCER MODEL USING NON-OPERATIVE TRANS-ANAL RECTAL INJECTION Bryan D. Loh(^1,2), MD, Melissa A Donigan(^3,4), BS, Laurie S Norcross(^1,2), MD, John Aversa(^1,2), DO, Shaun Li(^2), MD, Paul R Williamson(^1,2), MD, Samuel DeJesus(^1,2), MD, Andrea Ferrara(^1,2), MD, Joseph T Gallagher(^1,2), MD, Cheryl H Baker(^3,4), PhD, 1Colon and Rectal Clinic of Orlando, 2Orlando Regional Medical Center, 3M. D. Anderson Cancer Center Orlando, 4University of Central Florida

S051 DIFFERENTIAL EXPRESSION OF MMP-2 IN THE GASTROHEPATIC LIGAMENT OF THE GASTROESOPHAGEAL JUNCTION Lora Melman, MD, Phillip R Chisholm, BS, John A Curci, MD, Batool Arif, BS, Richard A Pierce, MD, Eric D Jenkins, MD, L Michael Brunt, J Christopher Eagon, MD, Margaret M Frisella, RN, Kathryn Miller, Brent D Matthews, MD, Department of Surgery, Section of Minimally Invasive Surgery, Washington University, St. Louis, Missouri

S052 THE IMPACT OF CO2-PNEUMOPERITONEUM ON LIVER REGENERATION AFTER LIVER RESECTION IN A RAT MODEL. Sven C Schmidt, MD, Guido Schumacher, MD, N Klage, U Neumann, MD, S Chopra, MD, P Neuhaus, MD, University Medicine Berlin, Charité Campus Virchow Clinic, Department for General-, Visceral- and Transplantation Surgery

10:30 AM - 12:00 PM

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

Re-Operation for Laparoscopic Complications Panel Diagnostic, Technical, and Outcomes Considerations

Location: West 301B-C Ballroom

Chair: David W. Easter, M.D.; **Co-Chair:** Niazy Selim, M.D., MBChB

This two-part panel will deal with immediate re-operation and delayed re-operation for unfavorable outcomes following laparoscopic surgery. Video clips of specific situations will be presented. An emphasis will be placed on the principles of re-operation strategies rather than specific procedures. These strategies will therefore be broadly applicable to most situations that arise when a surgeon considers re-operation following laparoscopic surgery. An interactive Audience Response System will be used to enhance discussion during this session.

Objectives:

After attending this panel, surgeons will be able to describe and review the following surgical principles of re-operative laparoscopic surgery:

- **Pre-operative issues** for re-operative laparoscopic surgery, including, indications for redo surgery, laparoscopic vs. open approach, and the best way to assess the patient's abdomen
- **Operative skills** including anatomy variations, technical considerations, port placements, coagulation energy options, adhesiolysis, proper tissue dissection, bleeding control, and risk of bowel injury
- **Post-operative concerns**, including legal and counseling advice, patient communication, and key terminology.

SCHEDULE

10:30 AM	Introduction	David W. Easter, M.D. & Niazy Selim, M.D.
	Part I: Immediate Re-Operation	
10:35 AM	Pre-Op Considerations – Consent, Documentation, Conversion Criteria	C. Daniel Smith, M.D.
10:42 AM	Recognition of Complications – Variable Anatomy, Heuristic Thinking, Expectations	John Hunter, M.D.
10:50 AM	Communication of Failure – Key Words, Do's and Don'ts, Medical Records	Dennis Fowler, M.D.
10:57 AM	Open vs. Laparoscopic Re-Operation? – Analyze Failure, Get Help, Open Strategies	Mark A. Talamini, M.D.
11:05 AM	Discussion	
	Part II: Delayed Re-Operation	
11:15 AM	Outcomes Expectations – Surgeon vs. Patient Goals	David Easter, M.D.
11:22 AM	Right Surgeon, Right Approach – Special Tools? Robotics?	Niazy Selim, M.D.
11:30 AM	Tricks of the Re-Do Trade – Special Devices, Stents, Hand Assist? Flexible Endoscope	Todd Heniford, M.D.
11:37 AM	Risk of Litigation – Documentation, Chosen Words, Expectations	Barry Salky, M.D.
11:45 AM	Discussion	



10:30 AM - 12:00 PM

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

Global Initiative and Opportunities for Surgeons in Service Panel – Giving Back to the Developing World

Location: North 221A-C Ballroom

Chair: Ramon Berguer, M.D.; **Co-Chair:** Raymond Price, M.D.

SAGES Go-Global Initiative hopes to address some of the vast unmet global surgical needs. Surgeons will draw from their own experiences to explore the issues involved in volunteering to teach laparoscopic surgery in the developing world.

Objectives:

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

- Describe the need and validity of teaching laparoscopic surgery in resource poor areas
- List the components of successful sustainable global surgical projects
- Review and evaluate solutions to the barriers that impede one's ability to participate in surgical volunteer experiences
- Locate appropriate surgical volunteer opportunities

SCHEDULE

10:30 AM	Introduction	Ramon Berguer, M.D. & Raymond Price, M.D.
	Why Teach Laparoscopy in the Developing World?	
10:40 AM	1st Perspective	David Earle, M.D.
10:50 AM	2nd Perspective	Christiana Bertocchi, M.D.
	Methods to Sustain Laparoscopy in Developing Countries	
11:00 AM	Methods for Short Term Missions	Ramon Berguer, M.D.
11:10 AM	Developing Local Ownership/Sustainability	Raymond Price, M.D.
	Overcoming Barriers to Participate in Surgical Volunteerism	
11:20 AM	Practical Logistics – Cost, Coverage, Legal, Family	Bruce MacFadyen, Jr., M.D.
11:30 AM	Fear of Working in Foreign Environment/Limited Equipment	Mark Pleatman, M.D.
11:40 AM	Discussion	

10:30 AM - 11:30 PM

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

From FLS to the Web Learning Center Panel: A Spectrum of SAGES Offerings to Enhance Your Knowledge and Skills in MIS

Location: North 222A-C Ballroom

Chair: Gerald Fried, M.D.; **Co-Chair:** L. Michael Brunt, M.D.

In this session, SAGES materials for enhancing knowledge and skills related to minimally invasive surgery will be reviewed. The session will provide an update on SAGES Fundamentals of Laparoscopic Surgery (FLS) and how it is being implemented nationally, will review SAGES video offerings and how they can be incorporated into your surgical education program, and will discuss how SAGES materials are being integrated into the SCORE national curriculum project.

Objectives:

After attending this panel, the attendee will be able to:

- Describe the educational resources available to the surgeons
- Motivate surgeons to use these resources
- Utilize these resources within a self-directed learning program

SCHEDULE

10:30 AM	Introduction	L. Michael Brunt, M.D.
10:35 AM	FLS: From Concept to the Present	Gerald M. Fried, M.D.
10:55 AM	SAGES Video Offerings: Changing the Format of Video Education	Daniel B. Jones, M.D.
11:05 AM	The SCORE Curriculum: Current and Future Opportunities for SAGES to Contribute to Resident Education in GI Surgery	Jo Buyske, M.D.
11:20	Discussion	

11:30 AM - 1:00 PM

Break: Exhibits, Posters, Learning Center

FLS Testing Available All Week!

Wednesday, April 22 - Saturday, April 25, 2009

Location: North Room 228A

Call (310) 437-0544, ext. 121 or stop by the SAGES Membership Booth to schedule your test.



A SAGES/ACS EDUCATION PROGRAM

FLS

FUNDAMENTALS of LAPAROSCOPIC SURGERY

...the definitive laparoscopic skills enhancement and assessment module.

- ▶ Review/Learn the basics
- ▶ Practice your skills
- ▶ Test your knowledge

Finally! A validated education and assessment program that definitively quantifies a candidate's cognitive and manual skills.

FLS provides hands-on skills training to practice technical skills and improve dexterity.

FLS permits learning of minimally invasive techniques in a completely safe environment, without putting patients at risk.

FLS Content:

1. Preoperative Considerations
2. Intraoperative Considerations
3. Basic Laparoscopic Procedures
4. Postoperative Considerations
5. Manual Skills Instruction and Practice

Why Take the FLS Test?

Finally! An education and assessment program that definitively quantifies a candidate's cognitive and manual skills. FLS permits learning of minimally invasive techniques in a completely safe environment, without putting patients at risk.

As of July 1, 2009 it is ABS required for General Surgery Certification.

Where is FLS Available?

Learn at your institution or at home at your own convenience.

Then you can take both the didactic and manual skills exams at:

- A regional Test Center near you
- The SAGES Annual Meeting and ACS Clinical Congress
- Your own institution if you purchase Education Package C from the FLS order form available at www.flsprogram.org

▶ Covidien Educational Fund - Supporting FLS Education

FLS provides objective evidence to residency programs that an individual resident has gained the basic knowledge and skills fundamental to the performance of laparoscopic surgery before the resident completed his/her program.

Through generous support from Covidien, surgical residency and fellowship programs may receive one **FLS** Training Box, access to the **FLS** curriculum, and **FLS** Test Vouchers for fifth-year surgery residents and first-year MIS/HPB/colorectal fellows.



FLS
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12:00 PM - 1:00 PM

***Separate Registration Fee: \$45**

Surgeons in Service Luncheon

Location: North 229A-B Ballroom

Chair: Raul Rosenthal, M.D.

SAGES mission and vision has broadened in the last few years and the society is determined to support its members with state of the art educational programs. Through the International Liason and Go Global Initiatives, SAGES created a platform to support its members and help those in need.

This session has been designed to highlight the work that SAGES members are doing around the world in an attempt to educate surgeons in how to perform basic and advanced laparoscopic procedures as well as participating in crisis intervention.

Objectives:

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

- Highlight the work that has been done worldwide by our members
- Understand the impact of the work that has been performed
- Define the needs of members around the world in order to better implement these programs

SCHEDULE

12:00 PM	Introduction	Raul J. Rosenthal, M.D.
12:05 PM	Teaching Basic Laparoscopy in Latin America	Ramon Berguer, M.D.
12:15 PM	Teaching Laparoscopy in Africa	Fiemu Nwariaku, M.D.
12:25 PM	Experience with FLS Training via Teleconference	Allan Okrainec, M.D.
12:35 PM	Experience with Teaching Surgery in India	Serene Perkins, M.D.
12:45 PM	Discussion	

12:00 PM - 1:00 PM

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

**Don't Forget: Friday Lunch in the Exhibit Hall,
Free for all SAGES & IPEG Scientific Session Registrants!
Bring Your Ticket**

1:00 PM - 5:00 PM

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

Concurrent Sessions (accepted oral & video presentations)

1:00 PM - 5:00 PM

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

Friday Afternoon at the Movies: Double Feature

Location: West 301A Ballroom

1:00 PM - 3:00 PM

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

I. SAGES Video Classics Session

Chair: Frederick L. Greene, M.D.; Co-Chair: Kenneth A. Forde, M.D.

Videos and presentations from past SAGES meetings and from surgical innovators who did the first laparoscopic or endoscopic case of various procedures or who presented videos at a SAGES meeting that would be considered video "classics" will be asked to present a brief summary of these 1st cases and show a video of their original technique or representative early case.

Objectives:

After attending this session, attendees will be able:

- Summarize the significant innovations in Laparo/Endoscopic surgery
- Become familiar with the process of introducing innovation into surgery
- Discuss the techniques used by the leading innovators in minimal access surgery

SCHEDULE

1:00 PM	Introduction	Frederick L. Greene, M.D. & Kenneth A. Forde, M.D.
1:05 PM	Flexible Colonoscopy	Kenneth A. Forde, M.D.
1:15 PM	Laparoscopic Cholecystectomy	Jacques Perissat, M.D.
1:25 PM	Nissen Fundoplication	Bernard Dallemagne, M.D.
1:35 PM	Laparoscopic Adrenalectomy	Michel Gagner, M.D.
1:45 PM	Common Bile Duct Exploration	Joseph Petelin, M.D.
1:55 PM	Laparoscopic Colectomy	Moises Jacobs, M.D.
2:05 PM	Discussion	



Friday, April 24, 2009

Scientific Sessions & Panels

3:00 PM - 5:00 PM

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

II. SAGES/JSES International Olympic MIS Video Session

Chair: Lee Swanstrom, M.D.; **Co-Chair:** Manabu Yamamoto, M.D.

Even in a world defined by high-technology and the latest information exchange abilities, there is still a lack of knowledge of happenings from outside our individual countries.

The International Olympic MIS video session seeks to decrease this knowledge deficit and to show new and surprising surgical developments from all over the world. In this session, videos from some of the world's most skilled surgeons from different countries will be presented in a special forum that will allow them to discuss the cultural context of their surgery and answer questions from a panel of other international experts. The panel of experts as well as the audience will assign "scores" as during the Olympic games.

Participants will watch the expert surgeon's procedures while enjoying the different culture, epidemiology, facilities and surgical philosophies from various medical systems around the world.

Objectives:

At the conclusion of this course, participants will:

- Understand the differences and similarity of MIS surgical techniques across the world
- Find tips for better patient care
- See what procedures are done in the world by expert surgeons
- Develop critical assessment skills as the judges of the International Olympics of Surgery

SCHEDULE

3:00 PM **Introduction**

Lee Swanstrom, M.D. & Manabu Yamamoto, M.D.

V041 SINGLE PORT SURGERY MADE EASY WITH INTERNAL RETRACTORS Yoav Mintz, MD, Ram Elazary, MD, Abed Khalaleh, MD, Amir Szold, MD, Avraham Schlager, MD, Avraham I Rivkind, MD, Hadassah-Hebrew University Medical Center, Jerusalem, Israel. Assuta Medical Center, Tel-Aviv, Israel

V042 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY: DEMONSTRATION OF CRITICAL VIEW DISSECTION AND INTRAOPERATIVE CHOLANGIOGRAPHY Steven E Hodgett, MD, Peggy Frisella, MD, Brent D Matthews, MD, L Michael Brunt, MD, Department of Surgery and Institute for Minimally Invasive Surgery, Washington University School of Medicine, St. Louis, MO.

V043 MINIMALLY INVASIVE OESOPHAGECTOMY WITH TWO-FIELD LYMPHADENECTOMY Darmarajah Veeramootoo, Clare Taylor, Rakesh Krishnadas, Richard G Berrisford, MD, Saj A Wajed, MD, Department of Thoracic and Upper GI Surgery, Royal Devon and Exeter NHS Foundation Trust, UK

V044 LAPAROSCOPIC TOTAL GASTRECTOMY WITH HAND-SEWN ESOPHAGO-JEJUNAL ANASTOMOSIS AND D2 LYMPHADENECTOMY FOR GASTRIC CANCER Camilo Boza, BA, Cristian Gamboa, MD, José Salinas, MD, Ricardo Funke, MD, Luis Ibañez, MD, Nicolás Jarufe, MD, Pontificia Universidad Católica de Chile

V045 LAPAROSCOPIC PANCREATODUODENECTOMY: SAFETY AND EFFICACY OF RADICAL RESECTION Chinnusamy Palanivelu, Palanisamy Senthilnathan, MS, Ramakrishnan Parthasarathi, MD, Pidigu Seshiyer Rajan, MS, Palanivelu Praveenraj, MD, GEM Hospital & Research Institute

V046 LAPAROSCOPIC COMPLETION PROCTOCOLECTOMY AND IPAA Jayleen Grams, MD, Winnie Tong, MD, Barry Salky, MD, Mount Sinai Hospital

INVITED VIDEOS:

Endoscopic Full-Thickness Resection (EFTF): A New NOTES Procedure – ESD and Beyond Keiichi Ikeda, Mitsuru Kaise, Kazuki Sumiyama, Masayuki Kato 1), Norio Mitsumori, Hideyuki Kashiwagi 2), Manabu Yamamoto 4), Hisao Tajiri 3), Department of Endoscopy 1), Department of Surgery 2), Department of Gastroenterology and Hepatology 3), The Jikei University School of Medicine, Tokyo, Japan, Adachi Kyosai Hospital 4)

NOTES Cholecystectomy Outside the U.S.

Ricardo Zorron, M.D.

Laparoscopic Liver Resection

Brice Gayet, M.D.

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1:00 PM - 3:30 PM

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

Creating the Future of Surgery Session From Medical Device to Field Development

Location: West 301B-C Ballroom

Chair: Steve Eubanks, M.D.; Co-Chair: Raymond Onders, M.D.

Historically, surgeons have always been innovators developing techniques and devices to optimize patient care. This session will outline many of the steps in device development from fostering the climate of innovation to the end results of financing the company that manufactures the device.

Objectives:

After attending this session, participants will be able to:

- Describe what constitutes intellectual property and how to manage conflicts of interest
- Describe the role of the FDA in evaluating new devices
- Develop a knowledge of how new devices become approved by insurance carriers
- Review the role of funding in starting new biotech companies

SCHEDULE

1:00 PM	Introduction	Steve Eubanks, M.D. & Raymond Onders, M.D.
1:05 PM	Developing Programs that Foster Innovation: Opportunities and Barriers	Steve Eubanks, M.D.
1:25 PM	You Have a Thought for a Device: How to Protect It and When Do You Need an IP Lawyer	Robert A. Green, Esq.
1:45 PM	How to Handle the Conflict of Interest that Develops During the Course of Innovation	David Easter, M.D.
2:05 PM	What Does the FDA Require to Study Your Devices in Humans	Colleen Hittle, RAC
2:25 PM	Device Development in Pediatric Surgery: Humanitarian Use Devices(HUD's) and Orphan Diseases	Todd Ponsky, M.D.
2:45 PM	Getting Insurance Carriers to Cover New Devices: What Is Required?	Paresh Shah, M.D.
3:05 PM	You Have a Great New Device But Will a Venture Capitalist Fund the Company that Makes It?: What Does a VC Look For?	Tony Ignagni
3:25 PM	Discussion	

*SAGES acknowledges unrestricted educational grants in support of this panel from
Ethicon Endo-Surgery, Inc. and Stryker Endoscopy*

1:00 PM - 2:30 PM

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

Joint SAGES/AHS Case Discussion Panel Hernia Problems You Wish Were Referred Elsewhere

Location: North 222A-C Ballroom

Chair: Edward Felix, M.D.; Co-Chair: Shirin Towfigh, M.D.

This is an interactive session with audience and expert panel participation. After a brief case description of a difficult-to-handle hernia, a distinguished panel of hernia surgeons will share evidence and expert opinion regarding diagnosis and management of complex hernia scenarios. The audience will have the opportunity for interactive participation.

Objectives:

After attending this panel, attendees will be able to:

- Identify at-risk populations for hernia failure
- Improve clinical decision-making for complex hernia problems
- Learn about surgical techniques specific to difficult-to-handle hernias
- Share common pitfalls in the management of complex hernias

Panel Discussants:

Edward Phillips, M.D.	George Ferzli, M.D.	Guy Voeller, M.D.
Karl LeBlanc, M.D.	Yuri Novitsky, M.D.	Bruce Ramshaw, M.D.

SCHEDULE

1:00 PM	Introduction	Edward Felix, M.D. & Shirin Towfigh, M.D.
1:05 PM	Case #1: Recurrent Inguinal Hernia After Laparoscopic TAPP	Edward Felix, M.D.
1:10 PM	Panel Discussion	Panel
1:25 PM	Case #2: Symptomatic Incisional Hernia in a Morbidly Obese Patient Pre-op for Lap Roux-en-Y Gastric Bypass	Shirin Towfigh, M.D.
1:30 PM	Panel Discussion	Panel
1:45 PM	Case #3: Recurrent Hiatal Hernia After Failure from Synthetic and Biologic Mesh	Edward Felix, M.D.
1:50 PM	Panel Discussion	Panel
2:05 PM	Case #4: Recurrent Parastomal Hernia in High-Risk Patient	Shirin Towfigh, M.D.
2:10 PM	Panel Discussion	Panel
2:25 PM	Case #5: Chronic Groin Pain After Inguinal Hernia Repair	Shirin Towfigh, M.D.

SAGES acknowledges an unrestricted educational grant in support of this panel from Covidien.



Friday, April 24, 2009

1:00 PM - 3:30 PM

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

Resident and Fellows Scientific Session

Location: North 221A-C Ballroom

Chair: Eric Hanly, M.D.; **Co-Chair:** David A. McClusky, M.D.

During this session, selected residents and fellows will have the opportunity to present their research to a panel of distinguished surgical faculty—all SAGES leaders and MIS program directors. The panel will then be invited to discuss and critique the papers. Speakers will be judged not only on the content and originality of their work, but also on methodology and presentation skills. An award for the best presentation at this session will be given at the end of the session. SAGES 2008 Career Development Award Winner, Dr. Melina Vassiliou, will also present.

Objectives:

After attending this session, participants will be able to:

- Gain exposure to the current research endeavors of surgeons in training
- Understand and recognize the methodological pitfalls that may cause some studies to lose scientific merit
- Identify solutions to these problems and apply them in order to improve study design
- Learn to optimize knowledge transfer in the context of the 10 minute talk

SCHEDULE

2:30 PM **Expert Panelists**

Leena Khaitan, M.D.
W. Scott Melvin, M.D.
Michael Marohn, M.D.
Adrian Park, M.D.

S121 PERITONEAL INFLAMMATORY RESPONSE OF NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY

(NOTES) VERSUS LAPAROSCOPY WITH CARBON DIOXIDE AND AIR PNEUMOPERITONEUM Joseph A Trunzo, MD, Michael F McGee, MD, Leandro T Cavazzola, MD, Steve J Schomisch, MD, Mehrdad Nikfarjam, MD, Jessica Bailey, BS, Tripurari Mishra, Benjamin K Poulouse, MD, Young-Joon Lee, MD, Jeffrey L Ponsky, MD, Jeffrey M Marks, University Hospitals Case Medical Center – **SAGES Research Grant**

S122 A RANDOMIZED CLINICAL TRIAL COMPARING COST AND EFFECTIVENESS OF BIPOLAR VESSEL SEALERS TO CLIPS AND VASCULAR STAPLERS IN STRAIGHT LAPAROSCOPIC COLECTOMY M Adamina, MD, B J Champagne, MD, B N Bae, MD, Y G Joh, MD, M Laughinghouse, RNC P Delaney, MD, Division of Colorectal Surgery, University Hospitals Case Medical Center, Cleveland, Ohio, USA

S123 VOLUME-OUTCOME RELATIONSHIPS AND OTHER INFLUENCES OF OUTCOME IN BARIATRIC SURGERY - JUSTIFICATION OF THE CURRENT PARADIGM Geoffrey P Kohn, MD, Joseph Galanko, PhD, Raghd S Bitar, MD, D Wayne Overby, MD, Timothy M Farrell, MD, Division of Gastrointestinal Surgery, University of North Carolina, Chapel Hill, NC

S124 SMALL BOWEL RESECTION AND ANASTOMOSIS USING "NOTES": LESSONS LEARNED IN A SURVIVAL MODEL Ariel U Spencer, MD, Hien T Nguyen, MD, Elena Dubcenco, MD, Anthony M Kalloo, MD, Michael R Marohn, DO, The Johns Hopkins University School of Medicine

S125 AUDITORY STRESS VERSUS MENTAL LOADING: THE EFFECTS ON LAPAROSCOPIC MOTOR SKILL PERFORMANCE Claudius Conrad MD, PhD, Yusuf Konuk, MD, Caroline Cao, PhD, Andrew Warshaw, MD, David Rattner, MD, Daniel Jones, MD, Denise Gee, MD, 1 Massachusetts General Hospital, Department of Surgery, Boston, MA; 2 Tufts University, Department of Mechanical Engineering, Medford, MA; 3 Beth Israel Deaconess Medical Center, Department of Surgery, Boston, MA

S126 NOVEL SYSTEM IMPROVES ACCURACY OF NEEDLE PLACEMENT FOR ABLATION PROCEDURES Stephen M Smeaton, MD, John B Martinie, MD, Michael C Meadows, MD, Phuong H Nguyen, MD, Jessica J Heath, BS, Sharif Razzaque, PhD, Caroline GreenH. James Norton, PhD, David A Iannitti, MD, Srikanth Padma, MD, Carolinas Medical Center, Charlotte, NC; InnerOptic Technology Inc, Chapel Hill, NC.

S127 RIVES-STOPPA INCISIONAL HERNIA REPAIR COMBINED WITH LAPAROSCOPIC SEPARATION OF ABDOMINAL WALL COMPONENTS: A NOVEL APPROACH TO COMPLEX ABDOMINAL WALL CLOSURE Tiffany C Cox, MD, Jonathan P Pearl, MD, Alexander Stojadinovic, MD, E. Matthew Ritter, MD, Departments of Surgery, National Naval Medical Center, Walter Reed Army Medical Center, and the Uniformed Services University, Bethesda, Maryland

S128 ERGONOMIC USER INTERFACES FOR NOTES; A COMPARISON OF LEARNING CURVES FOR OPEN, LAPAROSCOPIC AND ENDOSCOPIC DEVICES IN COMPLEX BIMANUAL COORDINATION Georg O Spaun, MD, Bin Zheng, PhD, Danny V Martinec, BS, Brittany N Arnold, BS Lee L Swanstrom, MD, Legacy Health System, Portland, Oregon

S129 FOLLOW-UP AND DISTANCE FROM CENTRE ARE IMPORTANT DETERMINANTS IN WEIGHT LOSS POST LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING. P Sivagnanam, BS, M Rhodes, MD, Norfolk and Norwich University Hospital NHS Trust, Norfolk, UK and Spire Hospital, Norwich, Norfolk, UK

S130 SINGLE PORT ACCESS (SPA) COLON RESECTION: A COMPARISON TO MULTIPOINT LAPAROSCOPIC (MPL) COLECTOMY Alex Poor, MD, Erica R Podolsky, MD, Andrew S Wu, MD, Paul G Curcillo, II, MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

*SAGES acknowledges an unrestricted educational grant in support of this session from **Ethicon Endo-Surgery, Inc.***

SAGES 2009

Friday, April 24, 2009

1:00 PM - 3:30 PM

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

Best Practices for Surgical Treatment of Obesity Session

Location: North 224A-B Ballroom

Chair: Daniel B. Jones, M.D.; **Co-Chair:** Jon Gould, M.D.

As one of the fastest growing fields, bariatric surgery offers the allure of strong demand and good financial reward. Rapidly accelerating advances in surgical technologies and techniques have raised concerns about patient safety as well as levels of scrutiny by regulatory agencies, insurers, and public health officials. The Betsy Lehman Center for Patient Safety and Medical Error Reduction reconvened a statewide panel of experts to review evidence-based literature and recommend best practice solutions in 2008. SAGES, the American College of Surgeons (ACS) and the American Society for Metabolic and Bariatric Surgery (ASMBS) have all developed practice guidelines for weight loss surgery. This panel will update information on patient safety and best practice options with the aim of improving quality of life and transparency.

Objectives:

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

- Recognize challenges facing patients undergoing obesity surgery
- Describe approaches to reducing medical error
- Discuss criteria common to Centers of Excellence
- Discuss advances in surgical management
- Discuss controversies in surgical treatment
- Describe patient selection strategies
- Identify physician training requirements
- Recognize the role of multidisciplinary approach to obese patients
- Identify and start to address legislative and financial barriers to care

SCHEDULE

1:00 PM	Introduction	Daniel B. Jones, M.D. & Jon Gould, M.D.
	Benchmarks for Patient Safety	
1:05 PM	Betsy Lehman Center for Patient Safety and Medical Error Reduction	Daniel B. Jones, M.D.
1:15 PM	Surgical Care: Levels of Evidence	Philip Schauer, M.D.
1:25 PM	Patient Education & Informed Consent	Robert Fanelli, M.D.
1:35 PM	Sleep Apnea and Anesthetic Care	Stephanie B. Jones, M.D.
1:45 PM	Documenting Nutritional Status & Risk Adjustment Outcomes	Matthew Hutter, M.D.
1:55 PM	Discussion	
	Special Issues and Controversies	
2:15 PM	Multidisciplinary Team and Bariatric Program Accreditation	Bruce Schirmer, M.D.
2:25 PM	Pediatric/Adolescent Care Concerns	Janey Pratt, M.D.
2:35 PM	N.O.T.E.S. and Endoscopic Weight Loss Surgery Frontiers	James Ellsmere, M.D.
2:45 PM	SAGES Educational Offerings	Steven Schwaitzberg, M.D.
2:55 PM	Policy and Access	Jon Gould, M.D.
3:05 PM	Discussion	

2:30 PM - 3:30 PM

SS11: Ergonomics / Instrumentation / Robotics **Location:** North 222 A-C

Moderators: Gretchen Purcell Jackson, MD, PhD and Alex Gandsas, MD

S053 QUANTIFIED SURGEON? SPARED MENTAL RESOURCE IN A LAPAROSCOPIC SUTURING TASK Bin Zheng, MD, Maria A Cassera, BS, Danny V Martinec, BS, Georg O Spaun, MD, Lee L Swanstrom, MD, Centre of Excellence for Surgical Education & Innovation of UBC, Legacy Health System, Portland, OR

S054 ROBOTIC ASSISTED PANCREATIC SURGERY: SINGLE SURGEON EXPERIENCE. Enrique Elli, MD, Fabio Sbrana, MD, Francesco Bianco, MD, Galaxy Shah, MD, Pier C Giulianotti, MD, Ospedale Misericordia Grosseto, Italy; University Of Illinois, Chicago, IL

V015 ROBOTIC-ASSISTED, THORACOSCOPIC MEDIASTINAL PARATHYROIDECTOMY FOR PERSISTENT HYPERPARATHYROIDISM Adrian M Harvey, MPA, Lynn Seto, MD, Gurkan Tellioglu, MD, Allan Siperstein, MD, Tomislav Mihaljevic, MD, Eren Berber, MD, The Cleveland Clinic, Cleveland, OH

S055 ATTENTION DISRUPTIONS TO THE OPERATING SURGEON DURING LAPAROSCOPIC CHOLECYSTECTOMY Nora Meehaghian, MD, Erica Sutton, MD, Yassar Youssef, MD, Yan Xiao, PhD, Tommy Lee, MD, David Dexter, MD, Adrian Park, MD, Department of Surgery, University of Maryland School of Medicine, Baltimore, MD

V016 CHOPSTICK SURGERY: A NOVEL TECHNIQUE ENABLES USE OF THE DA VINCI ROBOT TO PERFORM SINGLE INCISION LAPAROSCOPIC SURGERY (SILS) Rohan A Joseph, MD, Nilson A Salas, MD, Christopher Johnson V.Tech, Michael A Donovan, MS, Matthew G Kaufman, BS, Alvin Goh, MD, Brian Miles, MD, Patrick R Reardon, MD, Brian J Dunkin, MD, Department of Surgery, The Methodist Hospital, Houston, TX

S056 SIDE-TO-SIDE DUODENO-COLIC ANASTOMOSIS WITH ENDOTRACT TM PROVIDES EXCELLENT WEIGHT LOSS. Michel Gagner, MD, Dave Blaeser, Dale Spencer, Mount Sinai Medical Center, Florida International University





Friday, April 24, 2009

3:30 PM - 5:00 PM

SS12: New Technology / Surgical Innovation Location: North 221A-C

Moderators: Michel Gagner, MD and Paresch Shah, MD

S057 AUGMENTED REALITY FOR LAPAROSCOPIC SURGERY USING A NOVEL IMAGING METHOD- INITIAL RESULTS FROM A PORCINE MODEL R Shekhar, PhD, C Godinez, MDS Kavic, MD, E Sutton, MD, I George, A Park, MD, Department of Surgery, University of Maryland School of Medicine, Baltimore, MD

S058 IMAGE OVERLAY NAVIGATION BY FLUCTUATION ADJUSTING ACCELEROMETER IN LAPAROSCOPIC SURGERY AND NOTES Maki Sugimoto, MD, Veterans Affairs Palo Alto Health Care System, Stanford University, Stanford, CA

S059 BIOLUMINESCENT ENDOSCOPIC IMAGING: TECHNICAL REQUIREMENTS OF THE CHEMISTRY AND CAMERA SYSTEM Philip Neff, MD, Bruce Bryan, MD, Randall Murphy, PhD, Foothills Surgical Associates, Wheat Ridge, Colorado

S060 USING A FLEXIBLE ROBOTIC ENDOSCOPIC NOTES PLATFORM TRANSGASTRICALLY IN A CADAVER TO TEST ACCESS, NAVIGATION, MANEUVERABILITY AND STABILITY Dan Eisenberg, MD, Stanford School of Medicine and Palo Alto VA Health Care System, Palo Alto, CA

S061 A NOTES SURVIVAL STUDY OF A NOVEL GASTRIC CLOSURE DEVICE: LOOP-ANCHOR PURSE-STRING David J Desilets (1), MD, John R Romanelli (1), MD, Vihar C Surti (2), BS, Carolanne Lovewell (1), BS, Christopher N Chapman (1), MD, David B Earle (1), MD, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA (1)

S062 THE DEVELOPMENT AND TESTING OF A TETHERED, INDEPENDENT CAMERA FOR NOTES AND SINGLE-SITE LAPAROSCOPIC PROCEDURES Paul Swain, MD, Ralph Austin, MD, Kurt Bally, BS, Robert Trusty, MS, The NOTES Development Group, Imperial College, London UK; Colchester General Hospital, UK

S063 SINGLE PORT CHOLECYSTECTOMY WITH THE TRANSENTERIX SYSTEM: SIMPLE AND SAFE Aurora D Pryor, MD, Lou DiBernardo, MD, Duke University Medical Center, Durham, NC

S064 SINGLE PORT LAPAROSCOPIC CHOLECYSTECTOMY WITH THE TRIPORT: INITIAL EXPERIENCE Thomas B Roshek, MD, Philip A Omotosho, MD, David B Earle, MD, John R Romanelli, MD, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA

S065 LAPAROSCOPIC SINGLE PORT APPENDECTOMY USING INTRAPERITONEALLY PLACED MAGNETIC CAMERA Prashanth P Rao, MD, Jeff Cadeddu, MD, Daniel Scott, MD, Mahesh Desai, MD, Mamata Hospital, India, UT Southwestern, USA, MPUH, India

SAGES acknowledges an unrestricted educational grant in support of this session from Olympus-Gyrus ACMI.

3:30 PM - 4:30 PM

SS13: Complications Location: North 222 A-C

Moderators: Michael Nussbaum, MD and Yuko Kitagawa, MD

S066 INSULATION FAILURE IN LAPAROSCOPIC INSTRUMENTS Paul Montero, MD, Thomas N Robinson, MD, John Weaver, MD, Greg Stiegmann, MD, University of Colorado Health Sciences Center, Denver, CO

S067 PROSPECTIVE EVALUATION OF PERCUTANEOUS ENDOSCOPIC GASTROSTOMY RELATED PERITONITIS IN THE SURGICAL INTENSIVE CARE UNIT (SICU) -- A PRELIMINARY ANALYSIS Nazneen R Billimoria, MD, Rachit D Shah, MD, Nabil Tariq, MD, Charles J Shanley, MD, James M Robbins, MD, Randy J Janczyk, MD, William Beaumont Hospital, Royal Oak, Michigan

V017 LAPAROSCOPIC SIGMOIDECTOMY AND ANASTOMOTIC LEAK T D Francone, MD, P Marcello, MD, Lahey Clinic Medical Center, Burlington, MA

V018 EARLY RE-EXPLORATION FOLLOWING INCISIONAL HERNIA WITH BIOLOGIC GRAFT Emanuele Lo Menzo, MD, Alberto Iglesias, MD, Jose M Martinez, MD, Diya Alaadeen, MD, Seth A Spector, MD, Atul K Madan, MD, Miami VA Healthcare System & University of Miami, Miami, FL

S068 RECOMMENDED TIMING FOR SURVEILLANCE ULTRASONOGRAPHY TO DIAGNOSE PORTAL VEIN THROMBOSIS AFTER LAPAROSCOPIC SPLENECTOMY Tung Tran, MD, Sebastian Demyttenaere, MD, Gerry Polyhronopoulos, MD, Chantal Seguin, MD, Giovanni Artho, MD, Pepa Kaneva, MSc, Gerald Fried, MD, Liane Feldman, MD, Department of Surgery, McGill University, Montreal, Quebec, Canada

V019 LAPAROSCOPIC MANAGEMENT OF ILIAC VEIN INJURY Michael Hellinger, MD, Michel Gagner, MD, Irving Jorge, MD, Jacob Tangir, MD, Stelios Rekkas, MD, Mount Sinai Medical Center, Miami Beach, FL

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.



3:30 PM - 5:00 PM

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

SAGES/IPEG Joint Session: Urgent and Emergent Acute Care Problems in Pediatric and Adult Patients

Location: North 224A-B Ballroom

Chairs: John F. Sweeney, M.D. and Carroll "Mac" Harmon, M.D.

There are many general and pediatric surgeons who treat pediatric and adult patients with complex surgical problems. The topics covered in this joint SAGES/IPEG activity will outline the differences in presentation, diagnosis and management of several complex surgical problems in pediatric and adult patients.

Objectives:

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

- Describe the differences in the presentation, diagnosis, and treatment of acute appendicitis, intestinal malrotation, and intussusception in pediatric and adult patients
- Review the role of laparoscopy in the treatment of small bowel obstruction
- Identify methods for improving the early detection of intestinal ischemia
- Discuss current recommendations for non-operative and operative management of acute diverticulitis

SCHEDULE

3:30 PM	Introduction	John F. Sweeney, M.D. & Carroll "Mac" Harmon, M.D.
	Diagnosis and Management in Pediatric and Adult Patients	
3:35 PM	Acute Appendicitis	Shawn D. St. Peter, M.D.
3:45 PM	Intestinal Malrotation	Steven Rothenberg, M.D.
3:55 PM	Intussusception	Keith Georgeson, MD
4:05 PM	Discussion	
	Other Emergent Problems	
4:15 PM	Small Bowel Obstruction: Is There a Role for Laparoscopy?	Vadim Sherman, M.D.
4:25 PM	Intestinal Ischemia: Tips for Intervening Before It's Too Late	S. Scott Davis, M.D.
4:35 PM	Diverticulitis: Current Management and Recommendations for Surgical Intervention	Edward P. Dominguez, M.D.
4:45 PM	Discussion	
4:55 PM	Closing Remarks	John F. Sweeney, M.D. & Carroll "Mac" Harmon, M.D.

4:30 PM - 5:30 PM

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

SAGES "GameTime" 2009

Location: West 301B-C

Chair: James "Butch" Rosser, M.D.; **Co-Chair:** Shawn Tsuda, M.D.

Since the dawn of the age of television, **game shows** have been some of the highest rated and longest running members of this revolutionary medium of media. They have been a perennial source of family interaction and fun. Who can forget *Password*, *The Price is Right*, *Jeopardy*, and of late, *Deal or No Deal* and *American Gladiators*. At the 2009 SAGES Meeting, that same excitement will be experienced with SAGES *GameTime*!

Drs. Butch Rosser and Shawn Tsuda, and their select team, with jeopardy game questions from Dr. Terry Hicks, will combine their game-based competition experience and host a challenge of knowledge, athleticism, and surgical skill intimately aligned with these famous television icons. For the debut of SAGES GameTime, two highly motivated teams of competitors will go head to head with the pride of their universities put on the line. The inaugural battle of SAGES GameTime will be between the University of Missouri Tigers and The Ohio State University Buckeyes. For a grueling hour, these rivals will engage in a match of general, pop culture, and surgical trivia.

Knowledge alone will not prevail. To be crowned the eventual champion, contestants will have to demonstrate their skills with video games (Super Monkey Ball), passing a football, The Fundamentals of Laparoscopic Surgery peg transfer, and finally, the Top Gun Slam Dunk and suturing drills. They will not be alone. At-large contestants from the audience will be tasked with assisting each team.

As it was with its television counterparts, SAGES GameTime is all about winning for contestants and the audience alike. Individual medals will be awarded with the ultimate prize being the team SAGES GameTime trophy. Everyone is welcome: SAGES members, meeting attendees, and their families. This event promises a novel, exciting program for all that witness this showcase of knowledge, skill, and fun.

Please join us for the 1st SAGES GameTime 2009.

Personnel: Terrence Fullum, MD & Patrick Reardon, MD

Ohio State University Buckeyes Team Captain: W. Scott Melvin, MD

University of Missouri Tigers Team Captain: Steve Eubanks, MD

***SAGES is not offering CME credits for this event.**



Friday, April 24, 2009

Scientific Sessions & Panels

5:15 - 6:15 PM

IPEG/SAGES Simulator Session

Location: West 301D Ballroom

Chairs: Sanjeev Dutta, MD & David van der Zee, MD

Course Description:

Simulation as a modality for training is taking center stage in surgical education. Part-task trainers and virtual reality simulators are becoming more prevalent for technical skills training. This course familiarizes attendees to the range of commercially available simulators, and gives an overview of the role of technical skills simulation in the surgical education curriculum.

Learning Objectives:

- To become familiar with a variety of surgical simulator technologies currently available commercially.
- To understand the role of simulation in training surgical technical skills with respect to practice, performance feedback, and assessment.

SCHEDULE

5:15 PM

Introduction

David van der Zee, MD

5:15 PM - 5:30 PM

Industry Presentations

Haptica, Symbionix, & Surgical Science

5:30 PM - 6:00 PM

State-of-the-Art Lecture: "Skills Simulation: The Practice Arena before the Performance Arena"

Gary Dunnington, MD, FACS

6:00 PM - 6:15 PM

Roundtable Discussions

Sanjeev Dutta, MD

SAGES is not offering CME credits for this event.

6:00 PM - 7:00 PM

Meet the Leadership Reception For Residents, Fellows & New Members

Location: Valley of the Sun Room, Phoenix Sheraton Hotel

Ticketed Event

SAGES acknowledges a generous grant in support of this event from Olympus-Gyrus ACMI

7:30 PM - 11:00 PM

Don't miss the SAGES/IPEG Gala - Featuring: The SAGES Sing-Off!

Location: Corona Ranch. See page 111 for details. Shuttles begin departing at 7:15 PM in front of the Sheraton Phoenix Downtown and the Hyatt Regency Phoenix hotels. Buses will circle all evening until the event ends. Free to all SuperPass Registrants (Registration Option A). Registration Options B & C must purchase tickets.

SAGES acknowledges our Platinum and Gold Level Donors for their support of this event:

Platinum Donors

Allergan, Inc. · Covidien · Ethicon Endo-Surgery, Inc. · Karl Storz Endoscopy-America · Olympus-Gyrus Acmi

Gold Donor

Stryker Endoscopy

Revised SAGES Mission Statement

SAGES Board of Governors recently approved a revised mission statement, which will be approved by the membership:

"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 25 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.



Saturday-at-a-Glance

All courses, sessions and panels take place at the Phoenix Convention Center unless otherwise noted.



Saturday, April 25, 2009	Time	Room
SS14: Plenary Session II	7:30 - 8:30 AM	West 301A Ballroom
SAGES Health Policy Lecture: Catherine DeAngelis, MD	8:30 - 9:00 AM	West 301A Ballroom
SAGES Karl Storz Lecture in New Technology: David Williams	9:00 - 9:30 AM	West 301A Ballroom
Posters & Learning Center Open (Exhibits Closed)	9:30 AM - 1:30 PM	North Exhibit Hall B-C
SS15: Endolumenal / NOTES	9:30 - 11:30 AM	West 301B-C Ballroom
Patient Safety Panel	9:30 - 11:30 AM	West 301A Ballroom
SAGES/SLS Panel: Unexpected Findings at Laparoscopy	9:30 - 11:30 AM	North 221A-C Ballroom
SAGES/SSAT Upper GI Neoplasms Panel	9:30 AM - 12:00 PM	North 222A-C Ballroom
SAGES Annual General Membership Business Mtg.	11:30 AM - 12:00 PM	West 301B-C Ballroom
BREAK: Posters & Learning Center	11:30 AM - 1:00 PM	North Exhibit Hall B-C
Technology Lunch: Industry/Surgeon Partnerships in Promoting Surgical Innovation	11:30 AM - 1:00 PM	North 229A-B Ballroom
Fellowship Council Lunch: Integrating ABS Training Curriculum into the MIS Fellowship	12:00 - 1:00 PM	North 224A-B Ballroom
Emerging Technologies Session	1:00 - 4:00 PM	West 301A Ballroom
SS16: Solid Organ	1:00 - 2:30 PM	North 221A-C Ballroom
SS17: Hernia II	1:00 - 2:00 PM	North 222A-C Ballroom
SS18: NOTES / Single Incision Video	1:00 - 2:00 PM	West 301B-C Ballroom
SS19: Hepatobiliary / Pancreatic	2:30 - 4:00 PM	North 221A-C Ballroom
SS20: Flexible Endoscopy	2:00 - 3:00 PM	North 222A-C Ballroom
SS21: Bariatric II	2:00 - 3:00 PM	West 301B-C Ballroom
SS22: Education / Simulation II	3:00 - 4:00 PM	North 222A-C Ballroom
SS23: MIS Potpourri	3:00 - 4:00 PM	West 301B-C Ballroom

2009 Poster Session: Thursday - Saturday

**Posters will be on display, Thursday, Friday and Saturday.
The top posters will be recognized on-site.**

*SAGES acknowledges our Platinum Level Donors for their support of this session:
Allergan, Covidien, Ethicon Endo-Surgery, Inc., Karl Storz Endoscopy-America, Olympus-Gyrus ACMI*

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.

Saturday, April 25, 2009

7:30 AM - 8:30 AM

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

SS14: Plenary Session II

Location: West 301A Ballroom

Moderators: Mark Talamini, MD and Christopher Schlachta, MD

S069 TREATMENT OF ULTRA-LONG SEGMENT BARRETT'S USING FOCAL AND BALLOON-BASED RADIOFREQUENCY

ABLATION Melina C Vassiliou, MD, Daniel C Wiener, MD, Linda L Fadden, RN, Cynthia L Swasey CRC, Richard I Rothstein, MD, Dartmouth Hitchcock Medical Center, Lebanon, NH

S070 LONG-TERM OUTCOME AFTER ENDOSCOPIC STENT THERAPY FOR COMPLICATIONS AFTER BARIATRIC SURGERY

Atif Iqbal, MD, Brent Miedema, MD, Steve Eubanks, MD, Archana Ramaswamy, MD, Nicole Fearing, MD, Bruce Ramshaw, MD, Stephen Caleb, MS, Klaus Thaler, MD, Department of General Surgery, University of Missouri Columbia, Columbia, MO

V020 MINIMALLY INVASIVE FUNCTIONAL ABDOMINAL WALL RECONSTRUCTION: A NEW PARADIGM IN VENTRAL HERNIA REPAIR.

Michael J Rosen, MD, Case Medical Center. University Hospitals of Cleveland, OH

S071 TRANSGASTRIC AND TRANSVAGINAL ENDOSCOPIC CHOLECYSTECTOMY IN HUMAN BEINGS Gustavo Salinas, MD, Lil Saavedra, MD, Hellen Agurto, MD, Jeffrey Marks, MD, Edwin Ramírez, MD, José Grande, MD, Juan Carlos Tamayo, MD, Victoria Sánchez, MD, Avendaño Clinic, Lima, Peru

S072 TELESIMULATION IN AFRICA: AN EFFECTIVE METHOD FOR TEACHING THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY IN DEVELOPING COUNTRIES

Allan Okrainec, MD, Oscar Henao, MD, Georges Azzie, MD, Toronto Western Hospital - University Health Network, Toronto, Canada; Hospital for Sick Children, Toronto, Canada – **SAGES Research Grant**

KEYNOTE LECTURES:

8:30 AM - 9:00 AM

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

Health Policy Lecture *Conflicts of Interest in Medical Research: Facts and Friction*

Location: West 301A Ballroom



Catherine D. DeAngelis, MD, MPH

Editor, Journal of the American Medical Association, Editor in Chief, Scientific Publications and Multimedia Applications, Professor, Johns Hopkins University School of Medicine

Who to better update us, from the physician perspective, on the state of health policy in the U.S. than the physician who has served as the Editor of the *Journal of the American Medical Association (JAMA)* since 2000. We are happy to welcome Dr. Catherine DeAngelis to Phoenix and the SAGES meeting. Her viewpoint is unique because she has been a nurse and a Pediatrician. She earned a Masters of Public Health from Harvard, and a certificate in the Business of Medicine including Managed Care.

She has been awarded seven honorary degrees including six as doctor of science, and one as doctor of humane letters. Dr. DeAngelis has also earned a plethora of other honors. In 2000 the Catherine D. DeAngelis, MD Visiting Lectureship for Women in Medicine was established at the Johns Hopkins University School of Medicine.

Her career has led to academic appointments in Pediatrics at Roxbury Health Clinic, Boston; Columbia University, New York; University of Wisconsin School of Medicine, and Johns Hopkins University School of Medicine, Baltimore, where her last appointment was as Vice Dean for Academic Affairs and Faculty.

Dr. DeAngelis now serves as National Institute of Health Advisory Committee to the Director, and as a member of the Comptroller General's Advisory Board, United States Government Accountability Office.

STI 2009: SAGES Technology Initiative

For the fifth year, STI '09 continues to be a mechanism to bring new and emerging technologies to the front of the annual meeting, as well as to the attention of the Society. During the 2009 SAGES Meeting, STI includes the Wednesday Endolumenal/NOTES™ Hands-On Course; Thursday Advanced Laparoscopic Techniques Course & Lab (incl. SILS), Robotics Panel, Educators Luncheon on Simulation-Team Training and NOTES™/Endolumenal Symposium; and Saturday Emerging Technology Session and Technology Luncheon.



Saturday, April 25, 2009

Scientific Sessions & Panels

9:00 AM - 9:30 AM

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

Karl Storz Lecture in Innovative Technology *The Role of Technology in Enhancing Patient Safety*

Location: West 301A Ballroom



Dafydd (Dave) Rhys Williams, M.D.

**Director, McMaster Centre for Medical Robotics and Professor, Department of Surgery
Astronaut, Canadian Space Agency (Former)**

The Karl Storz Lecture in Innovative Technology was named for SAGES first Pioneer in Endoscopy. It is appropriate that this year's Karl Storz Lecture is presented by a pioneer in his own field.

Dave Williams was an astronaut... AND an aquanaut. That description alone could tell you almost everything about who he is. But there is much more. He enjoys flying, scuba diving, hiking, sailing, kayaking, canoeing, downhill and cross-country skiing. This is a man who is comfortable with risk and fresh air.

Dr. Williams graduated from McGill University, Montréal, Quebec, with a Bachelor of Science, Major in Biology, obtained a Master of Science from the Physiology Department, a Doctorate of Medicine and a Master of Surgery from the Faculty of Medicine, McGill University. He completed a residency in family practice at the University of Ottawa and obtained a fellowship in emergency medicine from the Royal College of Physicians and Surgeons of Canada. He is a Fellow of the Royal College of Physicians and Surgeons and the College of Family Physicians of Canada.

After several years in emergency medicine Dr. Williams became the director of the Department of Emergency Services at Sunnybrook Health Science Centre and Assistant Professor of Surgery at the University of Toronto. He is currently an Adjunct Professor of Surgery at the University of Toronto and McGill University.

In June 1992 the Canadian Space Agency selected Dave Williams as one of four successful candidates from a field of 5330 applicants to begin astronaut training. In May 1993, he was appointed manager of the Missions and Space Medicine Group. Dr. Williams was the principal investigator of a study to evaluate the initial training and retention of resuscitation skills by non-medical astronauts.

In January 1995, Dave Williams was selected to join the international class of NASA mission specialist astronaut candidates. From July 1998 until September 2002, Dave Williams held the position of Director of the Space and Life Sciences Directorate at the Johnson Space Center in Houston. With this appointment, he became the first non-American to hold a senior management position within NASA.

He became an aquanaut through his participation in the joint NASA-NOAA (National Oceanic and Atmospheric Administration) NEEMO 1 mission. During this seven-day exercise, Williams became the first Canadian to have lived and worked in space and in the ocean.

A veteran of two space flights, STS-90 in 1998 and STS-118 in 2007, Dave Williams has logged over 687 hours in space including 3 spacewalks (EVAs) totaling 17 hours and 47 minutes. Dave Williams retired from active astronaut status as of March 1, 2008.

Dave Williams' special honors include (among MANY others): NASA Space Flight Medal (1998); Melbourne W. Boynton Award, American Astronautical Society (1999); Ramon y Cajal Institute of Neurobiology, Spanish Council for Scientific Research (CSIC) Bronze Medal for contribution to neuroscience during Mission STS-90 (1999); NASA Outstanding Leadership Medal (2002); Patron of the International Life Saving Federation (2002); Honorary Ambassador of the SmartRisk Foundation; Space and Life Sciences Directorate Special Professional Achievement Award (2003) for the implementation of the Automatic External Defibrillator Program that has saved several lives at the NASA Johnson Space Center; Honorary Doctor of Laws, University of ARCH 2008

Previous Storz Lecturers

2008	Thomas Krummel, MD	2001	Jacques Marescaux, MD, FRCS
2007	Richard John (Bill) Heald, OBE MChir FRCS (Eng) FRCS (Ed)	2000	Tehmenton Udawadia, MD
2006	Richard M. Satava, MD	1999	Erich Muhe, MD
2005	Guy Bernard Cadiere, MD, PhD	1998	Michael Mack, MD
2004	Sir Ara Darzi, KBE	1997	Jack Jakimowicz, PhD
2003	Samuel A. Wells, MD	1996	George Berci, MD
2002	Christopher Paul Swain, MD		

9:30 AM - 1:30 PM

SAGES Posters & Learning Center Open (Exhibit Hall CLOSED)

SAGES 2009

Saturday, April 25, 2009

9:30 AM - 11:30 AM

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

Concurrent Sessions (accepted oral & video presentations)

SS15: Endolumenal / NOTES Location: West 301B-C

Moderators: William Richards, MD and Ricardo Zorron, MD

S073 3D NOTES NAVIGATION SYSTEM BY MAGNETIC SCOPE DETECTION AND OSIRIX VIRTUAL LAPALOSCOPY Maki Sugimoto, MD, Veterans Affairs Palo Alto Health Care System, Stanford University, Stanford, CA

S074 A MULTITASKING PLATFORM FOR NOTES; A BENCH TOP COMPARISON OF A NEW DEVICE FOR FLEXIBLE ENDOSCOPIC SURGERY AND STANDARD DUAL CHANNEL ENDOSCOPE * *SUPPORTED BY A NOSCAR GRANT (2006) Georg O Spaun, MD, Bin Zheng, Lee L Swanstrom, Legacy Health System, Portland, Oregon

S075 TISSUE APPPOSITION SYSTEM (TAS) – NEW TECHNOLOGY TO MINIMIZE SURGERY FOR ENDOSCOPICALLY UNRESECTABLE COLONIC POLYPS C P Delaney, MD, B J Champagne, MD, J M Marks, MD, V Obias, MD, L Sanuk, MD, B Ermlich, RN, Chak A, MD, Division of Colorectal Surgery and Department of Gastroenterology*, University Hospitals Case Medical Center, Cleveland, Ohio, USA

S076 EVALUATION OF A VISCEROTOMY FORMATION AND CLOSURE DEVICE FOR NATURAL ORIFICE SURGERY IN A SURVIVAL MODEL Danny A Sherwinter, MD, Maimonides Medical Center, Department of Minimally Invasive Surgery, Brooklyn, N.Y.

S077 HYBRID NOTES CHOLECYSTECTOMY: PROSPECTIVE HUMAN SERIES Angel Cuadrado-Garcia, MD, PhD, Jose F Noguera, MD, PhD, Jose M Olea-Martinez, MD, Rafael Morales, MD, Carlos Dolz, MD, PhD, Luis Lozano, MD, Jose-Carlos Vicens, MD, Servicios De Cirugia Y Ap. Digestivo, Hospital Son Llatzer (Palma De Mallorca, Spain)

S078 GYNECOLOGIC STATUS AFTER NOTES TRANSVAGINAL CHOLECYSTECTOMY Alberto R Ferreres, PhD, Santiago Horgan, MD, Julieta Paleari, MD, Anibal J Rondán, MD, Oscar Laudanno, MD, Mark Talamini, MD, Department of Surgery, University of Buenos Aires and Department of Minimal Invasive Surgery, University of California, San Diego

S079 USING EXTERNAL MAGNET GUIDANCE AND ENDOSCOPICALLY PLACED MAGNETS TO CREATE SUTURE-FREE GASTRO-ENTERAL ANASTOMOSES Christopher J Myers, MD, Benjamin Yellen, PhD, John A Evans, MD, Eric J DeMaria, MD, Aurora D Pryor, MD, Duke University Medical Center, Durham, North Carolina

S080 ESOPHAGEAL MUCOSAL RESECTION DIAGNOSTICS Matthew G Cusick, MD, J Kuhn, MD, J C Campbell, RN, M Arnold, RN, R Meyer, MD, J S Burdick, MD, Baylor University Medical Center

S081 PER ORAL STAPLED FUNDOPLICATION WITH THE MEDIGUS SRS DEVICE Aviel Roy-Shapira, MD, Amol Bapaye, MD, Menash Sonnenschein, MSc, Ben Gurion University, Beer Sheva, Isreal; Deenanath Maneshkar Hospital and Research Center, Pune, India; Medigus Ltd, Omer, Israel

S082 REDUCING THE UNEXPECTEDLY HIGH RATE OF INJURIES CAUSED BY NOTES GASTROTOMY CREATION Dae Kyung Sohn, MD, Denise W Gee, MD, Brian G Turner, MD, Field F Willingham, MD, Patricia Sylla, MD, Sevdenur Cizginer, MD, Yusuf Konuk, MD, William R Brugge, MD, David W Rattner, MD, Massachusetts General Hospital, Boston, MA.

S083 DIAGNOSTIC TRANSGASTRIC ENDOSCOPIC PERITONEOSCOPY: EXTENSION OF INITIAL HUMAN TRIAL FOR STAGING OF PANCREATIC HEAD MASSES Peter N Nau, MD, Benjamin Yuh, BA, Peter Muscarella Jr., MDE, Christopher Ellison, MD, Joel Anderson, MD, Lynn Happel, MD, W. Scott Melvin, MD, Jeffrey W Hazey, MD, Division of Minimally Invasive Surgery - Department of General Surgery, The Ohio State University School of Medicine, Columbus, OH USA

S084 CLINICAL EXPERIENCE WITH A MULTIFUNCTIONAL FLEXIBLE SURGERY SYSTEM FOR ENDOLUMINAL, SINGLE PORT AND NOTES PROCEDURES Santiago Horgan, MD, Georg Spaun, MD, Mark Talamini, MD, Alberto Ferreres, MD, Garth Jacobsen, MD, Kari Thompson, MD, John Cullen, MD, Lee Swanstrom, MD, UCSD, San Diego CA, Legacy Health System, Portland OR, Hospital de Clinicas, Buenos Aires, Argentina

S085 SURVIVAL STUDY OF NOTES RECTOSIGMOID RESECTION USING TRANSANAL ENDOSCOPIC MICROSURGERY (TEM) WITH OR WITHOUT TRANSGASTRIC ENDOSCOPIC ASSISTANCE IN A SWINE MODEL Patricia Sylla, MD, Dae K Sohn, MD, Sevdenur Cizginer, MD, Yusuf Konuk, MD, Brian Turner, MD, Denise W Gee, MD, Field W Willingham, MD, Christopher Hoffman, BA, Mayle Hsu, MD, Mari Mino-Kenudson, MD, William R Brugge, MD, David W Rattner, MD, Massachusetts General Hospital, Boston, MA

SAGES acknowledges an unrestricted educational grant in support of this session from Stryker Endoscopy.

Videos in the Video Channel Loop can be viewed in the dedicated viewing area set up in the Exhibit Hall.

The viewing area will be next to the Learning Center. Look for the hanging sign "SAGES 2009 Video Channel Loop Viewing Area." Viewing hours are Thursday & Friday 9:30AM - 3:30PM, Saturday 9:30AM - 1:30PM. Video Channel Loop abstracts are on page 162.





Saturday, April 25, 2009

Scientific Sessions & Panels

9:30 AM - 11:30 AM

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

Patient Safety Panel: Strategies for Reducing Errors in Surgical Care

Location: West 301A Ballroom

Chair: Dennis Fowler, M.D.; **Co-Chair:** Fredrick Brody, M.D.

This panel reviews strategies to address issues of patient safety including analysis of errors, sentinel events, near misses, system challenges, team interactions, impact of errors on reimbursements, and more. The current status of these strategies is presented along with a review of the aviation and space paradigms and their relevance to the operating room.

Objectives:

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

- Discuss the critical importance of teamwork in a high stakes environment such as aviation, space travel, or the operating room
- Describe the results of improved communication in the operating room
- Practice effective communication techniques for a team approach in a high stakes environment
- Summarize the American College of Surgeons Patient Safety Program

SCHEDULE

9:30 AM	Introduction	Dennis Fowler, M.D. & Fredrick Brody, M.D.
9:35 AM	Safety and Teamwork in a High Stakes Environment	Dave Williams, M.D.
10:05 AM	Surgical Safety Checklists	Dennis Fowler, M.D.
10:20 AM	Briefing and Debriefing in Surgery: Experience to Date	Donald Moorman, M.D.
10:35 AM	Incorporating Lessons Learned in Aviation into Surgical Training: Graduated Training, Simulation, Assessment	Carlos Godinez, M.D.
10:50 AM	The American College of Surgeons and Joint Commission Patient Safety Agenda	Kurt Newman, M.D.
11:05 AM	Discussion	

9:30 AM - 11:30 AM

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

SAGES/SLS Panel: What Do I Do Now? Unexpected Findings at Laparoscopy – An Interactive Video/Case Presentation Panel

Location: North 221A-C Ballroom

Chair: Barry A. Salky, M.D.; **Co-Chair:** David B. Earle, M.D.

This session will utilize photos and video to present cases where there were unexpected findings. The audience will have a chance to choose appropriate options with a remote audience survey system, after which the expert panelists will weigh in with their insight while participants interact via microphones on the floor. Follow up photos and/or videos will be shown if necessary.

Objectives:

After attending this session, attendees will be able to:

- Recognize these unexpected findings during laparoscopic procedures
- Describe an appropriate treatment strategy for these unexpected findings
- Anticipate unexpected findings in the future

Expert Panelists:

Edward Phillips, M.D.	Bruce Ramshaw, M.D.
Morris Franklin, M.D.	Barry Salky, M.D.
Kelvin Higa, M.D.	

SCHEDULE

9:00 AM	Introduction	Barry A. Salky, M.D. & David B. Earle, M.D.
9:35 AM	Large Left Lobe of Liver During Gastric Bypass/Foregut Surgery	
9:45 AM	Cirrhosis Found During Gastric Bypass/Foregut Surgery	
10:00 AM	Ventral Hernia During Gastric Bypass/Foregut Surgery	
10:15 AM	Incisional Hernia Found During Colostomy Closure	
10:30 AM	Unexpected Fistula During GI Surgery	
10:45 AM	Enterotomy During Ventral Hernia Repair	
11:00 AM	Short Esophagus During Paraesophageal Hernia Repair	
11:15 AM	Intraluminal Bleeding After Sigmoid Anastomosis	



9:30 AM - 12:00 PM

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

SAGES/SSAT Upper GI Neoplasms Panel: Current and Evolving Therapeutic Modalities for Upper GI Neoplasms

Location: North 222A-C Ballroom

Chair: Chandrakanth Are, M.D.; Co-Chair: Vivian Strong, M.D.

The session will outline the current practice and evolving therapeutic strategies in the management of upper gastrointestinal malignancies. The session will focus on the management of early or pre-malignant lesions, address controversies in staging, outline neo-adjuvant/adjuvant strategies and evaluate the open and emerging minimally invasive surgical techniques. The session will also place emphasis on the multi-disciplinary approach and outcomes data following treatment of patients with upper gastrointestinal malignancies.

Objectives:

After attending this panel, attendees will be able to:

- Describe how to provide surveillance to patients with Barrett's Esophagus
- Determine the optimal approach (surgical and/or endoscopic) in the management of patients with high grade dysplasia or early esophageal carcinoma
- Differentiate between the different techniques and determine the appropriate surgical approach for resection of esophageal carcinoma
- Review current standards on minimally invasive esophagectomy
- Obtain a comprehensive understanding of adjuvant/neoadjuvant treatment strategies for patients with upper gastrointestinal malignancies involving the multi-disciplinary approach
- Review current controversies and the role of MIS approaches in the surgical management of gastric cancer
- Review recent advances in the understanding and treatment of early gastric cancer, diffuse and familial gastric cancer
- Outline the current management approach of gastrointestinal tumors
- Evaluate outcomes following treatment of malignancies of the upper gastrointestinal tract

SCHEDULE

9:30 AM	Introduction	Chandrakanth Are, M.D. & Vivian Strong, M.D.
	Esophagus	
9:35 AM	Minimally Invasive Approaches to Esophageal Cancer	James Luketich, M.D.
9:45 AM	Staging of Upper GI Malignancies	Paul Mansfield, M.D.
9:55 AM	Treatment of Barrett's Esophagus, High Grade Dysplasia (HGD) and Early Esophageal Cancer: Endoscopic Approaches	Brian Dunkin, M.D.
10:05 AM	Treatment of Barrett's Esophagus, HGD and Early Esophageal Cancer: Surgical Approaches	Steven De Meester, M.D.
10:15 AM	Esophagectomy – Transhiatal Approach – How and Why I Do It?	Pierre Theodore, M.D.
10:25 AM	Esophagectomy – Ivor Lewis Approach – How and Why I Do It?	Manjit Bains, M.D.
10:35 AM	Discussion	
	Gastric	
10:45 AM	Neoadjuvant and Adjuvant Treatment for Upper GI Malignancies	Manish Shah, M.D.
10:55 AM	Familial Gastric Cancer/Diffuse Gastric Cancer and Early Gastric Cancer – Management Options	Henry Lynch, M.D.
11:05 AM	Current Issues/Controversies in the Surgical Management of Gastric Cancer	Martin Karpeh, M.D.
11:15 AM	Minimally Invasive Approaches to Gastric Cancer	Vivian Strong, M.D.
11:25 AM	Gastric GIST and Neuroendocrine Tumors	Jason Gold, M.D.
11:35 AM	National Trends and Outcomes in the Treatment of Upper GI Malignancies	Nabil Rizk, M.D.
11:45 AM	Discussion	

11:30 AM - 1:00 PM

Break: Posters & Learning Center (Exhibit Hall CLOSED)

Evaluation & CME Credit Forms:

Please complete the meeting evaluation form and return to the registration desk or place in an "Evaluation Drop-Box" throughout the convention center.

Visit the CME print stations on the North 300 level to print your CME credit form on-site.



Saturday, April 25, 2009

Scientific Sessions & Panels

11:30 AM - 12:00 PM

SAGES Annual General Membership Business Meeting

Location: West 301B-C

All SAGES Members Encouraged to Attend!

AGENDA

President's Introduction
Report of Ballots and Intro of New Officers/Board

Mark Talamini, MD
W. Scott Melvin, MD, Secretary

COMMITTEE REPORTS

Report on Finance & Assets
Membership
Publications
Guidelines
Flexible Endoscopy
Endolumenal Task Force/NOTES
Educational Resources
Resident Education
Continuing Education
FLS & FES
Research & Career Development
Public Information
Outcomes, Quality & Patient Safety
Program
Technology
Development
Liaison Groups (Bariatric, Ethics, Go Global/International, Pediatric)
Remarks by Incoming President

C. Daniel Smith, MD

11:30 AM - 1:00 PM

Separate Registration fee: \$45

SAGES Technology Luncheon: Industry/Surgeon Partnerships in Promoting Surgical Innovation

Location: North 229A-B Ballroom

Chair: Christopher M. Schlachta, M.D.

This session is for surgeons and industry partners who wish to learn more about the barriers, possible conflicts and opportunities for collaborative surgical innovation.

Objectives:

At the conclusion of this course, participants will have a better understanding of:

- What surgical innovation is
- What lessons can be learned from our forerunners
- What ethical considerations exist in partnering with industry
- How a surgeon approaches industry with an idea
- How industry chooses where to invest resources for development
- What kind of evidence third party payers need to support the adoption of new innovations
- The way in which the cost-effectiveness of a new innovation is measured
- How the surgeon/industry relationship must change for the future and what new ethical implications this carries

SCHEDULE

11:30 AM Introduction
11:40 AM Surgical Innovation: What Have We Learned?
11:55 AM From Bedside to Bench to Bedside: Bringing Ideas to Market
12:10 PM Health Technology Assessment: Evaluating the Cost and Benefit of Innovations
12:25 PM A Brave New World: The Future of Industry/Surgeon Partnerships
12:40 PM Discussion

Christopher Schlachta, M.D.
Daniel Riskin, M.D.
Kenneth Dobler
John H. Parker
Richard M. Satava, M.D.

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Saturday, April 25, 2009

12:00 PM - 1:00 PM

Separate Registration Fee: \$45

Fellowship Council Lunch Symposium: Integrating the New ABS Training Curriculum into the MIS Fellowship

Location: North 224A-B Ballroom

Chair: Samer Mattar, M.D.

General surgery training is undergoing tumultuous change. The introduction and adoption of novel techniques, in association with increased patient demand, have superseded the traditional pace of updating training curricula for residency programs. To satisfy the advanced training needs of graduating residents, numerous fellowship programs have emerged. The Fellowship Council was developed as an umbrella organization charged with various tasks, including regulating nation-wide matching of candidates to programs, accreditation of programs, and recently, the creation of curricula for all membership programs through their respective societies. The ABS curriculum for residency training has also undergone a recent update, with several modifications in key areas such as endoscopy and advanced laparoscopy (including FLS completion). The existence of two separate curricula has created confusion and tension between residency and fellowship directors, and also uncertainty of the future development, growth and maturity of these curricula, whether as separate and competing entities, or complementary and cohesive units.

The aim of this lunch symposium is to discuss these critical issues. The perspectives of a residency program director, a fellowship program director, and representatives from the ABS and the Fellowship Council will be presented.

Objectives:

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

- Describe the creation and mission of the Fellowship Council
- Review the main components of the FC curriculum
- Discuss recent updates and modifications of the ABS curriculum
- Understand the perspective of the director of a residency training program
- Understand the perspective of the director of a fellowship training program

SCHEDULE

12:00 PM	Introduction	Samer Mattar, M.D.
12:15 PM	Updates and Modifications of the ABS Curriculum	Adrian Park, M.D.
12:25 PM	The Perspective of the Director of a Residency Training Program	John Tarpley, M.D.
12:35 PM	The Perspective of the Director of a Fellowship Training Program	Philip Schauer, M.D.
12:45 PM	Discussion	Moderator: Adrian Park, M.D.

11:00 PM - 4:00 PM

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

Emerging Technologies Session

Location: West 301A Ballroom

Chair: Daniel Herron, MD; **Co-Chair:** Gretchen Purcell Jackson, MD, PhD

For the fifth year, SAGES is offered an Emerging Technologies abstract category. This category of abstract was open to both physicians and industry engineers/scientists/ researchers. Selected presenters will report on cutting edge or emerging technologies for which formal experimental data may not yet be available and on technologies which may still be under development. Topics were not limited to formal studies or experiments, but may include descriptive abstracts or very preliminary results.

SAGES is not offering CME credits for this event.

ET01 A SENSOR-EMBEDDED BODY SUPPORT SYSTEM FOR REAL-TIME MONITORING OF LOCAL OVERLOAD DURING STEEP BODY POSITIONING. Tsunekazu Mizushima, MD, Kiyokazu Nakajima, MD, Yutaka Hata*, PhD, Mitsugu Sekimoto, MD, Toshirou Nishida, MD, Yuichiro Doki, MD, Masakai Mori, MD, Osaka University Graduate School of Medicine, Osaka, and *University of Hyogo Graduate School of Engineering, Hyogo, Japan

ET02 INTRAOPERATIVE IMMUNOPHOTODETECTION IN PATIENTS WITH COLON CANCER MHGM van der Pas, MD, DL van der Peet, PhD, MA Cuesta, PhD, F Cailler, PhD, A Pèlerin, PhD, M Gutowski, PhD, V Garambois, PhD, GAMS van Dongen, PhD, WJHJ Meijerink, PhD, Department of surgery, VU University Medical Center, Amsterdam. Department of nuclear medicine, VU University Medical Center Amsterdam. Institut de Reserche en Cancerologie de Montpellier

ET03 CATHETER-BASED OPTICAL COHERENCE TOMOGRAPHY FOR OPTICAL BIOPSY OF COLONIC WALL AND MESENTERIC SENTINEL NODES BY NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES) Ronan A Cahill, M Asakuma, Joe Trunzo, Jeff Marks, Bernard Dallemagne, Jacques Marescaux, Nancy Tresser, EISRI, Dublin, Ireland; IRCAD/EITS, Strasbourg, France; Case Medical Center Cleveland, USA; Imalux Corporation, Cleveland, USA.

ET04 MEASURING CHANGES IN GASTRIC CONDUIT PERFUSION DURING MINIMALLY INVASIVE ESOPHAGECTOMY (MIE) USING OPTICAL FIBER SPECTROSCOPY Kyle A Perry, MD, C K Enestvedt, MD, Dan Gareau, PhD, Thai H Pham, MD, Frederic Truffer, PhD, James P Dolan, MD, Steven L Jacques, PhD, John G Hunter, MD, Oregon Health & Science University, Portland, Oregon, USA

ET05 THE EVALUATION OF A NEW BIPOLAR RADIOFREQUENCY ABLATION DEVICE IN EX-VIVO BOVINE LIVER Michael Tsinberg, MD, Eren Berber, MD, Gurkan Tellioglu, MD, Allan Siperstein, MD, Cleveland Clinic





SAGES
2009

Saturday, April 25, 2009

Scientific Sessions & Panels

ET006 TEMPORARY GASTRIC ELECTRICAL STIMULATION IN CHILDREN AND ADOLESCENTS WITH INTRACTABLE GASTROPARESIS / NAUSEA AND VOMITING Saleem Islam, MD, Christopher Jolley, MD, Thomas L Abell, MD, Shamaila Waseem, MD, University of Florida and University of Mississippi Medical center

ET07 EVALUATION OF A NEW TISSUE APPROXIMATION AND FASTENING DEVICE IN LAPAROSCOPIC PPLICATION GASTROPLASTY FOR OBESITY Barry H Rabin, PhD, Peter S Harris, Ninh T Nguyen, MD, Longevity Surgical, Inc., University of California, Irvine Medical Center

ET08 EARLY RESULTS OF SLENDURA™ ANTI-OBESITY PROCEDURE IN PORCINE MODEL C. Paul Swain, MD, Brian S Kelleher, BS, Monika Hagen, MD, Oliver J Wagner, MD, Santiago Horgan, MD, Imperial College London, University of California - San Diego, EndoMorphix (San Diego)

ET09 A NOVEL ENDOSCOPIC REVERSIBLE BARIATRIC DEVICE: ANIMAL RESULTS AND INITIAL HUMAN CLINICAL EXPERIENCE James Foote, MD, Randal Baker, MD, Jorge Trevino, MD, Paul Kemmeter, MD, Fred Walburn, PhD, Peter Freswick, BS, Grand Health Partners, Grand Rapids MI, Sentinel Group, Grand Rapids MI, Hospital Galenia, Cancun Mexico

ET10 A NOVEL TECHNIQUE OF KNOTLESS SUTURE FOR MESH FIXATION Pavlos Papasavas, MD, Paul Joyner, MD, Raymond McKay, MD, George Sikora, Raymond Bojarski, BA, Darren Tishler, MD, Orlando Kirton, MD, Hartford Hospital

ET11 BIPA - A NOVEL INTRALUMINAL DEVICE TO PREPARE THE RECTUM FOR DIVISION AND ANASTOMOSIS Marc I Brand, MD, Rush University Medical Center

ET12 VIRTUAL ENDOSCOPY PROCESSED FROM ACTUAL ENDOSCOPIC IMAGE FOR COLON Takuro Ishii, Tatsuo Igarashi, MD, Satoki Zenbutsu, Masashi Sekine, Toshiya Nakaguchi, PhD, Yukio Naya, MD, Harufumi Makino, MD, Research Center for Frontier Medical Engineering, Chiba University, Chiba, Japan.

ET13 BENEFITS OF "REPEAT BACK" WITHIN A COMPUTER-BASED INFORMED CONSENT PROGRAM Aaron S Fink, MD, Allan V Prochazka, MD, William G Henderson, PhD, Debra H Bartenfeld, MS, Carsie Nyirenda, MPH, Kamal Itani, MD, Alexandra L Webb, MD, Melissa M Bottrell, PhD, Atlanta, Houston, Boston, Denver, Portland, Pittsburgh and Tampa VAMCs

ET14 IMEDIC: AN IMMERSIVE MEDICAL ENVIRONMENT FOR DISTRIBUTED INTUITIVE CONSULTATION F J Seagull, PhD, Peter Miller, BS, Ivan George, Adrian Park, MD, Paul K Mlyniec, BS, University of Maryland, Digital ArtForms, Inc

ET15 REVERSE 3D HD IN ENDOSCOPIC SURGERY. Emanuele Lezoche, MD, Alessandro M Paganini, PhD, Romeo Croci, MSc, Giancarlo D'Ambrosio, MD, Pietro Ursi, MD, Giovanni Lezoche, MD, Sante Capitano, MD, Luciana Barchetti, MD, Bernardina Fabiani, MD, Daniele Scoglio, MD, Emanuela Capalbo, MD, Paola Campenni, MD, Chirurgia Endolaparoscopica e Tecnologie Avanzate, Department of Surgery "Paride Stefanini", University of Rome "La Sapienza", Rome, Italy.

ET16 ENDOSCOPIC SUBMUCOSAL DISSECTION USING A THROUGH-THE-SCOPE INTUITIVELY CONTROLLED ROBOTICS-ENHANCED MANIPULATOR SYSTEM KH Ho, MD, SJ Phee, PhD, SC Low, PhD, VA Huynh, PhD, AP Kencana, PhD, K Yang, PhD, JB So, PhD, SC Chung, MD, Davide Lomanto, MD, Minimally Invasive Surgical Centre, Dept Surgery and Department of Medicine, National University of Singapore and School of Mechanical & Aerospace Engineering, Nanyang Technological University, Singapore

ET17 IMTN INTERNATIONAL MULTICENTER TRIAL ON CLINICAL N.O.T.E.S.: INITIAL RESULTS OF 250 CASES Zorron R, Palanivelu C, Galvao M, Ramos A, Branco A, Sousa LH, Burghart J, Gellert K, Decarli L, Rajan PS, Forgione A, Pugliese R, Salinas G, Ayrosa P, Campos JM, Balashanmugan S T, Boza C, Avila D F, Cuesta A N, Jategaonkar A P, Ranagrajan M, Parthasarathi R, Senthilnathan P, Prasad M, Mueller V, Corcione F, Dep of Surgery- University Hospital Teresopolis, Rio de Janeiro; Hospital Santa CasaPorto Alegre- Brazil; Gastroboso Center São Paulo; GEM Hospital India, Coimbatore; IlcamGranda Hospital, Milan, Itália; Sana Clinical Center Berlin, Germany

ET18 NATURAL ORIFICE TRANGASTRIC ENDOSCOPIC LIVER WEDGE RESECTION USING AN ENDOSCOPIC CONTROLLED ROBOTICS-ENHANCED MANIPULATOR SYSTEM D Lomanto, MD, Ho KY, MD, Phee SJ, PhD, Low SC, PhD, Kencana AP, MD, Yang K, PhD, Sydney S Chung, Minimally Invasive Surgical Centre, Dept Surgery and Department of Medicine, National University of Singapore and School of Mechanical & Aerospace Engineering, Nanyang Technological University, Singapore

ET19 A NEW NOTES TOOLBOX: FLEXIBLE INSTRUMENTS FOR TRANSLUMENAL SURGERY Melina C Vassiliou, MD, Daniel von Renteln, MD, Daniel T McKenna, MD, Per-Ola Park, MD, Paul Swain, MD, Richard I Rothstein, MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH; Imperial College, London, United Kingdom; Sahlgrenska University Hospital, Goteborg, Sweden

ET20 MINIMALLY INVASIVE SURGERY USING MAGNETICALLY LEVITATED PLATFORMS. A CHANGE OF CONCEPT FOR A SUPERIOR VIEW AND APPROACH TO THE SURGICAL FIELD Yoav Mintz, MD, Martin Simon, PhD, Department of Surgery, Hadassah-Hebrew University Medical Center, Jerusalem, Israel, Department of Physics and Astronomy, University of California Los Angeles, CA, USA

SAGES acknowledges our Gold Level Donor for their support of this symposium: Stryker Endoscopy

Saturday, April 25, 2009

:00 PM - 4:00 PM

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

Concurrent Sessions (accepted oral & video presentations)

1:00 PM - 2:30 PM

SS16: Solid Organ Location: North 221 A-C

Moderators: Demetrius Litwin, MD and Seigo Kitano, MD

S086 POSTERIOR RETROPERITONEOSCOPIC ADRENALECTOMY IN LARGE ADRENAL TUMORS: A COMPARISON TO THE STANDARD ANTERIOR LAPAROSCOPIC TECHNIQUE Andreas Kiriakopoulos, MD, Dimitrios Tsakayannis, MD, Dimitrios Linos, MD, 1st Surgical Clinic, Department of Surgery, "Hygeia" Hospital, Athens, Greece

S087 LAPAROSCOPIC ADRENALECTOMY – INDICATIONS AND RESULTS Maciej Otto, PhD, Jacek Dzwonkowski, Tomasz Ciągła, Hamid Feiz Allah Poor, Department of General, Vascular and Transplant Surgery. Medical University of Warsaw

S088 LAPAROSCOPIC RADIOFREQUENCY ABLATION OF ADRENAL TUMORS Gurkan Tellioglu, MD, Allan E Siperstein, MD, Eren Berber, MD, Cleveland Clinic Endocrine and Metabolism Institute, Cleveland, OH

S089 HAND ASSISTED LAPAROSCOPIC SPLENECTOMY IS THE SUPERIOR APPROACH IN SPLEENS OVER 20CM IN LENGTH T W Swanson, MD, S Sampath, MD, A T Meneghetti, MD, J M Connors, O M Pantan, University of British Columbia

V021 HAND ASSISTED LAPAROSCOPIC SURGERY FOR MASSIVE SPLENOMEGALY Winnie Tong, MD, Jayleen Grams, MD, Barry A Salky, MD, Mount Sinai Hospital, New York, NY

S090 USE OF FLEXIBLE RETRACTOR TO FACILITATE VASCULAR LENGTH IN LIVING RELATED TOTAL LAPAROSCOPIC DONOR NEPHRECTOMIES Prakash R Paragi, MD, Harry Sun, MD, Matthew Tichauer, BS, Zachary Klaassen, BS, Stephen H Fletcher, MD, Stuart R Geffner, MD, Saint Barnabas Medical Center

V022 LAPAROSCOPIC DISTAL PANCREATECTOMY AND SPLENECTOMY FOR SPLENIC ARTERY ANEURYSM Brandon T Grover, DO (1), Sigurd B Gundersen III, MD, FACS (2), Shanu N Kothari, MD, FACS (2), (1) Department of Medical Education, Gundersen Lutheran Medical Foundation, and (2) Department of Surgery, Gundersen Lutheran Health System, La Crosse, Wisconsin

V023 LAPAROSCOPIC DISTAL PANCREATECTOMY WITH SPLEEN PRESERVATION Petachia Reissman, MD, Joseph Alberton, MD, Shaare-Zedek Medical Center, Jerusalem, Israel

S091 ENDOSCOPIC THYROIDECTOMY FOR MULTINODULAR GOITER Titus D Duncan, MD, Qammar N Rashid, MD, Ravi Rao, MD, Atlanta Medical Center, Atlanta, GA

1:00 PM - 2:00 PM

SS17: Hernia II Location: North 222 A-C

Moderators: B. Todd Heniford, MD and Edward Phillips, MD

S092 PROSPECTIVE RANDOMIZED DOUBLE BLIND PLACEBO CONTROLLED TRIAL OF POSTOPERATIVE ELASTOMERIC PAIN PUMP DEVICES FOLLOWING LAPAROSCOPIC VENTRAL HERNIA REPAIR. Michael J Rosen, MD, Trieve Duperier, MD, Jeffrey Marks, MD, Raymond Onders, MD, Bridget Ermlich, RN, Michelle Laughinghouse, RN, Case Western Reserve University, Cleveland, OH.

S093 CLINICAL PREDICTORS OF OPERATIVE COMPLEXITY IN LAPAROSCOPIC VENTRAL HERNIA REPAIR: A PROSPECTIVE STUDY Eric D Jenkins, MD, Victoria H Yom, BA, Lora Melman, MD, Richard D Schuessler, PhD, Richard A Pierce, MD, Margaret M Frisella, RN, J Christopher Eagon, MD, L Michael Brunt, MD, Brent D Matthews, MD, Department of Surgery Washington University in St. Louis, Missouri

S094 SINGLE PORT ACCESS (SPA) VENTRAL HERNIA REPAIR: INITIAL REPORT OF 15 CASES Angela Moulhas, MD, Erica R Podolsky, MD, Paul G Curcillo, II, MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

V024 LAPAROSCOPIC REPAIR OF CONGENITAL BILATERAL MORGAGNI'S HERNIA Saurabh Khandelwal, MD, Brant K Oelschlager, MD, University of Washington, Seattle, WA

S095 LAPAROSCOPIC INGUINAL HERNIA REPAIR FOR OCCULT (NON-PALPABLE) GROIN HERNIAS IN WOMEN WITH CHRONIC PELVIC PAIN Brendan G O'Connell, MD, Bruce Bernstein, PhD, Ibrahim M Daoud, MD, The University of Connecticut, Saint Francis Hospital and Medical Center, Hartford, CT

S096 LONG-TERM FOLLOW-UP OF LAPAROSCOPIC REPAIR OF PARASTOMAL HERNIA USING A BI-LAYER MESH WITH A SLIT Paul Wara, MSc, Lars Maagaard, MD, Surgical Department P, Aarhus University Hospital, Denmark

SAGES acknowledges an unrestricted educational grant in support of this session from Davol, Inc.





Saturday, April 25, 2009

1:00 PM - 2:00 PM

SS18: NOTES / Single Incision Video Location: West 301B-C

Moderators: Horacio Asbun, MD and David Easter, MD

V025 PURE NOTES CHOLECYSTECTOMY Marc Bessler, MD, Andrew Gumbs, MD, Luca Milone, MD, Peter Stevens, MD, Dennis Fowler, MD, Columbia University College of Physicians and Surgeons, New York, NY

V026 TRANSGASTRIC UTERINE HORN RESECTION USING A NOVEL NOTES TOOLBOX Edward D Auyang, MD, Eric S Hungness, MD, Department of Surgery, Northwestern University, Chicago, IL

V027 TRANS-ORAL ENDOSCOPIC REMOVAL OF AN ERODED ADJUSTABLE GASTRIC BAND William Bertucci, MD, Jay Grove, MD, Karen Kopmann, MD, Deborah Romero, RN, Todd Peterson, MD, Janos Taller, MD, Naval Medical Center San Diego, CA

V028 REVERSE NOTES: ESOPHAGEAL CANALIZATION John Cullen, MD, Kari Thompson, MD, Adam Spivack, MD, Lauren Fischer, MD, Brian Wong, MD, Mark Talamini, MD, Santiago Horgan, MD, Department of Surgery, University of California, San Diego, CA

V029 SINGLE PORT ACCESS (SPA) TECHNIQUE Andrew S Wu, MD, Erica R Podolsky, MD, Stephanie A King*, MD, Paul G Curcillo, MD, Department of Surgery, *Department of Obstetrics and Gynecology, Drexel University, College of Medicine, Philadelphia, PA

V030 SINGLE INCISION RIGHT COLON FOR CANCER Daniel J Rosen, MD, Kevin McGill, MD, Julio A Teixeira, MD, St. Luke's - Roosevelt Hospital Center, New York, NY

V031 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY Kari Thompson, MD, Lauren Fischer, MD, Brian Wong, MD, Adam Spivack, MD, Garth Jacobsen, MD, Mark Talamini, MD, Santiago Horgan, MD, Department of Surgery, University of California, San Diego, CA

2:30 PM - 4:00 PM

SS19: Hepatobiliary / Pancreatic Location: North 221 A-C

Moderators: TBA

S097 LAPAROSCOPIC VERSUS OPEN LIVER RESECTION FOR HEPATOCELLULAR CARCINOMA: A COMPARATIVE STUDY Ibrahim Dagher, PhD, Giuseppe Di Giuro, MD, Panagiotis Lainas, MD, Helene Agostini, Alessio Carloni, MD, Dominique Franco, PhD, Department of General Surgery, Antoine Bécélère Hospital, AP-HP, Clamart, F-92140, France; Univ Paris-Sud, Orsay, F-91405, France.

S098 LAPAROSCOPIC HEPATECTOMY RESULTS IN DECREASED VEGF EXPRESSION IN RESIDUAL HEPATOMA CELLS WHEN COMPARED TO OPEN RESECTION Kyle A Perry, MD, C K Enestvedt, MD, Luke W Hosack, MS, Swee Teh, MD, Thai H Pham, MD, John G Hunter, MD, Brett C Sheppard, MD, Oregon Health & Science University, Portland, OR – **SAGES Research Grant**

S099 LAPAROSCOPIC NEAR INFRARED FLUORESCENCE IMAGING OF BILIARY TREE ANATOMY Dragan J Golijanin, MD, Daniela Molena, MD, Jonah S Marshall, MD, Allison L Cardin, MD, Eric A Singer, MD, Ronald W Wood, MD, Luke O Schoeniger, MD, University of Rochester Medical Center. Departments of Urology and Surgery, Rochester, NY

S100 THE IMMEDIATE RE- RESECTION OF T1B INCIDENTAL GALLBLADDER CARCINOMA- INDICATION OR OVERTREATMENT Vittorio Paolucci, PhD, Thorsten O Goetze, PhD, Ketteler- Clinic Department of Surgery

V032 LAPAROSCOPIC CHOLEDOCHAL CYST RESECTION WITH HEPATICOJEJUNOSTOMY Steven B Bowers, MD, Horacio Asbun, MD, Kashif Z Malik, MD, Mayo Clinic, Jacksonville, FL

V033 ROUX EN Y INTRAHEPATIC-JEJUNOSTOMY AFTER COMMON BILE DUCT INJURY. Enrique Elli, MD, Francesco Bianco, MD, Mark S Choh, MD, Fabio Sbrana, MD, Pier C Giulianotti, University of Illinois, Chicago, IL

S101 PREDICTING THAT OCCULT METASTATIC (STAGE IV) DISEASE WILL BE DISCOVERED WITH DIAGNOSTIC LAPAROSCOPY AND PERITONEAL LAVAGE CYTOLOGY IN LOCALLY-ADVANCED PANCREATIC CANCER Clancy J Clark, MD, Fru Bahiraei, MD, Vincent Picozzi, MD, L W Traverso, MD, Virginia Mason Medical Center, Seattle, WA

V034 MINIMALLY INVASIVE PANCREATIC DEBRIDEMENT: INTRACAVITARY AND TRANSPERITONEAL DEBRIDEMENT Patricio Polanco, MD, Steven Hughes, MD, Kenneth K Lee, MD, Department of Surgery, University of Pittsburgh

V035 LAPAROSCOPIC INTERVENTION FOR MASSIVE, RAPIDLY PROGRESSIVE PANCREATIC PSEUDOCYST DISEASE WITH ENDOCRINE AND EXOCRINE DYSFUNCTION Carlos Godinez, MD, Yassar Youssef, MD, Ivan George, Ethan Hagan, BS, Adrian Park, MD, University of Maryland Medical Center

Saturday, April 25, 2009

2:00 PM - 3:00 PM

SS20: Flexible Endoscopy Location: North 222 A-C

Moderators: Bruce MacFadyen, MD and Benjamin Poulouse, MD

S102 PROSPECTIVE MONITORING OF SURGICAL TRAINEE ENDOSCOPY VOLUMES Erica Sutton, BA, Stephen Kavic, BA, Ralph Lloyd, BA, J. Scott Roth, MD, Adrian Park, MD, Department of Surgery, University of Maryland School of Medicine, Baltimore, MD

S103 INPATIENT MORTALITY AND LENGTH OF STAY COMPARISON OF PERCUTANEOUS ENDOSCOPIC GASTROSTOMY AND PERCUTANEOUS ENDOSCOPIC GASTROJEJUNOSTOMY Stephen J Poteet, MD, Willie V Melvin, MD, Michael D Holzman, MD, Kenneth W Sharp, MD, Benjamin K Poulouse, MD, Vanderbilt University Medical Center, Nashville, TN

S104 TRANSGASTRIC ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY A CASE SERIES AND DESCRIPTION OF TECHNIQUE. Peter M Bertin, DO, Kirpal Singh, Maurice E Arregui, St. Vincent Indianapolis Indiana, Indianapolis, IN

V036 LAPAROSCOPIC COMMON BILE DUCT EXPLORATION AND LASER LITHOTRIPSY: A NOVEL APPROACH TO MANAGEMENT OF COMMON BILE DUCT STONES Oliver A Varban, MD, Carl Westcott, MD, Dean Assimos, MD, Corey Passman, MD, Wake Forest University Baptist Medical Center, Winston-Salem, NC

S105 DOES PREOPERATIVE ENDOSCOPY IN BARIATRIC SURGERY ALTER THE MEDICAL OR SURGICAL STRATEGY? Afshin Eslami, MD, Carlos G Martinez, MD, Shahzeer Karmali, MD, Jonathan Gerber, Vadim Sherman, MD, Baylor College of Medicine, Michael E. DeBakey Department of Surgery, Houston, TX

S106 ENDOSCOPIC AND MANOMETRIC CHARACTERISTICS OF THE GASTROESOPHAGEAL VALVE IN LATERAL DECUBITUS AND UPRIGHT POSITIONS IN CLINICALLY NORMAL PATIENTS Gordon Buduhan, MD, Brian Louie, MD, Eric Vallieres, MD, Jeraldine Orlina, MD, Ralph Aye, MD, Swedish Medical Center Division of Thoracic Surgery, Seattle Washington
– SAGES Research Grant

SAGES acknowledges an unrestricted educational grant in support of this session from Boston Scientific.

2:00 PM - 3:00 PM

SS21: Bariatric II Location: West 301 B-C

Moderators: Alfons Pomp, MD and Aureo DePaula, MD

S107 THE EFFECTIVENESS OF GASTRIC BAND: A RETROSPECTIVE SEVEN-YEAR U.S. FOLLOW-UP STUDY Christine Ren, MD, Marina Kurian, MD, Heekoung Allison Youn, RN, CCRC, MA, George Fielding, MD, New York University Medical Center, New York, NY

S108 HIGH FAILURE RATE AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB): FIVE YEAR FOLLOW UP. Camilo Boza, MD, Cristian Gamboa, MD, José Salinas, MD, Alex Escalona, MD, Gustavo Perez, MD, Fernando Pimentel, MD, Fernando Crovari, MD, Alejandro Raddatz, MD, Luis Ibañez, MD, Pontificia Universidad Católica de Chile

S109 LAPAROSCOPIC SLEEVE GASTRECTOMY: A RETROSPECTIVE REVIEW OF 1 AND 2 YEAR RESULTS Moises Jacobs, MD, Eddie Gomez, MD, Raul Mederos, MD, William Bisland, MD, Gustavo Plasencia, MD, Carlos Celaya, MD, Roberto Fogel, MD, Mercy Hospital, Miami, FL

S110 COMPARISON OF RESOLUTION AND IMPROVEMENT OF CO-MORBIDITIES BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC ADJUSTABLE GASTRIC BAND. Juan J Omana, MD, Subhash U Kini, MD, Daniel Herron, MD, Scott Nguyen, MD, Division of Laparoscopic Surgery, Department of Surgery, Mount Sinai School of Medicine, New York, NY

V037 MODIFIED SINGLE INCISION LAPAROSCOPIC ADJUSTABLE GASTRIC BAND Daniel J Scott, MD, Antonio O Castellvi, MD, Esteban Varela, MD, Homero Rivas, MD, Southwestern Center for Minimally Invasive Surgery, University of Texas Southwestern Medical Center, Dallas, TX

V038 LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN A PATIENT WITH PREVIOUS GASTRIC BYPASS SURGERY Maria V Gorodner, MD, Alberto Gallo, MD, Federico Moser, MD, Carlos A Galvani, MD, University of Illinois at Chicago, IL

SAGES acknowledges an unrestricted educational grant in support of this session from Allergan, Inc.





Saturday, April 25, 2009

3:00 PM - 4:00 PM

SS22: Education / Simulation II Location: North 222 A-C

Moderators: Kenric Murayama, MD and Demetrius Stefanidis, MD

S111 GAGES: A VALID MEASUREMENT TOOL FOR TECHNICAL SKILLS IN FLEXIBLE ENDOSCOPY Melina C Vassiliou, MD, Benjamin K Poulouse, MD, Pepa A Kaneva, MSc, Brian J Dunkin, MD, Jeffrey M Marks, MD, Riadh Sadik, MD, Gideon Sroka, MD, Mehran Anvari, MD, Klaus Thaler, MD, Gina L Adrales, MD, Jeffrey W Hazey, MD, Jenifer R Lightdale, MD, John D Mellinger, MD, Gerald M Fried, MD, Dartmouth-HMC, NH; Vanderbilt Univ, TN; McGill UHC, Montreal, QC; Methodist Hosp, TX; Case Med Center, OH; Sahlgrenska Hosp, Gothenburg, Sweden; McMaster Univ, Hamilton, ON; Univ of Missouri, MO; OSU, OH; Children's Hosp. Boston, MA; Med. Coll. Georgia, GA

S112 HOW DO NURSES AND PHYSICIANS LEARN GASTROINTESTINAL ENDOSCOPY: ASSESSMENT OF LEARNING CURVES USING A HIGH-FIDELITY VIRTUAL REALITY SIMULATOR Irina Kruglikova, MD, Teodor P Grantcharov, PhD, Asbjorn M Drewes, DSc, MD, Peter Funch-Jensen, DSc, MD, Department of Surgical Gastroenterology L, Aarhus University Hospital, Aarhus, Denmark; University of Toronto, St. Michael's Hospital, Toronto, Canada; Department of Gastroenterology, SMI, Aalborg University Hospital, Aalborg, Denmark;

S113 VALIDITY OF USING THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY (FLS) PROGRAM TO ASSESS LAPAROSCOPIC COMPETENCE AMONG GYNCOLOGISTS Bin Zheng, MD, Hye-Chun Hur, MD, Susan Johnson, MD, Lee L Swanson, MD, Legacy Health System, BIDMC, CESEI of UBC – **SAGES Research Grant**

S114 EVALUATION OF A VIDEO-BASED CURRICULUM FOR LAPAROSCOPIC BILIARY SURGERY: A PILOT STUDY FROM THE SAGES MIS WEB LEARNING CENTER Nicole Fearing, MD, Michael Holzman, MD, Daniel Scott, MD, Michael Brunt, MD, Departments of Surgery, University of Missouri, Columbia MO, Vanderbilt University, Nashville, TN, University of Texas-Southwestern, Dallas, TX, Washington University-St Louis, MO.

S115 MENTORING AND TELEMENTORING LEADS TO EFFECTIVE INCORPORATION OF LAPAROSCOPIC COLON SURGERY Christopher M Schlachta, MD, Kevin L Lefebvre, MD, A Kent Sorsdahl, MD, Shiva Jayaraman, MD, CSTAR (Canadian Surgical Technologies & Advanced Robotics), Lawson Health Research Institute, University of Western Ontario, London, and Stratford General Hospital, Stratford, Ontario, Canada

V039 THE MARTIAN CHRONICLES: SURGICAL CARE 100 MILLION MILES FROM HOME.... S A Dulchavsky, MD, C Otto, MD, J M Comptois, MD, I Rubinfeld, MD, A G Dulchavsky, A E Sargsyan, MD, Henry Ford Hospital, Detroit MI, University of Ottawa, NASA, and the Canadian Space Agency

3:00 PM - 4:00 PM

SS23: MIS Potpourri Location: West 301 B-C

Moderators: Michael Edye, MD and Roberto Gallardo, MD

S116 PORT SITE LOCAL ANESTHETIC INJECTION DOES NOT DECREASE POSTOPERATIVE PAIN LEVEL OR NARCOTIC USE: A RANDOMIZED BLINDED STUDY Yewching Teh, MD, Noam Belkind, MD, Rodrigo Arrangoiz, MD, Keith Apelgren, MD, Michigan State University, East Lansing, MI

S117 LAPAROSCOPIC SURGERY SIGNIFICANTLY REDUCES SURGICAL SITE INFECTIONS COMPARED TO OPEN SURGERY Esteban Varela, MD, Ninh Nguyen, MD, Samuel Wilson, MD, Veterans Affairs North Texas Healthcare System and University of California Irvine Medical Center, Irvine, CA

S118 ADVANCED LAPAROSCOPIC TECHNIQUES SIGNIFICANTLY IMPROVE FUNCTION OF PERITONEAL DIALYSIS CATHETERS Vikram Attaluri, MD, Chris Lebeis, BS, Marty Schreiber, MD, Steve Rosenblatt, MD, Cleveland Clinic, Cleveland, OH

S119 MALPRACTICE CARRIER UNDERWRITES FLS TRAINING AND TESTING – A BENCHMARK FOR PATIENT SAFETY Alexandre Y Derevianko, MD, Steven D Schwaitzberg, MD, Shawn Tsuda, MD, David C Brooks, MD, Mark P Callery, MD, Limaris Barrios, MD, David Fobert, BS, Noel Irias, David W Rattner, MD, Daniel B Jones, MD, Beth Israel Deaconess Medical Center, Cambridge Health Alliance, Brigham and Women's Hospital, Massachusetts General Hospital, Boston, MA

S120 SAGES GRANT IMPACT ON RECIPIENT ACADEMIC CAREER Aurora D Pryor, MD, Alfonso Torquati, MD, SAGES Research and Career Development Committee

V040 HAND ASSISTED LAPAROSCOPY FOR WANDERING SPLEEN Michael W Cripps, MD, Jonathan D Svahn, MD, Department of Surgery, Kaiser Permanente East Bay, Oakland, CA

Do you have an upcoming course? Find out how to obtain SAGES endorsement

SAGES offers Course and Program Directors the opportunity to have their courses reviewed and endorsed by the SAGES Continuing Education Committee. Endorsement brings the following benefits to Course Directors:

1. Courses will be listed on the SAGES website
2. Courses will be included in SCOPE, the SAGES bi-annual newsletter.
3. SAGES Endorsed Course list will be mailed or faxed to interested surgeons upon request (average of 10-25 requests per month).
4. The Course Director may include the SAGES Endorsement Statement on promotional brochures and course materials.

SAGES has two applications for course endorsement: individual course endorsement and institutional course endorsement. For more information, please contact Aaron Goodman in the SAGES office at aaron@sages.org or visit the SAGES website: http://sages.org/education/endorsed_courses/applications.php



2009 Learning Center

Location: North Exhibit Hall B-C

Chair: Dmitry Oleynikov, M.D.

Co-Chair: Allan Okrainec, M.D.

Hours of Operation:

Thursday, April 23, 2009 9:30AM - 3:30PM

Friday, April 24, 2009 9:30AM - 3:30PM

Saturday, April 25, 2009 9:30AM - 1:30PM

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.

Station 1: NOTES®

Coordinator: Kai Matthes, MD, PhD

Natural Orifice Translumenal Endoscopic Surgery (NOTES®) is an emerging research area of minimally-invasive surgery. 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. The tissue provides a realistic tactile feedback, which is essential to assess and train in 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 transluminal 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, hysterectomy, oophorectomy
- Perform a secure closure of the transluminal access port using various techniques such as t-tags, clips or sophisticated closure devices

- Review the limitation of currently available standard endoscopic devices and the advantage of additional laparoscopic ports for visualization and retraction using a hybrid-NOTES® approach

Station 2: Laparoscopic Ventral Hernia Repair

Coordinator: Limaris Barrios, MD

Laparoscopic ventral hernia repair has become a very commonly performed procedure. Both virtual reality and box trainer hernia modules will allow participants to practice and become facile with this technique. This station will utilize an angled scope, and all the equipment necessary to perform the repair. Participants will place the mesh in the defect and subsequently secure it with sutures and a tacker. Participants and proctors will be able to monitor their progress.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Understand normal anatomic relationships for ventral hernia repair.
- Practice mesh deployment and fixation techniques.

Station 3: Basic Instrumentation

Coordinators: Gretchen Purcell

Jackson, MD, PhD

Robert O. Carpenter, MD

Rachel Forbes, MD

Laparoscopic instruments are the tools that make minimally-invasive surgical techniques possible. This station provides instruction on the assembly, use, and troubleshooting for basic laparoscopic tools including staplers, suturing devices, and instruments for coagulation and cutting. Participants can view educational videos, receive one-on-one instruction, and use trainers to practice techniques with various devices.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Demonstrate the ability to set up and troubleshoot basic laparoscopic instruments.
- Describe the mechanical and physiologic basis for the operation of devices used in minimally-invasive surgery.
- To show proficiency in using basic laparoscopic instruments through practice.

Station 4: Suturing

Coordinators: Zoltan Szabo, PhD

Neal Seymour, 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".

Station 5: FLS

Coordinator: Melina Vassiliou, MD

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. This station will also give new program directors the opportunity to have hands-on time with the module and to learn about the Covidien Educational Fund.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Describe the components of the FLS program
- Explain some of the preoperative, intraoperative, and postoperative considerations fundamental to laparoscopic surgery

Station 6: TOP GUN

Coordinator: James "Butch" Rosser, MD

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 completing for slots in the Top Gun Shoot Out that will crown one SAGES 2009 TOP GUN.

Check on site for exact competition times.

2009 Learning Center

Objectives:

At the conclusion of this activity, the participant will be able to:

- Review, list and recite the Rosser suturing algorithm
- Perform dexterity skills and suturing exercises using the "Rosser TOP GUN" training stations
- Compete with other surgeons in the Top Gun Shoot Out (no CME credits will be given for this competition)

Top Gun For Kids: In keeping with the slogan, "Its never too early to get a head start", SAGES will launch its first edition of the SAGES Top Gun 4 Kids Program at the 2009 Scientific Program. This year's presentation will be a demonstration event featuring children of SAGES members that will show that youngsters have the right stuff today to be the cybersurgeons of tomorrow. The program is an extension of the one created by James "Butch" Rosser, MD FACS that has been featured at the American College of Surgeons annual program, science centers and schools around the US for the last five years. Be there to see these amazing children execute the FLS peg transfer drill, the Top Gun Cobra rope, the video game Super Monkey Ball and others just like their parents. Could it be that son or daughter can challenge mom or dad? If successful, in the future this could represent a community outreach platform for SAGES to touch underprivileged or at risk youth. Join us for this inaugural event as SAGES gives back to the global community that it serves.

Station 7: Laparoscopic Common Bile Duct Exploration

Coordinator: Benjamin Poulouse, MD

At this station, participants will gain exposure to the laparoscopic transcystic method of common bile duct stone management. The station utilizes the latest in inanimate model technology to simulate an actual situation for the management and retrieval of common bile duct stones.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Identify the indications for laparoscopic common bile duct exploration.
- Describe the necessary equipment utilized during laparoscopic transcystic common bile duct exploration including common bile duct access instrumentation, choledochoscopy, and stone retrieval methods.
- Work as part of a simulated operating room team to perform laparoscopic transcystic common bile duct exploration.

Station 8: Intraoperative Ultrasound

Coordinators: Maurice Arregui, MD

This station will focus on intraoperative ultrasound techniques and applications. Participants will use the latest ultrasound technology with a new inanimate phantom that was developed to mimic the ultrasound properties of abdominal organs. Instructors will demonstrate and help participants perform intraoperative ultrasound for liver, biliary and pancreatic disease, as well as discuss their surgical applications.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Describe basic ultrasonography techniques.
- Review how ultrasound may be used to diagnose and treat biliary and pancreatic disease.

Station 9: Laparoscopic Weight Loss Surgery

**Coordinators: Shanu Kothari, MD
John Morton, MD**

The learning curve for gaining proficiency in weight-loss procedures may be shortened with an effective simulator. The Laparoscopic Adjustable Gastric Band Simulator allows participants to introduce a laparoscopic adjustable band, "run" the tubing, place the band in its correct anatomic position, and fixate the port into the subcutaneous tissue. The technical aspects of laparoscopic adjustable gastric band placement may be enhanced by simulation and allow a greater preprocedural understanding for the trainee and expert alike. A virtual laparoscopic gastric bypass trainer will similarly allow for participants to familiarize themselves with the steps and techniques necessary to perform gastric bypass.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Review laparoscopic adjustable gastric band anatomy, structure, and function.
- Describe the basic steps of placing a laparoscopic adjustable gastric band.
- Explain the steps and techniques necessary to perform laparoscopic gastric bypass surgery.

Station 10: Fundamentals of Endoscopic Surgery (FES)

**Coordinators: Brian Dunkin, MD
Thadeus Trus, MD**

Come get hands-on experience on the newly developed Fundamentals of Endoscopic Surgery (FES) testing platform. FES is the flexible endoscopy equivalent of FLS (Fundamentals of Laparoscopic Surgery) and will be the first validated

testing platform for gastrointestinal endoscopic skills. This station features two Symbionix virtual reality simulators loaded with the FES testing modules. Come 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. The winner of the FES shootout will receive a SAGES Top 21 DVD video set.

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 hands-on training curriculum

Station 11: Simulators for Pediatric Minimally Invasive Surgery

**Coordinators: Georges Azzie, MD
Sanjeev Dutta, MD
Milissa McKee, MD, PhD**

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

Station 12: Structured Training and Assessment Curriculum (STAC) for Basic Laparoscopic Skills

**Coordinators: Teodor Grantcharov, MD
Allan Okrainec, MD**

Development and validation of new, evidence-based tools for training and assessment of laparoscopic skills has been a subject of numerous publications. Previous work has demonstrated that several tools can provide an objective and reliable assessment of performance and that skills developed in a simulated environment can be transferred to the operating room. However, very little of this knowledge has been transferred to clinical practice. This station will provide and example of a Comprehensive Training and Assessment Curriculum which





2009 Learning Center

incorporates all evidence-based tools and can be implemented in a clinical setting.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Present all validated tools for training and assessment of basic laparoscopic skills
- Demonstrate how these tools can be integrated into a comprehensive curriculum
- Understand the main steps in the implementation of the curriculum in clinical practice
- Provide a hands-on training on the different components of the curriculum

Station 13: Single Incision Minimal Access Surgery and New Robotic Technology

Coordinators: Dmitry Oleynikov, MD, Daniel Scott MD, Andrew Wright, MD

Participants will perform single incision minimal access surgery and robotic surgery using the latest technologies. New in-vivo robots, including deployable robotically controlled laparoscopic visualization systems will be demonstrated. These miniature robots are designed to enhance

a surgeon's visualization well beyond the limitations of a conventional laparoscope within the constraints of single incision minimal access surgery by providing a "bird's eye" downward view and off-axis visualization. Surgeons will learn the strategies behind using conventional straight and new articulating laparoscopic instruments and multi-lumen access ports used during a single incision operative procedure. Participants will have sufficient time to gain a hands-on appreciation and understanding of these technologies by performing both laparoscopic and mini-robot assisted simulated surgical procedures.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Learn the advantages of the equipment used to perform single incision surgery
- Identify new technology to miniaturize surgical instruments
- Compare robotic visualization with conventional laparoscopy for single incision minimal access surgery
- Demonstrate new instrumentation and operative strategies for single incision surgery

Station 14: Team Simulations

Coordinator: Shawn Tsuda, MD

Surgeons of today must be leaders of high performance teams to optimize efficiency and safety in the operating environment. High-fidelity simulation allows surgical teams to identify deficits in communication and performance. This station will engage surgeons, endoscopists, anesthesiologists, nurses, surgical technologists in practicing new procedures such as Natural Orifice Translumenal Endoscopic Surgery (NOTES®) and simulating low frequency events such as technical complications and intraoperative crises in a mock endosuite. A debriefing and evaluation of performance using validated tools will promote retention of valuable learning points.

Objectives:

At the conclusion of this activity, the participant will be able to:

- Demonstrate team-based techniques in managing technical complications or intra-operative crises.
- Identify and interactively discuss deficits in team performance post-simulation
- Simulate technical aspects of NOTES® procedures as an operative team

SAGES acknowledges unrestricted educational grants in support of this educational venue from

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Ethicon Endo-Surgery, Inc. · Karl Storz Endoscopy-America · Stryker Endoscopy**

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See you April 14 - 17, 2010

As SAGES & CAGS host the

12th World Congress of Endoscopic Surgery

just outside Washington, DC

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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.
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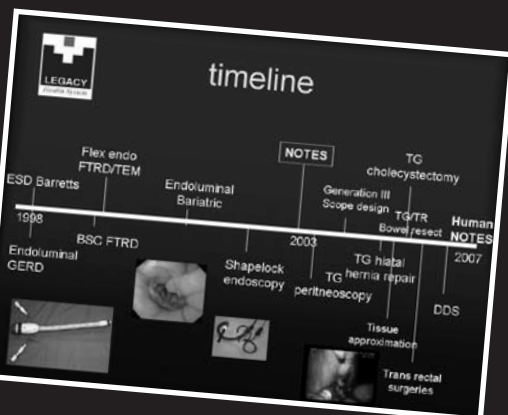
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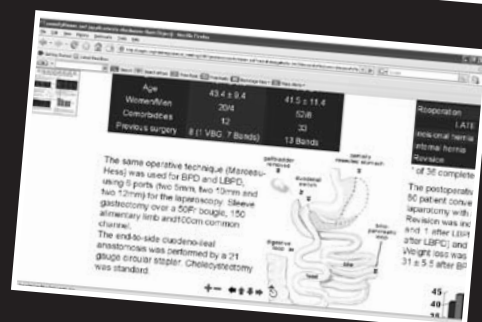
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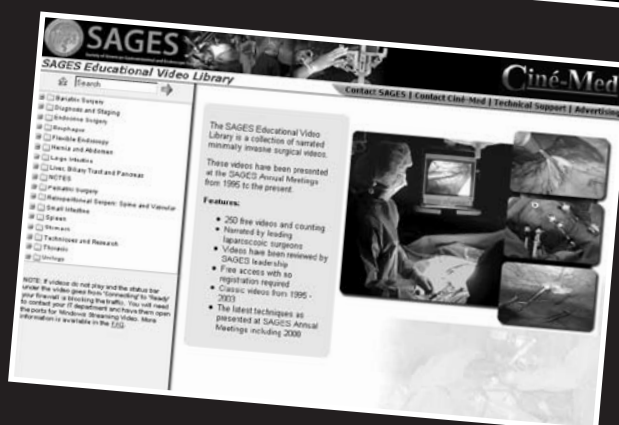
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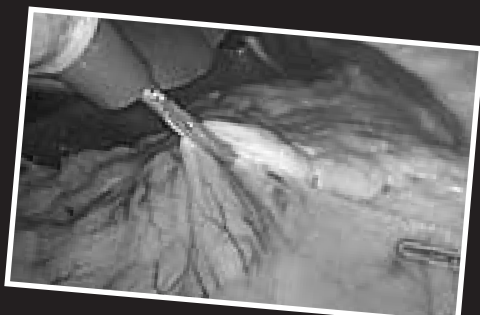
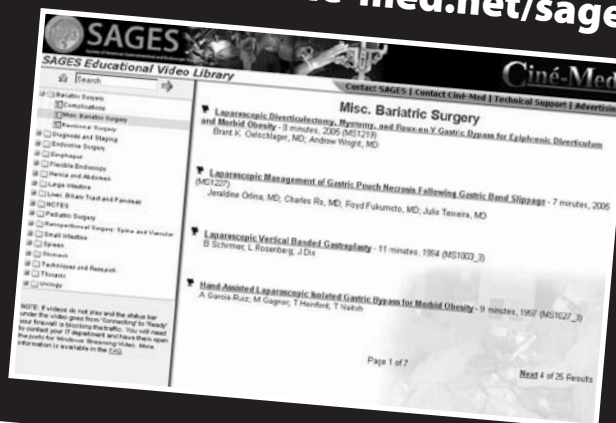
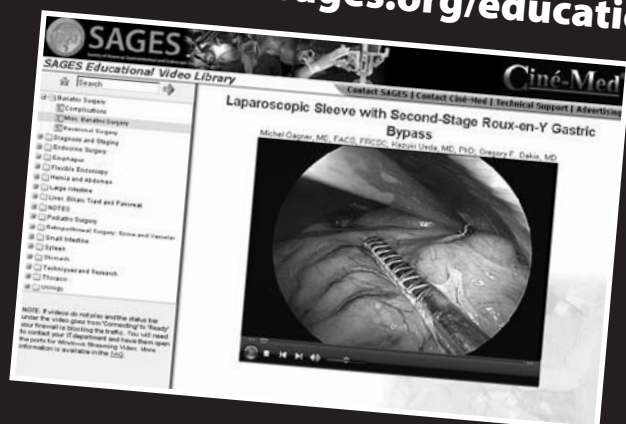
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	Endogastric Solutions	Other	Other	research support
	Crospon	Other	Other	research support
Daniel Bougere Jones	Stryker Endoscopy	Consulting Fee	Advisory Committee	
	CineMed	Royalty	Independent Contractor	
	TNCO	Royalty	Consultant	
	Surgiquest	Consulting Fee	Advisory Committee	
	Covidien	Other	Other	Educational grant for MIS fellowship
Stephanie B. Jones	Allergan (spouse)	Consulting Fee	Consultant	
	Covidien (spouse)	Consulting Fee	Consultant	
	TNCO (spouse)	Consulting Fee	Consultant	
	Stryker (spouse)	Consulting Fee	Consultant	
Gregg H. Jossart	Covidien	Consulting Fee	Speaking/Teaching	
Lee Kaplan	Merck Research Laboratories	Consulting Fee	Consultant	
	Johnson and Johnson	Consulting Fee	Advisory Committee	
	GI Dynamics	Consulting Fee	Advisory Committee	
	Stryker Development	Consulting Fee	Advisory Committee	
	Gelesis	Consulting Fee	Advisory Committee	
Namir Katkhouda	Storz	Consulting Fee	Consultant	
	Ethicon endosurgery	Honoraria	Speaking/Teaching	
	WL Gore	Honoraria	Speaking/Teaching	
	Baxter	Honoraria	Speaking/Teaching	
William E. Kelley Jr	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	TransEnterics	Honoraria	Advisory Committee	
Kent W. Kercher	Ethicon Incorporated	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	WL Gore	Honoraria	Speaking/Teaching	
Shanu N. Kothari	Covidien	Other	Other	Fellowship Grant Support
	LifeCell	Consulting Fee	Consultant	
Emanuele Lo Menzo	Covidien	Consulting Fee	Consultant	
	Synovis Surgical Innovations	Other Financial Benefit	Speaking and/or Teaching	Educational Grant

Faculty & Presenter Disclosures

Name	Commercial Interest	What was received	For what role	Other
Emily S. Lukacz	Novartis Intuitive Corp Intuitive Corp Elsevier Inc Proctor & Gamble	Honoraria Honoraria Consulting Fee Honoraria Honoraria	Speaking/Teaching Speaking/Teaching Consultant Other Speaking/Teaching	Editor
James D. Luketich	Accuray Invesitgator Stryker, Covidien, Axcn Covidien, Stryker and Oncotech Intuitive Surgical, Boston Scientific, Covidien, Stryker, Axcn,	Other Speaking/Teaching Other Grant/Principal Investigator Other	Other Other Other	Research Grant/Principal Research Stock Options/Recipient
Atul K. Madan	Endo-Ethicon	Other	Other	Educational Grant for Fellowship
Joseph Mamazza	Covidien Storz	Other Other	Other Other	Minimally Invasive Surgery program support Minimally Invasive Surgery program support
Peter W. Marcello	Covidien Ethicon Olympus Applied Medical	Consulting Fee Consulting Fee Consulting Fee Consulting Fee	Consultant Consultant Consultant Consultant	
Jeffrey M. Marks	WL Gore Apollo Endosurgery Covidien Olympus Neoguide	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Consulting Fee	Consultant Advisory Committee Consultant Consultant Advisory Committee	
John H. Marks	Covidien Covidien Wolfe Stryker Glaxo Smith Kline SurgiQuest Zassi	Consulting Fee Honoraria Consulting Fee Consulting Fee Consulting Fee Honoraria Consulting Fee	Consulting Speaking/Teaching Consulting Consultant Consultant Advisory Committee Consultant	
Jose M. Martinez	Boston Scientific	Honoraria	Speaking/Teaching	
Samer G. Mattar	Ethicon Covidien	Honoraria Honoraria	Speaking/Teaching Advisory Committee	
Kai Matthes	EndoSim, LLC Olympus America Inc.	Ownership Interest Other	Management Position Other	equipment support
Brent D. Matthews	WL Gore Atrium Medical Ethicon Endosurgery Musculoskeletal Transplantation Foundation	Honoraria Consulting Fee Other Consulting Fee	Speaking/Teaching Consultant Speaking/Teaching Consultant	
W. Scott Melvin	Endogastric Solutions Stryker Covidien	Ownership Interest Consulting Fee Consulting Fee	Advisory Committee Advisory Committee Speaking/Teaching	
Dean J. Mikami	Covidien Endogastric Solutions Gore	Honoraria Honoraria Consulting Fee	Speaking/Teaching Speaking/Teaching Consultant	
Yoav Mintz	Virtual Ports Ltd. Ethicon Endo Surgery Israel Lumenis Ltd.	Other Financial Benefit Honorarium Consulting Fee	Membership on Advisory Committees or Review Panels Speaking and/or Teaching Consulting	Stock options





Faculty & Presenter Disclosures



Name	Commercial Interest	What was received	For what role	Other
Benyamine Mizrahi	Covidien	Consulting Fee	Consulting	
Kenric M. Murayama	Ethicon EndoSurgery Inc	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
Matthew G. Mutch	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
	Applied Medical	Honoraria	Speaking/Teaching	
Philip Neff	BioLume	Intellectual Property Rights	Consulting	
Ninh Tuan Nguyen	Covidien	Honoraria	Speaking/Teaching	
	Power Medical Intervention	Consulting Fee	Advisory Committee	
	Ethicon	Honoraria	Speaking/Teaching	
Abdelrahman A. Nimeri	Cine Med	Consulting Fee	Consultant	
Yuri W. Novitsky	Covidien	Consulting Fee	Speaking/Teaching	
	WL Gore	Consulting Fee	Consultant	
	Davol, Inc	Consulting Fee	Consultant	
	Nerites	Consulting Fee	Review Panel	
Brant K. Oelschlager	Cook Surgical of Washington School of Medicine	Other	Other	Research, University
	Covidien	Other	Other	Research and educational programs. University of Washington School of Medicine
	W.L. Core	Other	Other	Research and Educational programs. University of Washington Medical School
	Sandhill Scientific	Other	Other	Research programs. University of Washington Medical School
Allan E. Okrainec	Ethicon	Honoraria	Speaking/Teaching	
Dmitry Oleynikov	Virtual Incision corp	Ownership Interest	Board Member	
	Gore	Other	Other	Research Grant
	Covidien	Honoraria	Speaking/Teaching	
Raymond P. Onders	Synapse Biomedical	Ownership Interest	Board Member	
	Covidien	Honoraria	Speaking/Teaching	
Adrian E. Park	Apollo Endosurgery	Other	Advisory Committee	
	WL Gore	Honoraria	Consultant	
	Stryker Endoscopy	Other	Advisory Committee	
	Surgiquest	Other	Advisory Committee	
Jeffrey H. Peters	Torax Inc	Other	Other	Grant Support
	EndoVx Inc.	Ownership Interest	Consultant	
	MediGus Inc	Other	Other	Grant Support
	Ethicon Endosurgery	Honoraria	Advisory Committee	
Anthony T Petrick	Covidien	Other Financial Benefit	Other Activities	Educational Grant
	Ethicon	Other Financial Benefit	Other Activities	Educational Grant
Alessio Pigazzi	Covidien	Honorarium	Speaking and/or	
	Teaching			
	Covidien	Honoraria	Speaking/Teaching	
	Intuitive	Honoraria	Speaking/Teaching	
	Intuitive	Honorarium	Speaking and/or Teaching	
Mark A. Pleatman	Gyrus	Royalty	Other	Gyrus markets the patented "Pleatman Sac" through a licensing agreement with me.

Faculty & Presenter Disclosures

Name	Commercial Interest	What was received	For what role	Other
Alfons Pomp	W.L. Gore and Associates	Honoraria	Speaking/Teaching	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
Guillermo R Portillo	Cook	Honorarium	Speaking and/or Teaching	
	Covidien	Honorarium	Speaking and/or Teaching	
	WL GORE	Honorarium	Speaking and/or Teaching	
	W.L. Gore	Consulting Fee	Speaking and/or Teaching	
Benjamin K. Poulouse	Covidien	Other	Other	Fellowship Support
	Boston Scientific	Other	Other	Fellowship Support
Aurora Dawn Pryor	Transenterix	Ownership Interest	Advisory Committee	
	Synecor	Consulting Fee	Consultant	
	Immersion	Consulting Fee	Consultant	
	Covidien	Honoraria	Speaking/Teaching	
Sonia L. Ramamoorthy	Myriad Genetics	Honoraria	Speaking/Teaching	
	Ethicon	Honoraria	Speaking/Teaching	
	Apollo Endosurgery	Other	Consultant	
Bruce J. Ramshaw	WL Gore	Honoraria	Speaking/Teaching	
	MTF	Consulting Fee	Advisory Committee	
	Ethicon Endosurgery	Other	Other	Fellowship support
	Ethicon	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
	Atrium	Other	Other	Research support
Abhay Rane	Covidien	Honoraria	Advisory Committee	
David W. Rattner	Olympus	Honoraria	Speaking/Teaching	
Kevin M. Reavis	Endogastric Solutions	Honoraria	Speaking/Teaching	
Christine Ren	Allergan	Contracted Research		
William O. Richards	Metacure	Consulting Fee	Consultant	
	Covidian	Consulting Fee	Advisory Committee	
	Ethicon	Consulting Fee	Consultant	
E. Matt Ritter	Ethicon Endosurgery	Other	Other	Unrestricted Educational Grants and training equipment via Henry
	M. Jackson Foundation			
	Covidien	Other	Other	Unrestricted Educational Grants and Equipment via
	Henry M. Jackson Foundation			
	ConMed Linvatec	Other	Other	Video Imaging equipment for skills training lab
Homero Rivas	Covidien	Consulting Fee	Membership on Advisory Committees or Review Panels	
John R Romanelli	Cook Endoscopy, Inc.	Salary	Other Activities	Grant Funding
	Cook Endoscopy, Inc.	Intellectual Property Rights	Consulting	
Michael J. Rosen	Covidien	Consulting Fee	Consultant	
	Covidien	Honoraria	Speaking/Teaching	
	Life Cell	Honoraria	Speaking/Teaching	
	LifeCell	Consulting Fee	Speaking/Teaching	





Faculty & Presenter Disclosures



Name	Commercial Interest	What was received	For what role	Other
Raul J. Rosenthal	Synovis	Consulting Fee	Consultant	
	Karl Storz	Consulting Fee	Speaking/Teaching	
	Karl Storz eEndoscopy	Consulting Fee	Consultant	
	Ethicon Endosurgery	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Speaking/Teaching	
	Ethicon	Consulting Fee	Speaking/Teaching	
	Sinovys	Consulting Fee	Speaking/Teaching	
John Scott Roth	KCI/Lifecell	Other	Other	Participated in Clinical Trial
	Davol	Consulting Fee	Advisory Committee	
	Musculoskeletal Transplant Foundation	Honoraria	Advisory Committee	
Steven S. Rothenberg	Karl Storz	Consulting Fee	Consultant	
	Covidien	Consulting Fee	Consultant	
Richard Rothstein	SafeStitch	Consulting Fee	Consultant	
	Spirus Medical	Consulting Fee	Consultant	
	Olympus	Consulting Fee	Consultant	
	Boston Scientific	Consulting Fee	Consultant	
	Barrx	Consulting Fee	Consultant	
	Davol/Bard	Other	Other	Research Grant
	GI Dynamics	Consulting Fee	Consultant	
	Ethicon EndoSurgical	Consulting Fee	Consultant	
Aviel Roy-Shapira	Medigus Ltd	Ownership Interest	Employment	
Barry A. Salky	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Neatstitch, LTD	Ownership Interest	Board Member	
	Storz	Other	Other	Support for Educational Courses
	Covidien	Other	Other	Support for Research Project
Richard M. Satava	InTouch Technologies	Ownership Interest	Other	own stock in company
	Karl Storz	Consulting Fee	Consultant	
Philip R. Schauer	Stryker Endoscopy	Other	Other	Educational Grant
	Surgiquest	Consulting Fee	Advisory Committee	
	Baxter	Other	Other	Educational Grant
	Stryker Endoscopy	Consulting Fee	Advisory Committee	
	Remedy MD	Ownership Interest	Board Member	
	Ethicon Endo Surgery	Consulting Fee	Speaking/Teaching	
	Cardinal Snowden Pincer	Consulting Fee	Advisory Committee	
	Ethicon Endo Surgery	Consulting Fee	Advisory Committee	
	Ethicon Endo Surgery	Other	Other	Research Grant
	Recipient			
	Gore	Consulting Fee	Consultant	
	Gore	Other	Other	Educational Grant
	Barosense	Consulting Fee	Advisory Committee	
	Bard Davol	Other	Other	Research Grant
	Recipient			
	Allergan	Other	Other	Educational Grant
	Covidien	Other	Other	Educational Grant
Christopher M. Schlachta	Bard Davol	Consulting Fee	Advisory Committee	
	Bard Davol	Consulting Fee	Review Panel	
	Johnson and Johnson Medical Products	Consulting Fee	Advisory Committee	
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
Steven D. Schwartzberg	Neatstitch	Ownership Interest	Advisory Committee	
	Stryker	Honoraria	Advisory Committee	
	MMDI	Consulting Fee	Consultant	
	MITI	Ownership Interest	Advisory Committee	
	Merck	Honoraria	Speaking/Teaching	
	Cambridge Endo	Ownership Interest	Advisory Committee	
	Surgiquest	Ownership Interest	Advisory Committee	

Faculty & Presenter Disclosures

Name	Commercial Interest	What was received	For what role	Other
Daniel J. Scott	Covidien	Other	Other	Sponsored research, advisory panel, teaching Co-inventor
	Magnetically Anchored Instruments	IP Rights	Other	
	Ethicon	Other	Other	sponsored research
	Storz	Other	Other	Equipment Grant
Don J. Selzer	Cook Biotech, Inc.	Salary	Advisory Committee	
	Ethicon Endosurgery	Other	Other	Educational grant
	Covidien	Other	Other	Educational Grant
Anthony J. Senagore	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
Paresh C. Shah	Suturtek	Other	Advisory Committee	
	Stryker	Other	Advisory Committee	
Virender K. Sharma	Barrx Medical	Other	Other	Research Grant - Salary support for research investigator
Stephen M Smeaton	InnerOptic	Consulting Fee	Consulting	Research Grant
Nathaniel J. Soper	Karl Storz	Other	Other	Received equipment for research lab
	Ethicon Endosurgery	Honoraria	Speaking/Teaching	
	Covidien	Honoraria	Speaking/Teaching	
	Terumo	Honoraria	Advisory Committee	
	USGI Medical	Other	Advisory Committee	
Georg O Spaun	Ethicon	Other Financial Benefit	Other Activities	Dr Swanstrom receives educational support from this company
	USGI Medical	Other Financial Benefit	Other Activities	authors position at Legacy Health System is sponsored by a research grant from USGI, senior author receives research support from USGI
	USGI Medical	Other Financial Benefit	Other Activities	authors position at Legacy Health System is funded by a research grant from USGI Medical, mentor receives research support from USGI
	Olympus, Boston Scientific, Wolf, Knittlingen, Germany	Other Financial Benefit	Other Activities	senior author receives research support from this companies
	Olympus, Boston Scientific, Wolf, Knittlingen, Germany	Other Financial Benefit	Other Activities	Dr Swanstrom receives research support from these companies
	Ethicon	Other Financial Benefit	Other Activities	senior author receives education support
Donna Stanbridge	Covidien Healthcare Canada	Salary	Other	Research





Faculty & Presenter Disclosures



Name	Commercial Interest	What was received	For what role	Other
Greg V. Stiegmann	Olympus Valley Lab	Honoraria Honoraria	Speaking/Teaching Speaking/Teaching	
Paul Swain	USGI Medical GivenImaging Ethicon Endosurgery Valentx Ethicon Endo-Surgery	Consulting Fee Consulting Fee Consulting Fee Consulting Fee Consulting Fee	Consultant Consultant Consultant Consultant Consulting	
Lee L. Swanstrom	Boston Scientific USGI Olympus Ethicon	Other Consulting Fee Other Other	Advisory Committee Advisory Committee Other Other	research support. consultant educaton program support
Zoltan Szabo	Karl Storz Endoscopy	Royalty		
Amiki Szold	Niti Medical MST Hernia Solutions Nicast Simbionix Visionsense Virtual Ports Stimpulse Bio Magnesium	Consulting Fee Ownership Interest Ownership Interest Consulting Fee Consulting Fee Consulting Fee Consulting Fee Consulting Fee Consulting Fee Consulting Fee	Consultant Board Member Board Member Consultant Consultant Consultant Consultant Consultant Consultant Consultant	
Gurkan Tellioglu	Ethicon Angiodynamics Angiodynamics	Consulting Fee Other Financial Benefit Honorarium	Consulting Other Activities Speaking and/or Teaching	research grant
Christopher C. Thompson	Bard Covidien Covidien Power Medical Bard Bard USGI medical Boston Scientific Valentx Bard USGI Medical	Other Consulting Fee Honoraria Honoraria Royalty Honoraria Consulting Fee Consulting Fee Consulting Fee Consulting Fee Honoraria	Other Consultant Advisory Committee Advisory Committee Other Advisory Committee Consultant Consultant Consultant Consultant Advisory Committee	Grants for research support Licensing Agreement
Winnie Tong	Ethicon Covidien	Other Financial Benefit Other Financial Benefit	Consulting Consulting	
Alfonso Torquati	Covidien Ethicon	Consulting Fee Other	Advisory Committee Independent Contractor	
Melina C Vassiliou	Boston Scientific Covidien (GMF) Ethicon Endosurgery Ethicon Endosurgery (MCV & GMF) Olympus WL Gore (GMF) Ethicon	Consulting Fee Other Financial Benefit Consulting Fee Other Financial Benefit Consulting Fee Honorarium Other	Contracted Research Other Activities Contracted Research Other Activities Consulting Speaking and/or Teaching Other	Education and Research Grant Research Grant- unrelated to abstract funding of a trip to Brazil to observe NOTES
Richard M. Vazquez	Promethean Medical Devices	Consulting Fee	Consultant	
Pratibha Vemulapalli	Covidien	Consulting Fee	Consulting	
Guy R. Voeller	Covidien W.L. Gore Atrium	Honoraria Honoraria Consulting Fee	Speaking/Teaching Speaking/Teaching Consultant	

Faculty & Presenter Disclosures

Name	Commercial Interest	What was received	For what role	Other
Carl J. Westcott	Rivulet Steris TEI Bioscience	Ownership Interest Consulting Fee Consulting Fee	Advisory Committee Consultant Consultant	
Steven D. Wexner	Covidien intuitive surgical Karl Storz Endoscopy Karl Storz Endoscopy America Power Medical interventions Power Medical interventions SURGRx SURGRx Neat Stitch Covidien	Other Ownership Interest IP Rights Consulting Fee Consulting Fee IP Rights Consulting Fee Ownership Interest Ownership Interest IP Rights	Speaking/Teaching Consultant Other Consultant Consultant Other Consultant Independent Contractor Consultant Other	inventor inventor inventor
Richard L. Whelan	Applied Medical	Other	Other	Participating in a multicenter study being sponsored by the company. Under contract, the company reimburses the Department of surgery research unit on a per capita basis to help cover the costs of the study. I am the PI on a Phase 1 Drug trial (IRB approved) involving the drug Cetuximab) The study is being done with financial support from BMS. I am receiving no salary support or money for doing the study.
	Bristol Meyers Squibb	Other	Other	
	Olympus Corporation PolyE Pharma Corporation	Honoraria Other	Speaking/Teaching Other	Doing murine study and human study testing the Poly E drug made by this company. The company is providing some funds under contract to pay for the research and to pay part of the salary one lab worker.
Mark H. Whiteford	Applied Medical Sanofi Aventis Richard Wolf Medical Instruments	Honoraria Honoraria Consulting Fee	Speaking/Teaching Speaking/Teaching Consultant	
Manabu Yamamoto	Sumitomo Bakelite Co. Ltd.	Consulting Fee	Consultant	
Tonia M. Young-Fadok	Covidien	Other	Other	Educational grant for laparoscopic colorectal fellowship support
	Covidien	Other	Other	Received: fellowship funding Role: program director
Natan Zundel	Allergan Ethicon Endosurgery	Honoraria Honoraria	Consultant Consultant	





WAGMANSON

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SAGES & IPEG Social Programs

Welcome Reception– SAGES and IPEG

Date: Wednesday, April 22, 2009

Time: 5:00 - 7:00 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, April 24, 2009

Time: 6:00 - 7:00 PM

Place: Valley of the Sun Room,
Phoenix Sheraton Hotel

Dress: Casual

Ticketed Event

Viva La SAGES! Viva La IPEG! Gala An Evening at Corona Ranch

Dinner and Sing-Off

Date: Friday Evening, April 24, 2009

Place: Corona Ranch

Time: 7:30 - 11:00 PM

Dress: Casual (really casual!)

Fee: Included in Registration for SAGES SuperPass (Option A), IPEG meeting & registered guests.

Ticketed Event

The evening will conclude with the SAGES International Sing-Off.

Shuttles begin departing at 7:15 PM in front of the Sheraton Phoenix Downtown, Hyatt Regency Phoenix and Wyndham hotels. Buses will circle all evening until the event ends.

SAGES/IPEG Tours

Tour 1: Taliesin West

Date: Thursday, April 23rd

Time: Departs 8:30 AM,

Returns approx. 12:30 PM

Buses begin loading at 8:15 AM at the Convention Center entrance on 3rd Street and Monroe

Fee: \$75.00 per person

Tickets available until Wednesday 5:00 PM

Visit Taliesin West, the main campus of the Frank Lloyd Wright School of Architecture. It began as the winter home of Wright in 1937. The buildings were designed and built by apprentices over many years. The docent-guided tour of the grounds includes Wright's living quarters, private office, Cabaret and Music Pavilion. A glimpse into Wright's philosophy of integrating indoor and outdoor spaces. Following Taliesin West, you will visit one of Wright's final designs, **Gammage Auditorium** at ASU. Now on the National Register of Historic Places, the building continues to make history. The tour also visits the **Arizona Biltmore** where Wright's influence can be seen in the decorative details and general massing.

Tour 2: Sedona Art Tour

Date: Friday, April 24th

Time: Departs 7:30 AM

Returns approx. 5:00 PM

Buses begin loading at 7:15 AM at the Convention Center entrance on 3rd street and Monroe

Fee: \$140.00 per person, including lunch

Tickets available until Thursday 5:00 PM

Note: Please wear comfortable shoes for walking
Travel from Scottsdale through the **Sonoran Desert** to the colorful red rocks of Sedona, a unique geological area that has mesmerized visitors for decades. See the rock monoliths named Coffeepot, Cathedral and Bell Rock. There join a local guide who will introduce you to **Sedona's art community**, where you will visit art galleries and artists' studios and learn more about why this area is an inspiration for painters and sculptures. Includes lunch at **Tlaquepaque**, a picturesque arts and crafts village.

Tour 3: Native American Heritage Tour

Date: Friday, April 24th

Time: Departs 8:00 AM

Returns approx. 1:30 PM

Buses begin loading at 7:45 AM at the Convention Center entrance on 3rd street and Monroe

Fee: \$85.00 per person, including lunch

Tickets available until Thursday 5:00 PM

Start with a visit to the **Pueblo Grand Museum and Archaeological Park** to learn about the original residents of Phoenix. See the Hohokam Indian ruins located in the heart of Phoenix as well as exhibits about the Hohokam culture. The tour then continues to the world-renown **Heard Museum**, displaying both historical and contemporary Native American art, jewelry, pottery, & baskets. Your docent will share perspective and detailed explanations about the different cultures. Includes lunch at the **Arcadia Farms Café** on site.





A Guide to SAGES Resources

The following two pages detail what SAGES has to offer...current projects, initiatives, committees, publications, courses, products, guidelines...and more!

SAGES Projects

FLS: The Fundamentals of Laparoscopic Surgery Program (FLS) is an innovative product in surgical education and skills assessment. FLS includes a comprehensive, multi-media CD-ROM and soon to be webbased education module and hands-on component designed to teach the physiology, fundamental knowledge, clinical judgment and technical skills required in the performance of basic laparoscopic surgery. The study guides cover topics ranging from laparoscopic instrumentation, energy sources and patient selection to patient positions, laparoscopic suturing and procedural complications. It also includes an exam to assess cognitive knowledge and manual skills. The FLS CD-ROMs, FLS trainer box and accessory kit are available for purchase. For more information, please contact FLS office at fls@sages.org or visit www.flsprogram.org. FLS Program currently available **free to every surgical residency program!**

Outcomes: The SAGES Outcomes Initiative is a general surgery outcomes tracking tool providing user-friendly case-specific logs that are designed to serve as your surgical diary. Participants enter in data via the web or through their PDA into one or more modules including general surgery, gallbladder, GERD, hernia, morbid obesity and colorectal. Newly added is the EGD module. Contact Jennifer Clark at jennifer@sages.org to join today.

Legislative: SAGES Legislative Review Committee is actively involved in a variety of issues affecting SAGES members including medical liability, Pay for Performance and reimbursement. Members of this committee include SAGES representatives to the AMA HOD (House of Delegates), RUC (Relative Value Update Committee), CPT (Current Procedural Terminology), and the SQA (Surgical Quality Alliance). SAGES is committed to pursuing codes through the CPT, and values through the RUC for emerging endoluminal techniques and technologies. This involves working closely with the GI societies including AGA and ASGE. SAGES sends a delegation to Washington, DC each year to inform Federal legislators of SAGES position on key issues. For more information, please contact Shelley Ginsberg at shelley@sages.org.

Society of American Gastrointestinal and Endoscopic Surgeons

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Los Angeles, CA 90064
Phone (310) 437-0544
Fax: (310) 437-0585
Email: sagesweb@sages.org
Web: www.sages.org

Video Projects

Top 21 Project: Developed by the SAGES Educational Resources Committee and produced by Ciné-Med, the Top 21 Project is a revised collection of the most common minimally invasive procedures performed by surgeons. To order the collection, please contact Ciné-Med at 800-515-1542 or visit www.cine-med.com/sages.

SAGES Pearls Project: This series of CD/DVD-ROM programs delivers Pearls from masters of laparoscopic surgery. Surgical Procedures are broken down into core steps. Each step will reveal one or more methods as performed by the masters of laparoscopic surgery. Specially prepared commentaries are included to enhance your understanding of each Pearl, and to help you develop your own unique set of surgical skills.

Currently Available:

- Laparoscopic Nissen Fundoplication
- Laparoscopic Sigmoid Colectomy
- Laparoscopic Right Hemi-Colectomy
- Laparoscopic Inguinal Hernia Repair
- Roux-en-Y Gastric Bypass

To order, please contact Ciné-Med at 800-515-1542 or visit www.cine-med.com/sages.

SAGES Grand Rounds Master Series:

This series provides current information on topics in the field of minimally invasive surgery from some of the nation's leading laparoscopic surgeons. Some of the SAGES Grand Rounds features include: Grand Rounds style in depth lectures by leading experts in the field of minimally invasive surgery; DVD-format chapter organization that allows easy viewer reference; Video segments included in each issue to illustrate important techniques or procedures; Case discussions and review of difficult management problems. Issue 1: *Laparoscopic Cholecystectomy and Biliary Tract Surgery*; Issue 2: *Flexible Endoscopy for General Surgeons*; Issue 3: *Laparoscopic Management of Acute and Chronic Abdominal Pain*; Issue 4: *Laparoscopic Management of Tumors of the Stomach and Colon*; Issue 5: *Controversies and Techniques in Inguinal Hernia Repair*; Issue 6: *Bariatric Surgery*; Issue 7: *Current Management of Adrenal Tumors*

Pricing Structure: You may now purchase individual SAGES Grand Rounds Episodes! With the purchase of each episode you now have access to this episode online for one year. That means that even if you don't have your DVD handy you can still view the videos in that episode from anywhere that you have access to the Internet. To order, please contact Ciné-Med at 800-515-1542 or visit www.cine-med.com/sages.

SAGES CME Video Courses: SAGES is pleased to bring you the latest in technology and video based medical education. This DVD based Surgical Education currently features Post Graduate Courses previously presented in recent SAGES meetings.

Courses Currently Available:

- Motility Misery: A Growing Problem
- Diagnosis and Management from Oropharynx to Anus
- Challenging Hernias
- Complications in Bariatric Surgery and How to Manage Them
- Top to Bottom: GERD
- Surgeon in the Digital Age: PDA Workshop For Surgeons
- Surgeon in the Digital Age: Understanding Your Video System
- Hands-On Laparoscopic Colon Course & Modern Management of Colon Cancer
- GERD/ Controversies and Laparoscopic Complications
- MIS & Cancer Postgraduate Course: Debate on Controversies in GI Cancer Surgery
- IBD Postgraduate Course: Laparoscopic Surgery for Inflammatory Bowel Disease: Technical Issues

* CME Available

For product details and to order please visit: www.cine-med.com/sages or call 800-515-1542 or 203-263-0006.

SAGES On line Video Library: The SAGES Video Library features programs presented at, or submitted to, recent SAGES Scientific Sessions and/or Postgraduate Courses. Get quick and easy access to the entire SAGES surgical education video library. Each procedure is narrated by leading experts in the field of minimally invasive surgery. To visit the SAGES video library please go to www.sages.org/education

Coming Soon!

Classic SAGES Educational Projects such as the Top 14 and the Pearls catalog are currently being enhanced, with new implementations scheduled to release in the next year. The SAGES Top 14 will soon become the Top 21. Upcoming Pearls issues currently in development include Lap Cholecystectomy, Incisional Hernia, Lap Band, and Gastric Sleeve.



A Guide to SAGES Resources

Research Grants

The SAGES Research Awards are open to any principal investigator who is a **SAGES member, including Candidate members**. SAGES especially encourages grant funding to young investigators/candidate members in the hopes that funding through SAGES will lead to additional extramural funding. Awards are conferred on a competitive basis by submission of a grant application, which is reviewed and evaluated by the SAGES Research Committee and approved by the Governing Board. Grant recipients are presented with an award during the Annual Meeting. Funded by industry support, SAGES gives on average between six to nine grants per year. Grant applications are generally available over the Summer, with the deadline to apply each Fall. The Research Committee now awards the Career Development Award. The focus of this SAGES Foundation supported award is to provide funding for a young surgeon or surgeon-in-training for the development of critical skills required for their academic career in gastrointestinal and endoscopic surgery. The intent of this award is to delay the start of a faculty role or ongoing residency training for supplemental training/traveling fellowship or intense research time. This grant provides the awardee with a unique educational opportunity that would not otherwise be available. Awards are conferred on a competitive basis by submission of a grant application, which is reviewed and evaluated by the SAGES Research and Career Development Committee and approved by the Governing Board. The application period is generally during the summer with an application deadline of late fall. For more information on both the research grants and Career Development Award information, visit <https://sages.org/leadership/committees/research/>. For questions, contact the SAGES Office at (310) 437-0544 or at research@sages.org.

SAGES Publications

SCOPE & Mini-SCOPE: SCOPE, SAGES semi-annual newsletter, and Mini-SCOPE, a brief electronic version, provide updates on SAGES projects and activities, upcoming events and general news affecting the organization. To receive a copy of SCOPE, please contact the SAGES office. To subscribe to Mini-SCOPE, e-mail sages-subscribe@topica.email-publisher.com.

GUIDELINES: SAGES offers its latest guidelines online: *Guidelines for the Clinical Application of Laparoscopic Bariatric Surgery*; *Guidelines for Office Endoscopic Services*; and *Guidelines for Diagnostic Laparoscopy*. To access these and all SAGES guidelines, please visit <http://www.sages.org/publications.html#guide> or to order, please contact the SAGES office at (310) 437-0544.

Resident Courses

SAGES offers courses in gastrointestinal endoscopy and laparoscopy for general surgery residents throughout the year. Basic Courses are for 2nd and 3rd year residents and Advanced Courses are open for 4th and 5th year residents, with courses in 2009 for Canadian residents. Attendees must be SAGES Candidate members to attend an advanced course. For Basic Courses, SAGES offers courses in gastrointestinal endoscopy and laparoscopy twice a year. The basic course is an educational experience designed to present the basic science and technical approaches to modern endoscopic surgery. It will present materials dealing with traditional diagnostic and therapeutic flexible endoscopy as well as minimally invasive surgical techniques. It will include an extensive laboratory experience, in addition to classroom didactics. The faculty will include many of the most experienced and respected endoscopic surgeons in the world. Upcoming Advanced courses give general surgery residents in their 4th or 5th year exposure in foregut, solid organ, colon, bariatric and hernia surgery. The faculty will discuss indications and surgical techniques of those subspecialties. In addition to classroom didactics, each advanced course involves an extensive laboratory experience. For a listing of resident courses in 2009, visit https://sages.org/meetings/resident_courses/. For more information, contact Yumi Hori at (310) 437-0544 ext. 102 or yumi@sages.org.

SAGES Books

The SAGES Manual: Fundamentals of Laparoscopy, Thoracoscopy and GI Endoscopy, 2/e, edited by Carol Scott-Conner features an entirely new section on thoracoscopy, a greatly expanded section on laparoscopic bariatric surgery, and new chapters on hand-assisted laparoscopy. In addition to this new material, all chapters have been revised and updated to reflect the current state of the art in minimally invasive surgery.

The SAGES Manual of Perioperative Care in Minimally Invasive Surgery, was edited by Drs. Richard (Larry) Whelan, James Fleshman and Dennis Fowler. This book focuses on perioperative concepts and strategies for successful patient management before, during and after minimally invasive surgery. From preoperative evaluation and technique selection to postoperative management, this easy-to-read manual provides strategies that not only optimize outcomes but also ensure quality patient care beyond the operating room. **Both books are available online at www.springeronline.com or by calling 800-SPRINGER.**

New Manuals on Strategic Decision Making, in a case study format, editor Carol Scott-Conner, and *Bariatric Surgery*, editor Ninh Nguyen, are now available.

SAGES' Journal

SURGICAL ENDOSCOPY:

Surgical Endoscopy is SAGES official journal. To view articles on-line, visit www.sages.org. A journal subscription is included with SAGES membership.

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SAGES Other Products

SAGES Patient Information Brochures:

As a way to educate patients on certain laparoscopic and endoscopic procedures, the SAGES Educational Resources Committee has created several patient information brochures, written in both English and Spanish. Additional languages will be available soon. To order, please visit www.sages.org.

SAGES Troubleshooting Guide:

Double sided, laminated guide to hang in your OR to assist OR personnel when equipment problems arise.

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Scientific Session Oral Abstracts

S001

LAPAROSCOPIC LOW ANTERIOR RESECTION WITH TOTAL MESORECTAL EXCISION, 17 YEARS EXPERIENCE WITH 590

PATIENTS, Morris E Franklin MD, Guillermo R Portillo MD, Jeffrey L Glass MD, John J Gonzalez MD, Eduardo A Perez MD, Mike Renfrow MD, Texas Endosurgery Institute

Introduction Laparoscopic surgery has been established as the procedure of choice for much intra-abdominal disease process. However laparoscopic colon surgery has been the focus of much criticism and debate, while surgical procedure per se has gained acceptance, the indications for surgery has been the center of controversy, primarily regarding the safety and efficacy of these minimally invasive procedures for the treatment of colorectal malignancy. We present data collected prospectively from a single institution over a seventeen-year period, on laparoscopic low anterior resection with total mesorectal excision for rectal cancer.

Method All patients undergoing totally laparoscopic or laparoscopically assisted low anterior resection (LAR) with Total Mesorectal Excision from Feb 1991 to May 2008 at Texas Endosurgery Institute, San Antonio, Texas were included in the study. Data was collected on pre-operative work-up, operative time, blood loss, pathologic details of the surgical specimen, and post-operative course.

Follow up was done through office charts and direct patient contact.

Results A total of 590 patients underwent laparoscopic Low anterior resection with total Mesorectal Excision. 324 patients have malignant disease (55%) and 266 patients had benign disease (45%). Eighty six % of the patients received totally laparoscopic LAR and 14% laparoscopically assisted LAR.

Five hundred and forty two (92%) patients were elective and 8% had an emergency procedure. Thirty patients required conversion to open procedure (5%). The mean operating time was 150 minutes (range 120-405, median 196 minutes). Mean and median blood loss was 100 ml (range 25-600 ml). The average number of lymph nodes harvested was 15 with a median of 17 lymph nodes. Median post-operative hospital stay was 6 days (range 4-18 days). Anastomotic leak rate was 1.2%. Local recurrence rate was 2.6% and the 5 years survival rate was 81%. There were no recurrences at wound or trocar sites.

Conclusion Laparoscopic low anterior resection with total mesorectal excision is safe, feasible and effective.

Laparoscopic TME is associated with good long term oncological outcomes.

The laparoscopic approach should be considered an excellent option for both benign and malignant disease.

S002

LAPAROSCOPIC SUBTOTAL COLECTOMY FOR MEDICALLY REFRACTORY ULCERATIVE COLITIS: THE TIME HAS COME, Dana A

Telem MD, Anthony Vine MD, Celia M Divino MD, Mark Reiner, Brian Jacob, Michael T Harris, Adrian J Greenstein, Barry Salky, Lester B Katz, The Mount Sinai Hospital

Introduction: We hypothesized that laparoscopic subtotal colectomy (STC) is a safe alternative in patients with medically refractory ulcerative colitis (UC).

Methods: This is a retrospective study of 85 medically refractory UC patients undergoing STC with end ileostomy since 2002. Patients with toxic megacolon were excluded. Results are presented as mean with confidence interval and compared using unpaired t-test with two-tail distribution.

Results: 85 patients underwent STC, 56 open (OC) and 29 laparoscopic (LC). Patients were equally matched for gender, ASA score and comorbidity. Age was significantly different between the two groups, LC younger than OC (33.9±4.96 vs. 41.4±5.3 respectively, p 0.05) All patients were on steroids preoperatively. No mortalities occurred in either group. Major morbidity was defined as a life-threatening complication, readmission or re-operation within 30 days and was equivalent in both groups (OC 19% vs. LC 17%, p 0.78). Significant postoperative complications included 7 wound infections with 5 wound dehiscence in OC (OC 21.4% vs. LC 0%, p 0.003). Postoperative ileus (POI) was higher in LC, but not statistically significant (OC 10.1% vs. LC 17%, p 0.43).

For patients without major complications, length of hospital stay (4.53±0.74 vs. 6±1.32 days, p 0.0006) and intraoperative blood loss (EBL) (98.45±32.91 vs. 169.23±29.82 mL, p 0.01) were significantly decreased in LC. Intraoperative time was longer in LC (215.65±29.06 vs. 171.08±18.98 minutes, p 0.014). For both OC and LC, postoperative complication rate correlated with intraoperative EBL.

Time to reversal and percentage of patients reversed were similar in both groups.

Conclusion: Serious morbidity was equivalent in both groups. Intraoperative EBL predicts the probability of postoperative complication. Laparoscopy, although associated with a slightly higher rate of POI, confers the benefits of improved cosmesis, negligible wound complications, shorter hospital stay and reduced intraoperative blood loss. We conclude that laparoscopy is a feasible and safe alternative to open surgery in this patient population.

S003

A COMPARISON OF THE CLINICAL AND ECONOMIC OUTCOMES FOR OPEN VERSUS MINIMALLY INVASIVE APPENDECTOMY AND COLECTOMY: EVIDENCE FROM A LARGE COMMERCIAL PAYER

DATABASE, Terrence M Fullum MD, Joseph L Ladapo MD, Bijan J Borah PhD, Candace L Gunnarsson PhD, Howard University College of Medicine; Harvard Medical School; 13 Innovus; S2 Statistical Solutions, Inc.

INTRODUCTION: Appendectomy and colectomy are commonly performed surgical procedures. Despite evidence demonstrating advantages to the minimally invasive surgical (MIS) approach, the prevalence of open procedures is higher. It remains controversial whether the MIS approach is safer or more cost effective.

METHODS: A retrospective analysis was performed using a large commercial payer database. The data included information on 7,532 appendectomies and 2,745 colectomies. Data were reviewed on the distribution of patient demographic and co-morbidity characteristics associated with the MIS and open approaches. The corresponding complication rates and expenditures were analyzed. Summary statistics were compared using chi-square tests and generalized linear models were constructed to estimate expenditures while controlling for patient characteristics.

RESULTS: There were no significant variations in the age distribution of patients undergoing MIS and open colectomy, and marginal age differences for appendectomy. Significantly more patients experienced an infection postoperatively and procedure-specific complications rates were more common in the open group (p<0.05) for both procedures. The post-surgical length of stay was longer for patients treated using open techniques, with an average difference of a half day for appendectomies and significantly longer at four days for colectomy (p<0.001). Readmission rates differed little between the two approaches. Procedures performed through an MIS approach were associated with lower expenditures than with the open technique, and the differences ranged from \$700 (p<0.05) for appendectomy patients to \$15,200 for colectomy patients (p<0.001).

S004

LAPAROSCOPIC TRANSANAL ABDOMINAL TRANSANAL (TATA) RESECTION WITH SPHINCTER PRESERVATION FOR RECTAL CANCER OF THE DISTAL 3CM FOLLOWING NEOADJUVANT THERAPY, John H Marks MD, Benyamini Mizrahi MD, Scott S Dalane BA, Ikenna Nweze MD, Gerald J Marks MD, Lankenau Hospital and Institute for Medical Research: Section of Colorectal Surgery

Introduction: In a prospective rectal cancer management program, this study reports short and long term results of laparoscopic radical transanal abdominal transanal proctosigmoidectomy with coloanal anastomosis (TATA) after neoadjuvant therapy.

Methods: From 1998 to 2008, in a prospective database, 102 rectal cancer patients were treated with laparoscopic TATA. Patients with distant metastasis at presentation, tumor > 3cm from the anorectal ring, and those not undergoing neoadjuvant therapy were excluded leaving 79 patients for this study. Demographics are as follows: gender: 54 men, 25 women; Mean age: 59.2 years (22-85). Thirteen patients completed neoadjuvant therapy prior to original evaluation and are excluded from report of initial clinical assessment. Pretreatment T Stage was as follows: T3=50, T2=16. Mean level in rectum superior to anorectal ring: 1.2cm (-0.5-3.0); Fixity of tumor: mobile=31, tethered=27, early fixation=8; Ulceration: none=8, minimal=12, superficial=7, moderate=22, deep=27; Mean pretreatment size of tumor: 4.8cm (1.5-12.0); External beam radiation: median=5400cGy (3000-7295); 75 with chemo.

Results: Mean follow up was 34.2 mos (1.9-113.9 mos). There were no perioperative mortalities. The conversion rate was 2.5%. The mean largest incision length was 4.3cm (1.2-21cm). In 84% of the patients the incision was < 6.0cm and 46% of the patients had no abdominal incision to deliver the specimen. Mean EBL was 367cc (75cc-2200cc). All patients had a temporary diverting stoma. Major morbidities were 11% with a 21.5% minor morbidity rate. Major complications included: 4 full thickness rectal prolapse with

Scientific Session Oral Abstracts

repair, 1 ischemic neorectum with successful reanastomosis, 2 bowel obstructions and 2 failed anastomosis requiring stoma. ypT Stage are as follows: complete response=22, ypT1=12, ypT2=22, ypT3=23; ypN0=65, ypN+=14 (T3=7, T2=4, T1=3). Local recurrence (LR)=2.5% (2/79). Distant metastases rate of 10.1% (8/79). Both local recurrences had synchronous distant metastases. KM5YAS = 97.1%. Overall 90% of patients lived without a stoma. Neorectal loss due to L/R followed by APR=2, ischemic=2, 3 were not reversed due to comorbidities, 1 had a stoma secondary to bowel obstruction.

Conclusion: Our results indicate excellent L/R rates and 5 year survival without the need for permanent colostomy in patients with cancers in the distal 1/3 of the rectum. Laparoscopic TME in the transanal abdominal transanal (TATA) approach is safe and can be completed laparoscopically an overwhelming percentage of the time. Multi-institutional studies will be required to establish the reproducibility of this promising approach.

S005

A PROSPECTIVE STUDY COMPARING THE SURGICAL OUTCOMES BETWEEN LAPAROSCOPIC SURGERY FOR TRANSVERSE AND DESCENDING COLON CANCER AND LAPAROSCOPIC SURGERY FOR OTHER COLON CANCERS., Seiichiro Yamamoto PhD, Takayuki Akasu PhD, Shin Fujita PhD, Yoshihiro Moriya PhD, National Cancer Center Hospital

Introduction: Several prospective randomized trials have demonstrated the long-term oncological safety of laparoscopic surgery for colon cancer. However, transverse/descending colon cancers were excluded from prior randomized controlled trials, mainly because of technical difficulties. This study was designed to compare surgical outcomes between laparoscopic surgery for transverse/descending colon cancers and that for other colon cancers, in the absence of randomized trials comparing laparoscopic and open surgery for transverse/descending colon cancer.

Methods: In June 2001, we unified our surgical and postoperative management procedures, and a total prospective registry of 405 patients with colon cancer, who initially underwent laparoscopic surgery between June 2001 and March 2008, were reviewed. Surgical outcomes were compared between laparoscopic surgery for transverse/descending colon cancer (TD group, n=83) and laparoscopic surgery for other colon cancers (Other group, n=322). Indications of laparoscopic surgery were limited to patients with Stage I cancer during the early period.

Results: The median follow-up was 37 months. There was no perioperative mortality, and an anastomosis was performed in all patients. One patient with transverse colon cancer required conversion to conventional open surgery because of cancer invasion to the duodenum. Preoperative clinical characteristics were similar between the two groups. Regarding operative and postoperative results, mean surgical duration was significantly greater in the TD group (221 vs. 205 minutes, $p=0.0152$). However, blood loss was similar between the two groups. There were no significant differences in the postoperative course between the two groups except for a slow fluid intake start in the TD group (1.24 vs. 1.05 days, $p=0.0263$). There were no perioperative mortalities, and complication rates between the two groups were similar ($p=0.5258$). There was one anastomotic leakage, and two early reoperations in the Other group. None of the patients treated with curative intent developed recurrence of cancer in the TD group.

Conclusions: Laparoscopic surgery for transverse/descending cancer can be performed safely without increased morbidity or mortality, and shows short-term benefits comparable to that in patients who underwent laparoscopic surgery for other colon cancers.

S006

A PROSPECTIVE, RANDOMIZED, DOUBLE-BLIND, PLACEBO CONTROLLED TRIAL OF DEXAMETHASONE IN PREVENTING POSTOPERATIVE NAUSEA IN THE LAPAROSCOPIC GASTRIC BYPASS PATIENT., Nia Zalamea MD, Farida Bounoua MD, Sarah Lee MD, Todd Peterson MD, David Thoman MD, Santa Barbara Cottage Hospital

Postoperative nausea in patients undergoing laparoscopic gastric bypass remains a common source of patient discomfort and can lengthen hospital stay. The reported incidence of nausea ranges from twenty to thirty percent. A single dose of dexamethasone has been shown to prevent postoperative nausea and vomiting in patients undergoing strabismus surgery and laparoscopic cholecystectomy. Dexamethasone has not been studied in the bariatric population. We prospectively randomized 84 patients undergoing laparoscopic roux-en-y gastric bypass in a double-blind manner to either 8mg

of dexamethasone or normal saline at induction of anesthesia. The anesthesia and operation were standardized. A visual analog scale was used to evaluate nausea and pain in the post anesthesia care unit, and at six, twelve, eighteen and twenty-four hours.

Patients who received dexamethasone had a significantly decreased incidence of postoperative nausea when compared to patients who received placebo.

Preoperative dexamethasone decreases postoperative nausea in patients undergoing laparoscopic gastric bypass but does not affect length of stay and pain scores.

S007

LAPAROSCOPIC DUODENO-JEJUNAL BYPASS (LDJB) AS A SURGICAL TREATMENT FOR TYPE 2 DIABETES MELLITUS IN THE NON OBESE PATIENTS. EARLY EXPERIENCE., Marcos Berry MD, Patricio Lamoza MD, Lionel Urrutia MD, Hector Conoman MD, Rodolfo Lahsen MD, Center for Nutrition and Obesity Surgery, Clinica Las Condes, Santiago, Chile

Introduction: We know from bariatric surgical literature that all bariatric surgical techniques resolve diabetes (T2DM) from 73% to 98% in obese patients, this resolution occurs among days to weeks after surgery. Based on Dr. Rubino's research on animals, LDJB has been proposed as an alternative of treatment for T2DM in non obese patients.

Objective: To confirm LDJB as a new treatment for a subset of T2DM in non obese patients

Patients and Methods: Following a strict protocol with ethics committee approval in our institution, 7 T2DM patients underwent a LDJB. Surgical technique: transection of the duodenum 2 cm. distal to the pylorus, duodeno-jejunal anastomosis, biliopancreatic limb of 150 cm, alimentary limb 100 cm. Barium swallow was done on the second postoperative day. All patients are taking metformin upon discharge for at least 6 month after surgery.

Results: 6 Male, 1 Female patient. Mean age: 45 yo (34-54). Mean years of T2DM 5 (1-10), 2 patients were insulin users, Mean Preop BMI 28,7 (26,8-31), Postop BMI: 6 month 27,5 (27-27,9), Pre-op Fasting Blood Glucose 165 (128 - 251), Post-op Fasting Blood Glucose: 1 month 113,9 (95,5 - 130). 3 months: 129 (101-165). 6 months: 108,5 (97 - 120). Pre-op HbA1c: 8,3 (6,9 - 9,3), Post-op HbA1c: 1 month: 6,6 (5,9 - 7,5), 3 month: 6,86 (6,1 - 8,4), 6 month: 6,65 (6,2 - 7,1). No patient on insulin postop. OR time: 150 min. Morbidity: 1 duodeno-jejunal anastomotic leak resolved, gastroparesis in 2 cases (1 at 15 days post discharge, 1 during hospital stay). No mortality.

Conclusion: These early results are encouraging, showing improvement or remission of T2DM in all patients. We believe that duodenal exclusion is the main mechanism that explains these results. Although these preliminary data is very promising, as an alternative treatment for T2DM in non obese patients, longer follow-up is needed.

S008

THE INCIDENCE AND MANAGEMENT OF POST-OPERATIVE HEMORRHAGE AFTER LAPAROSCOPIC GASTRIC BYPASS, Michael K Fishman MD, Tejwant S Datta MD, Alfred Trang MD, George Eid MD, Ramsey Dallal MD, Albert Einstein Medical Center, Philadelphia, PA, University of Pittsburgh, Pittsburgh, PA

Background: Management and prevention of post-operative hemorrhage after laparoscopic gastric bypass (LGB) has been debated. Some authors believe in routine use of staple line buttress materials and the philosophy of routine re-operation for post-operative hemorrhage.

Methods: A retrospective, multi-institutional review of all patients having undergone a LGB (without staple line reinforcement) was undertaken to identify patients with peri-operative bleeding. Hemorrhage was defined as necessitating transfusion for hemodynamic instability.

Results: 33 of 3054 (1.1%) LGB patients were identified to have hemorrhage requiring transfusion. 18 patients had gastrointestinal (GI) bleeding, one subcutaneous, and 15 intraperitoneal bleeding (IP). Bleeding was identified a median of 1 day post-operative (0-1). Nine patients underwent laparoscopic exploration and only two were therapeutic (both had active bleeding from mesentery). Multivariable logistic regression did not identify BMI, age, institution, race or gender as predicting post-operative bleeding. There was no significant difference in the time for presentation of symptoms of bleeding and the type of bleed. Two methods of thromboembolic prophylaxis were utilized: continuous intravenous heparin infusion, n=208, and low molecular weight heparin, n=2720. Comparing these two methods, there was no difference in bleeding risk.





Scientific Session Oral Abstracts

Conclusion: The clinical course and management of hemorrhage was similar regardless of source. Non-operative management of bleeding with volume resuscitation is successful in most patients after LGB. The incidence of post LGB bleeding is acceptable without the use of staple line buttress materials.

S009

SINGLE SITE SERIES UTILIZING THE ENDOSURGICAL OPERATING SYSTEM (EOS) FOR REVISION OF POST ROUX-EN-Y GASTRIC BYPASS STOMAL AND POUCH DILATATION

Frank J Borao MD, Steven A Gorcey MD, Michael Chaump MD, Monmouth Medical Center, Long Branch NJ

Introduction: Interventional therapy for weight regain after Roux-en-Y gastric bypass surgery (RYGB) has been tempered by the higher morbidity and mortality associated with standard revisional surgery. Although endoluminal reduction of post-bypass stomal and pouch dilatation offers the promise of a safer alternative approach, questions still remain regarding safety, durability, and weight loss outcomes with this procedure. We report intra-operative and post-operative results to date utilizing the EndoSurgical Operating System® (EOS), for this challenging patient subset.

Methods: Patients who had regained significant weight 2+ years after RYGB after losing greater than 50% of excess body weight post-RYGB underwent endoluminal stomal and pouch reduction after being endoscopically screened for post-bypass stomal and/or pouch dilatation. The EOS was utilized to endoluminally reduce stoma size by creating circumferential folds with the EOS tissue anchoring system. Anchors were also utilized to approximate gastric pouch tissue and reduce pouch size. Data on safety, intra-operative performance, post-op weight loss, and anchor durability were recorded to date with use of the EOS.

Results: In 20/21 subjects we were able to successfully place anchors (one patient had an occult gastro-gastric fistula impairing pouch distention). Weight regain post-RYGB averaged 59 lbs (N=20). Stomal diameter was reduced on average by 53%, with pouch reduction averaging 41%. O.R. time averaged 91 minutes. There were no significant complications. An average of 36% of weight regain post-RYGB was lost at 3 months post-procedure (N=15). Median weight loss at 3 months was 24 lbs (range 8-40 lbs). 3 month EGD results revealed presence of anchors in their original locations, preservation of most of the intra-operative stoma/pouch reduction, tissue remodeling, and fibrotic tissue folds.

Conclusion: Clinical study of the EOS suggests great potential as a safe, and efficacious method for reducing stoma and pouch dilatation post-RYGB. Weight loss is currently being tracked through ongoing endoscopic and clinical follow-up.

S010

MANAGEMENT OF POST GASTRIC BYPASS NONINSULINOMA PANCREATOGENOUS HYPOGLYCEMIA (NESIDIOBLASTOSIS)

Viney Mathavan MD, Maurice Arregui MD, Chad Davis MD, Kirpal Singh MD, Veronica Martin MD, James Meachem MD, St Vincent Hospital, Indianapolis

Introduction: Post gastric bypass hyperinsulinemic hypoglycemia defines a group of patients with postprandial neuroglycopenic symptoms similar to insulinoma but in many cases more severe. There are few reports of patients with this condition. The primary surgical therapy is distal or subtotal pancreatectomy. Here we describe our surgical experience for the management of this rare condition.

Materials and methods: A retrospective study was done at tertiary care center. 15 patients were identified with symptomatic post gastric bypass hypoglycemia between 2004-2008. All patients were initially treated with maximal medical therapy for hypoglycemia. Nine refractory patients eventually underwent surgical treatment. The preoperative workup included triple-phase contrast islet cell protocol CT scan of abdomen, endoscopic ultrasound of pancreas, 72-hr fast, and calcium stimulated selective arteriography. Splenic, gastroduodenal, superior mesenteric and hepatic arteries were selectively cannulated and serial sampling for insulin level was done from hepatic vein. At surgery, intraoperative ultrasound was also performed. Patients then underwent thorough abdominal exploration, lysis of adhesions, exploration of the whole pancreas and extended distal pancreatectomy.

Results: Nine patients underwent surgery. Eight were female and one was male. The age range was from 28 to 62 years. The median age was 33 years. The onset of symptoms ranged from 1 month after Roux-en-Y gastric bypass to 4.5 years. The mean duration of symptoms was 14 months. Symptoms were those of severe neuroglycopenia and included dizziness, shakiness,

confusion, syncope and blurring of vision. The 72-hr fast was negative in 7 patients (as expected). It was positive in 2 patients. Triple-phase contrast CT scan of the abdomen was negative in all patients. Endoscopic ultrasound showed 1 cm lesion in head of pancreas in one patient. The final pathology on that was mucinous cystadenoma (which was present in addition to nesidioblastosis). Calcium-stimulated arteriography showed elevated insulin secretion with stimulation of splenic and gastroduodenal arteries. Some patients showed elevated insulin on stimulation of SMA also, in addition to above indicating more diffuse involvement of the pancreas. Extended distal (80%) pancreatectomy was performed in all nine patients. The spleen was spared in seven patients. The procedure was done laparoscopically in 8 patients, but converted to open in three. One patient had an open procedure from start to finish. Three patients had pancreatic leak, which was managed with drain. Pathology showed islet cell hyperplasia consistent with nesidioblastosis with varying degrees of hyperplasia of islet cells. No insulinoma was identified in any patient.

Follow-up: Follow-up ranged from 2 - 48 months (median 24 months). All patients initially reported marked relief of symptoms. Over time, two patients had complete resolution of symptoms; three patients developed occasional symptoms (once or twice a month) not requiring any medication; three patients developed more frequent symptoms (more than twice a month), controlled with medications; and one patient had severe symptoms refractory to maximal medical therapy (calcium channel blockers, diazoxide, octreotide). She underwent repeat preoperative work-up evaluation and subsequently underwent near total (95%) pancreatectomy with marked, but not complete, resolution of symptoms.

Discussion: Postprandial hypoglycemia after gastric bypass surgery with endogenous hyperinsulinemia is being increasingly recognized. It is associated with diffuse hyperplasia of islet cells but the exact cause is not understood. It must be distinguished from insulinoma. Various diagnostic tests aim to differentiate between the two. Sometimes they can coexist, as reported in some case reports. There are very few series and some case reports noted in the literature about post gastric bypass hyperinsulinemic hypoglycemia. Our present series will be one of the largest after the Mayo Clinic series. The etiology of this condition is not entirely understood. There may be yet unknown factors involved but increased secretion of glucagon like peptide-1 and decreased ghrelin are being implicated for islet cell hypertrophy. There is no gold standard treatment but varying degrees of pancreatectomy to debulk the islet cells is the main surgical modality.

S011

HIGH VISCERAL ADIPOSE VOLUME IMPAIRS BETA-CELL FUNCTION AND MAY INFLUENCE SURGICAL OPTIONS

Edward Lin DO, Adeola Ayeni MD, Zhe Liang MS, William Torres MD, John F Sweeney MD, Thomas R Ziegler MD, Lawrence Phillips MD, Nana Gletsu-Miller PhD, Emory Bariatrics and Endocrinology, Emory University School of Medicine

BACKGROUND: The mechanism for type-2 diabetes (T2DM) resolution following bariatric surgery is unknown, but is typically more robust for malabsorptive procedures (roux-en-Y gastric bypass, RYGB) than for restrictive procedures (laparoscopic gastric banding, LGB). We hypothesize that high visceral volume is a predictor of pre- or frank diabetes and surgeries that rapidly deplete visceral adipose stores more readily reverses T2DM.

METHOD: 37 female patients were admitted to the Clinical Research Center for evaluation prior to undergoing RYGB. A smaller cohort of patients underwent LGB. Visceral adipose tissue (VAT) volume was measured by waist circumference and standardized CT scan protocol. Beta-cell function (insulin secretion and disposition index) were evaluated by IVGTT. All patients were followed for 2 years. Correlations were performed with linear and multivariate analysis.

RESULTS: Patients with impaired fasting glucose or T2DM had the highest VAT volume compared with those with normal fasting glucose (5000 cc vs. 3100 cc, respectively $p < 0.05$). VAT volume, but not abdominal subcutaneous fat, was inversely related to insulin secretion and disposition index ($r = -0.46$, $p = 0.004$). Both parameters of beta-cell function were improved within the first 6 months compared to baseline ($p < 0.05$), and beta-cell function correlated only with VAT, but not general fat, depletion ($r = -0.48$, $p < 0.04$). These post-surgical changes were not observed with LGB patients.

CONCLUSIONS: The improved beta-cell function following depletion of visceral adipose volume suggests one mechanism by which RYGB induces T2DM resolution. We preferentially offer RYGB to patients with pre-surgically determined high visceral fat volume (>5000 cc) and impaired beta-cell function.

Scientific Session Oral Abstracts

S012

INCIDENCE AND IMPLICATIONS OF ABNORMAL GLUCOSE TOLERANCE TESTING FOLLOWING GASTRIC BYPASS, R Andrews MD, J H Oren BS, E J Yanco MD, P C Shah MD, M S Roslin MD, Lenox Hill Hospital, Department of Surgery

Introduction: Reactive hypoglycemia following RYGB has been well reported. Its frequency and implications are unclear. To further determine its incidence and significance, glucose tolerance tests (GTT) was used to assess the effect of glucose challenge on post-RYGB patients.

Methods: 28 randomly selected patients who were at least 6 months post-op from RYGB and were returning for routine follow-up were studied. All underwent a standard GTT with measurement of corresponding insulin levels. All had anatomical studies demonstrating intact staple lines and normal post-bypass anatomy. Mean age 48.8 +/- 11.5 years, mean pre-operative BMI 48.7 +/- 6.8, mean percent excess BMI lost 65 +/- 21%. 2/3 of the patients had weight regain and the mean weight regain at follow-up was 15.3 +/- 16.9 lbs, mean follow-up time 38.4 (6-89) months.

Results: 26/28 patients had an abnormal GTT. 5/28 patients were identified as diabetic. 3 of these patients had mildly elevated fasting glucose levels and 2 patients had normal fasting glucose levels. All 5 of these patients were diabetic pre-operatively. Of the remaining patients, 91% (21/23) had evidence of reactive hypoglycemia (glucose < 60mg/dL) at 1-2hrs post glucose load. The mean 1 hr insulin level for these 23 patients was 103 +/- 96.3 μ U/mL. Within this cohort of 23 patients, 11 had a maximum to minimum glucose ratio > 3:1 with 4 having a ratio > 4:1.

Conclusions: This study demonstrates that an abnormal GTT is a common finding post-RYGB. 6 cases of diabetes were recognized among patients with normal-mildly elevated fasting glucose levels. Among patients with no prior history of diabetes, reactive hypoglycemia was found to be more common than expected. Given that insulin values were in the normal-mildly elevated range for all but 3 of those patients, these results do not support nesidioblastosis as an etiology. A large subgroup, 11/23 patients, had a profound dumping reaction with rapid elevation of glucose followed by sharp decline. We believe this is due to rapid emptying of the pouch and may contribute to maladaptive eating behaviors leading to weight regain long-term. Based on these results we have started prospective studies comparing pyloric preserving operations such as VSG and BPD-DS with non-pyloric sparing procedures such as RYGB. Finally, our data suggests that GTT is an important part of post RYGB follow-up and should be incorporated into the routine post-operative screening protocol.

S013

GOALS -BASED ASSESSMENT OF RESIDENT SKILL IN ADVANCED LAPAROSCOPIC CASES, Aku O Ude Welome MD, Nancy J Hogle MS, Department of Surgery, Columbia University College of Physicians and Surgeons

INTRODUCTION: We hypothesized that GOALS (Global Operative Assessment of Laparoscopic Skills) would have construct validity for laparoscopic cases beyond cholecystectomy and appendectomy.

METHOD: Attending surgeons at our institution use a web-based GOALS scoring sheet to evaluate PGY1 through PGY5 residents immediately after all operations. We reviewed all data entered from 7/04 to 5/08 for the following advanced laparoscopic cases: foregut, hernia, colorectal and bariatric. For analysis, residents were divided according to their PGY year (PGY 1&2, PGY 3, PGY 4 and PGY 5). Biostatistical analysis was performed using a two-sample t-test that assumed unequal variances. We compared the mean scores of residents in each of the domains (depth perception, bimanual dexterity, efficiency, tissue handling, and autonomy).

RESULTS: All mean score differences between successive PGY years were statistically significant ($p < 0.02$) for all domains except the autonomy domain of PGY 1&2 v. PGY 3 ($p = 0.68$).

	PGY 1&2 v. PGY 3	PGY 3 v. PGY 4	PGY 4 v. PGY 5
Depth Percept.	2.92 v. 3.06	3.06 v. 3.86	3.86 v. 4.13
Bimanual Dext.	2.67 v. 2.90	2.90 v. 3.53	3.53 v. 3.78
Efficiency	2.75 v. 2.88	2.88 v. 3.47	3.47 v. 3.82
Tissue Handling	2.83 v. 3.22	3.22 v. 3.61	3.61 v. 4.17
Autonomy	2.50 v. 2.84	2.84 v. 3.41	3.41 v. 3.79

CONCLUSION: This study provides evidence that GOALS is a useful tool for evaluating resident technical performance during advanced laparoscopic cases.

S014

COMPUTER-BASED HAPTIC AND NONHAPTIC VIRTUAL REALITY SURGICAL SIMULATORS: PERFORMANCE CHARACTERISTICS AND PERCEPTIONS OF NEW USERS, David W Lin MD, Eyad M Wohaibi MD, John R Romanelli MD, Richard D Zlotnik MD, Jay N Kuhn MD, Rob W Bush BS, Neal E Seymour, Baystate Medical Center Tufts University School of Medicine

Background: In order to define the value and perception of importance of haptic features in virtual reality (VR) laparoscopic simulators, we evaluated the initial experience of surgeons using both haptic and nonhaptic simulation devices in the performance of an advanced laparoscopic task.

Methods: At the 2008 SAGES meeting, 68 Learning Center attendees were randomized to use either a VR simulator with a haptic (LapSim [LS], Göteborg, Sweden) or a non-haptic interface (SurgicalSIM [SS], SimSurgery, Oslo, Norway and METI, Sarasota, FL). Demographic, training and prior experience data were collected by intake survey and subjects then performed one iteration of a suturing and knot-tying task on their respective devices. A post-task multi-item survey was used to rate impressions of haptic importance and quality, overall task realism, interface quality, and educational value (5 point Likert scale). Comparisons of machine-generated task performance data for user-defined novice, intermediate and expert groups were made for each device by ANOVA. Post-task survey responses were compared by Mann Whitney U-test.

Results: 31 attendees (5 novice, 22 intermediate, 4 expert) randomized to SS and 37 (10 novice, 21 intermediate, 6 expert) to LS. Experience-related differences in performance were observed for novice, intermediate and expert groups on the SS for task time (413 ± 143 , 273 ± 90 , 237 ± 47 respectively; $p < 0.01$) and tip trajectory (883 ± 289 , 574 ± 220 , 569 ± 169 ; $p < 0.03$). No significant differences were seen on LS for time or efficiency measures based on subject experience. Impression of realism of suture thread was higher for SS than LS (3.1 ± 1.1 vs 2.5 ± 1.1 ; $p < 0.02$). There were no other significant differences in quality or realism ratings of the two systems, and educational value was rated highly for both (SS 3.6 ± 1.1 , LS 3.7 ± 1.0). Haptic feedback was appreciated and felt to be of higher quality on LS compared to SS (3.2 ± 1.3 and 3.3 ± 1.0 vs 2.4 ± 1.1 and 2.4 ± 1.2 ; $p < 0.01$ and $p < 0.01$, respectively).

Conclusions: The nonhaptic device (SS) was an excellent discriminator of expert and nonexpert performance confirming construct validity on initial device use. Although haptic features were appreciated on LS, the system was less able to discriminate expected performance differences. Both platforms were deemed educationally valuable. Added value of haptic capabilities were not evident in this study, and this must be weighed in consideration of procurement costs for these systems.

S015

TESTING CONSTRUCT VALIDITY FOR A VIRTUAL REALITY COLONOSCOPY SIMULATOR: MODULE MATTERS, Raad Fayed MD, Liane S Feldman MD, Pepa Kaneva MS, Gerald M Fried MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery, McGill University

Background: The use of simulation for competency assessment requires validation of the simulation's performance metrics. This study was designed to assess whether the Symbionix GI Mentor II® virtual reality simulator metrics could differentiate endoscopists with varying clinical experience using modules of increasing clinical complexity (known-groups construct validity). **Methods:** 20 subjects were classified into two groups based on self-reported clinical experience with GI endoscopy (novice, <50 scopes, n=12 and experienced, >50 scopes, n=8). Three VR colonoscopy simulation modules of increasing difficulty were assessed (modules I-1, II-2, I-7). The data reported by the simulator after each module (time to cecum(min), number of occasions of lost view of lumen, number of occasions of excessive pressure, % of mucosa visualized, % of time with clear view, % of time patient in pain, total time colon was looped (sec) and overall efficiency(%)) were compared using Students t-test. Data expressed as mean(SD), $p < 0.05$ considered statistically significant. **Results:** On module 1, only time to reach the cecum was different between the groups (experienced 1.6(0.6) vs novice 3.2(0.8) min, $p < 0.01$). In module 2, only overall efficiency was different (94(2)% vs 83(11)%, $p < 0.01$). In contrast, on the third module (most difficult), performance differed between the groups for most parameters: the experienced group reached the cecum faster (5.7(2.7) vs 13.9(6.3) min, $p < 0.01$), had a greater proportion of time with a clear view (92(2) vs 89(4)%, $p = 0.02$), had fewer occasions of lost view (0.5(0.5) vs 2.6(1.3) $p < 0.01$), fewer episodes of excessive



Scientific Session Oral Abstracts

pressure (1.5(0.8) vs 4.5(2), $p < 0.01$) and greater overall efficiency (85(7)% vs 39(25)% $p < 0.01$). There were no differences in %time with patient in pain or total time the colon was looped. **Conclusion:** If the VR colonoscopy simulator is to be used for assessment, the module must be of sufficient complexity for the metrics to differentiate between groups of differing expertise.

S016

LAPAROSCOPIC COLON SIMULATOR, Reza Rahbar MD, Alexandre Derevianko MD, Benjamin Schneider MD, Deborah Nagle MD, Beth Israel Deaconess Medical Center

Introduction: Laparoscopic simulators are utilized as an integral part of pre-clinical OR surgical training and proficiency assessment. Currently no standard model for teaching laparoscopic colectomy exists. We hypothesized that performance on a laparoscopic colectomy simulator would correlate with key laparoscopic skills and level of clinical volume and expertise.

Methods: 15 surgeons participated in this study which was conducted in the SAGES Learning Center (2008). Laparoscopic skill level was measured by a portion of the Fundamentals of Laparoscopic Surgery (FLS) skills test. Each surgeon then performed a hand-assisted laparoscopic sigmoid colon resection on the Haptica (Haptica, Inc, Dublin, Ireland) Laparoscopic Colectomy Simulator. Pre and post-procedure questionnaires were utilized to stratify level of training, clinical experience, and subjective impressions of the simulation experience. A blinded independent expert graded simulation trays at a time remote from the trial. Both data sets were subject to correlation analysis using 2-tailed Pearson test of the SPSS software (SPSS, Inc.). Additionally, cumulative simulator performance scores were tested for correlation with the data subsets of FLS-style suturing score and participant's annual volume of laparoscopic basic cases, advanced cases, and separately, laparoscopic colorectal procedures.

Results: The cumulative performance score on the simulator positively correlated with the combined score of the results of the survey and FLS-style intracorporeal suturing: Pearson Correlation Coefficient of 0.533, $p = 0.041$. The highest correlation level was achieved between the simulator scores and intracorporeal suturing: 0.723, $p = 0.002$. There was also a strong positive correlation between the performance on the simulator and annual laparoscopic colorectal surgical volume: 0.603, $p = 0.017$. A trend was noted in the relationship between the performance on the simulator and cumulative annual advanced laparoscopic surgical volume of advanced: 0.470, $p = 0.077$. Finally, we elucidated no significant correlation between the simulated procedural performance and basic laparoscopic surgical volume: 0.290, $p = 0.295$.

Conclusion: The proficiency level of the FLS-style intracorporeal suturing is a strong predictive factor for performance on the Haptica HALC surgical simulator. Moreover, experience performing laparoscopic colon surgery is also a strong predictive factor for simulation performance indicating that the current laparoscopic colon simulator is valid as a model. The correlation between level of training/experience and simulation performance indicates that the simulator is a valid tool and potentially can be effective for teaching laparoscopic colectomy skills outside the operating room.

S017

DEVELOPMENT AND VALIDATION OF MENTAL PRACTICE AS A TRAINING STRATEGY FOR LAPAROSCOPIC SURGERY, S Arora BS, R Aggarwal PhD, N Sevdalis PhD, P Sirimanna, P Crochet, R Kneebone PhD, A Moran PhD, A Darzi PhD, Imperial College, London

Background Concerns for patient safety have rendered the need for alternative training strategies outside of the operating-theatre. Mental Practice (MP), 'the cognitive rehearsal of a task prior to performance,' has been successful in sport and aviation to enhance imagery and thus skill. This study aims to develop and validate a MP training strategy for laparoscopic surgery.

Method A cognitive task analysis was conducted for a Laparoscopic Cholecystectomy (LC) identifying visual, tactile and cognitive cues for the procedure. This was used to develop a MP training protocol consisting of a 'script' of procedural steps and additional cues to enhance mental imagery. The script was validated with expert and novice laparoscopic surgeons. Each subject was asked to use this script to mentally rehearse a LC within 30mins. Their ability to mentally practice this procedure was assessed pre and post the MP training with a modified version of a validated questionnaire.

Results 20 subjects (10 experts with >100 LCs, 10 novices < 5LCs observed) completed the study. The ANOVA on questionnaire scores revealed that, whereas experts scored higher on all questions

than novices pre-training, after MP training both groups improved significantly on all components of MP. Specifically, both novices ($M = 6.00 \pm SD 0.67$) and experts ($M = 6.10 \pm 0.74$) found MP useful. Comparing pre to post training, novices significantly improved in ability to see ($M = 1.60 \pm 0.52$ vs. $M = 5.20 \pm 0.63$, $t(9) = 13.50$, $p < 0.001$) and feel ($M = 1.30 \pm 0.48$ vs. $M = 4.70 \pm 0.68$, $t(9) = 15.38$, $p < 0.001$) themselves performing a LC. Confidence in performing a LC improved in the novice group ($Mpre = 1.70 \pm 0.48$ vs. $Mpost = 5.10 \pm 0.74$, $t(9) = 15.38$, $p < 0.001$) as did ability to teach a LC by going through its steps ($Mpre = 1.70 \pm 0.68$ vs. $Mpost = 5.40 \pm 0.84$, $t(9) = 12.33$, $p < 0.001$).

Conclusions This is the first study to develop and validate mental practice as a novel training approach for laparoscopic surgery. MP may be a time and cost effective strategy that improves surgeons' ability to visualize themselves performing a LC, as well as their confidence and perceived ability to teach. Future studies should explore the use of MP as an adjunct to training in the OR by demonstrating its effect upon improving surgical performance.

S018

THE EFFECT OF VIDEOGAME 'WARM-UP' ON PERFORMANCE OF LAPAROSCOPIC SURGERY TASKS, James C Rosser, Jr. MD,

Bjorn S Herman MD, Paul Lynch MD, Douglas Gentile PhD, Beth Israel Medical Center, New York, NY; University of Miami School of Medicine; New York University; Iowa State University

Introduction: 'Warming up' before performing a skill can lead to early and sustained excellence. Performing procedures in the laparoscopic arena requires special training to perform at a superior level. Our previous studies suggest that videogame play is associated with superior laparoscopic performance (1), so we investigated whether surgeons benefited from practicing video games immediately before performing laparoscopic surgical tasks.

Methods: Participants were split into a control ($n = 180$) and experimental group ($n = 123$), similar in years of experience, surgeries performed, and pretest measure of suturing skill. The experimental group played video games for thirty minutes on home video game consoles. Then, all subjects were enrolled in the 'Rosser Top Gun Course,' which uses preparatory drills and a structured algorithm to teach intracorporeal suturing, and performances were based on each participant's speed and accuracy in laparoscopic drills.

Results: Surgeons who played video games prior to the Cobra Rope drill (in which laparoscopic tools are moved along a piece of string, clamping it at marked intervals) were significantly faster on their first attempt ($t = 2.17$, $p < .05$) and across all 10 trials ($t = 2.28$, $p < .05$).

Conclusion: This study demonstrated that subjects completing a 'warm-up' session with video games prior to performing laparoscopic tasks were faster than those not engaging in 'warm-up.' This study augments our previous research suggesting that videogames could serve as a cost-effective training platform when used as a preparatory exercise for minimally invasive surgical procedures. 1) Rosser et al (2007) The Impact of Video Games on Training Surgeons in the 21st Century. Archives of Surgery;142:181-186.

S019

LAPAROSCOPIC VENTRAL/INCISIONAL HERNIA REPAIR WITH TISSUE AUGMENTATION AND TRANSFASCIAL FIXATION, 17 YEARS FOLLOW UP, Morris E Franklin MD, Guillermo R Portillo MD,

Jeffrey L Glass MD, John J Gonzalez MD, Mike Renfrow MD, Eduardo A Perez MD, Texas Endosurgery Institute

BACKGROUND: Incisional hernias develop in 2%-20% of laparotomy incisions, necessitating approximately 90000 ventral hernia repairs per year. Although a common general surgical problem, a "best" method for repair has yet to be identified, as evidenced by documented recurrence rates of 25%-52% with primary open repair, there is controversy regarding the closure of the defect and the transfascial fixation of the mesh. The aim of this study was to evaluate the efficacy and safety of laparoscopic ventral and incisional herniorrhaphy, and the long term follow up with fascial closure and transfascial fixation of the mesh.

METHODS: From February 1991 through December 2008, a total of 955 patients were treated by laparoscopic technique for primary and recurrent umbilical hernias, ventral and incisional hernia. The technique was essentially the same for each procedure and involved lysis of adhesions, reduction of hernia contents, closure of the defect, and 5 cm circumferential mesh coverage of all hernias.

RESULTS: Of the 955 patients in our study group, 49% were females and 51% were male. The mean age was 58.3 years (range 27-100 years). The mean operating time was 68 min (range 14-405 min), and the mean estimated blood loss was 25 mL (range 10-200 mL).

Scientific Session Oral Abstracts

Conversion rate was 1.46% (14 patients). The mean postoperative hospital stay was 2.9 days and ranged from same-day discharge to 36 days. The overall postoperative complication rate was 10.1%. There have been 20 recurrences (2.09%) during a mean follow-up time of 74.1 months (range 6-171 months).

CONCLUSION: Laparoscopic ventral and incisional hernia repair, based on the Rives-Stoppa technique, is a safe, feasible, and effective alternative to open techniques. More long-term follow-up is still required to further evaluate the true effectiveness of this operation.

S020

PROSPECTIVE EVALUATION OF ADHESION CHARACTERISTICS TO INTRAPERITONEAL MESH AND ADHESIOLYSIS-RELATED COMPLICATIONS DURING LAPAROSCOPIC RE-EXPLORATION AFTER PRIOR VENTRAL HERNIA REPAIR, Eric D Jenkins MD, Victoria H Yom BS, Lora Melman, L Michael Brunt MD, Margaret M Frisella RN, Brent D Matthews MD, Department of Surgery, Section of Minimally Invasive Surgery, Washington University, St. Louis, Missouri

Introduction: The risks and operative complexity of reoperation after ventral hernia repair has not been defined for barrier meshes designed for intraperitoneal placement. The purpose of this study is to define the adhesion characteristics of absorbable and nonabsorbable barrier-coated meshes and to report adhesiolysis-related complications during laparoscopic re-exploration after prior ventral hernia repair with intraperitoneal mesh.

Methods: Under an IRB-approved protocol, patients undergoing laparoscopic re-exploration after prior intraperitoneal mesh placement were prospectively graded intraoperatively for adhesion tenacity (0-4) to the mesh, adhesion surface area (0=0%, 1-10%=1, 11-20%=2...10=91-100%) over the mesh and ratio of adhesiolysis time over the mesh:mesh surface area (min/cm²). Adhesiolysis-related complications were also recorded. Data are given as means \pm SD. Statistical significance ($p < 0.05$) was determined using t-test and Fisher's exact test.

Results: From 3/06-9/08, 58 patients underwent laparoscopic surgery after prior intraperitoneal mesh placement for ventral hernia repair. The previously placed intraperitoneal meshes were absorbable barrier-coated mesh (n=15), nonabsorbable (PTFE) barrier-coated mesh [Composix (n=15), DualMesh (n=11)], uncoated polypropylene mesh [n=11] and biologic mesh (n=6). Indications for laparoscopic re-exploration were recurrent ventral hernia (n=52), cholecystectomy (n=3), nephrectomy (n=1), chronic pain (n=1) and Nissen fundoplication (n=1).

	Tenacity	Adhesion Area	AT:MSA
Absorb Barrier	3.1 \pm 0.3	7.0 \pm 4.7	0.19 \pm 0.01
Composix	3.6 \pm 0.4	8.7 \pm 1.3	0.34 \pm 0.02
DualMesh	2.4 \pm 0.5	5.8 \pm 2.8	0.14 \pm 0.01
Polypropylene	3.5 \pm 0.9	8.5 \pm 1.1	0.36 \pm 0.16
Biologic	3.0 \pm 0.0	6.8 \pm 4.2	0.34 \pm 0.01

AT:MSA - adhesion time:mesh surface area (min:cm²)

Adhesions to DualMesh were less tenacious ($p < 0.05$) compared to all meshes. Surface area of adhesions to DualMesh were less ($p < 0.05$) than to Composix and uncoated polypropylene mesh, but not absorbable barrier-coated and biologic meshes. Adhesiolysis time over the mesh:mesh surface area was less ($p < 0.05$) for DualMesh when compared to Composix, uncoated polypropylene mesh and biologic mesh, but not when compared to absorbable barrier-coated mesh. Adhesiolysis-related complications occurred in 2 (18%) patients with uncoated polypropylene mesh [$p = ns$], a cystotomy and enterotomy; both repaired laparoscopically and there were 2 (18%) conversions to an open procedure [$p = ns$]. There were no adhesiolysis-related complications in the Composix or absorbable-barrier coated mesh groups; however, there was one patient converted to open with Composix (6.7%) and one patient with absorbable-barrier coated mesh (6.7%), respectively. There were no adhesiolysis-related complications or conversions to an open procedure in the DualMesh or biologic mesh groups.

Conclusions: Adhesion characteristics of previously placed intraperitoneal mesh and adhesiolysis-related complications during laparoscopic re-exploration after ventral hernia repair are distinctly defined by the unique properties of the mesh and/or barrier.

S021

LAPAROSCOPIC REPAIR OF UMBILICAL AND PARAUMBILICAL HAS THE LOWEST RATE OF RECURRENCE, Tino A Solomon BSc, MBBS, P Wigneswaran BS, Matthew Tutton MD, ICENI Centre, Department of Laparoscopic Surgery, Colchester Hospital University NHS Foundation Trust, Essex, UK

INTRODUCTION: No firm consensus currently exists on the best technique for the repair of umbilical and paraumbilical hernia in adults. The role of laparoscopic hernioplasty of umbilical hernia remains controversial, and a recent EAES consensus meeting recommended both open mesh, suture or laparoscopic repair for defects under 3cm.

METHODS: A retrospective audit was conducted and identified patients who had umbilical/paraumbilical hernia repairs performed over a ten year period, (January 1998- July 2008) (n=1200). Demographic data, hernia characteristics, complications and outcomes were recorded. Patients were divided into three groups based on operative technique, laparoscopic repair with mesh, open repair with mesh, and open repair without mesh (primary suture repair).

RESULTS: To date 212 cases have been evaluated. Age range was from 3-86 (mean 48). A total of 169 open cases were performed compared to 43 laparoscopic cases. Recurrence rates were 8.2% (n=14) in the open group compared to 2.3% (n=1) in the laparoscopic group (n.s Fisher's exact test; Odds Ratio: 0.38 95% CI: 0.05-2.84). In the open group 12 recurrences were from primary suture repairs and 2 from mesh repairs (n.s Fisher's exact test). Complications recorded included wound infection 4.1% (n=7) open vs 2.7% (n=3) laparoscopic, 1 wound dehiscence in the open group and 1 incisional hernia in the laparoscopic group. In the open group 3% (n=5) were associated with a hospital stay of greater than 24h compared to 4.6% (n=2) in the laparoscopic group.

CONCLUSIONS: In this series the laparoscopic repair of umbilical/paraumbilical hernias resulted in a trend to a lower recurrence rate and overall complication rate. Although not reaching significance open repair with simple suture had a higher recurrence rate than repairs with mesh. In this series laparoscopic repair of para/umbilical hernias had the lowest recurrence rate.

S022

LAPAROSCOPIC TOTAL EXTRAPERITONEAL REPAIR IN RECURRENT INGUINAL HERNIAS: COMPARING OUTCOME WITH PRIMARY HERNIA REPAIR IN 937 PATIENTS, Pankaj Garg MS, Shaanmeet MS, Mohamed Ismail MS, 1. MM Institute of Research and Medical Sciences, Mullana, Haryana, India 2. Shah Satnam ji Specialty Hospitals, Sirsa, Haryana, India 3. Moulana Hospital, Perinthalmanna, Kerala, India,

Objective- To study the outcome and morbidity parameters of total extraperitoneal (TEP) repair in patients with recurrent inguinal hernia and assess as how they are different from the primary inguinal hernia repair.

Patients & Methods- A retrospective analysis was carried out over a three-year period in 937 patients in whom TEP was done. The recurrence rate, pain scores at 24 hours, 1 week and 4 weeks, hospital stay, days to resume normal activities, seroma formation and urinary retention rates were noted. Pain scoring was done as -1=no pain, 2=mild pain, 3=moderate pain, 4=severe pain and 5=intolerable pain. The mean pain scores were calculated.

Results- In 937 patients, 52 patients underwent recurrent and 885 patients underwent primary hernia repair. Mean age was 48.4 \pm 14.5 yrs and 46.1 \pm 14.2 yrs in the recurrent and primary groups respectively ($p = 0.2$, NS, t-test). Follow up range was 12-40 months (median- 25 months). The mean operating time was more in the recurrent group (32.7 \pm 6.3 minutes) compared to the primary group (30.1 \pm 6.1 minutes) ($p = 0.015$, t-test). The mean pain scores at 24 hours were similar in both the groups (2.28 \pm 0.5-recurrent vs. 2.20 \pm 0.4) primary group, $p = NS$, t-test). However the pain scores at one week were significantly higher in the recurrent group (1.35 \pm 0.5) than the primary group (1.20 \pm 0.4) ($p = 0.017$, t-test). The hospital stay and the days taken to resume normal activities were significantly longer in the recurrent than the primary group. (Hospital stay- 1.19 \pm 0.4 vs. 1.07 \pm 0.3 days, $p = 0.002$; Resume normal activities- 8.62 \pm 2.6 vs. 7.67 \pm 1.4 days, $p < 0.0001$, t-test). The urinary retention rate in the recurrent (9.6%, 5/52) was statistically comparable to the primary group (5.4% - 48/885) ($p = 0.16$, Fisher's exact test). The rate of seroma formation (3.8%-recurrent & 3.5%-primary, $p = 0.5$, Fisher's exact test) was also similar in both the groups. There were two recurrences and two conversions to open procedure in the primary group and none in the recurrent group.

Conclusions- Laparoscopic TEP repair of recurrent inguinal hernia is safe and effective with recurrence and conversion rates similar to the primary hernia repair. However, operative time, pain at one week post-operatively, hospital stay and days taken to resume normal activities were significantly longer in the recurrent hernia repairs. The post-operative pain at 24 hours, urinary retention rate and seroma formation was similar in both the groups.



Scientific Session Oral Abstracts

S023

SINGLE PORT ACCESS (SPA) CHOLECYSTECTOMIES: MULTI-INSTITUTIONAL REPORT OF THE FIRST 100 CASES, Andrew S Wu MD, Erica R Podolsky MD, Paul G Curcillo, II MD, M Bessler MD, L Cohen MD, C Copper MD, R Dunham MD, S Fendley MD, C Graybeal MD, A Gumbs MD, A Iannelli MD, N Katkhouda MD, W Kelley MD, R Mason MD, M Neff MD, M Norton MD, Department of Surgery, Drexel University, College of Medicine, Columbia University, College of Physicians, Kennedy Health System, Long Street Clinic, Richmond Surgical Group, University of Southern California, University of Nice-Sophia-Antipolis,

Since the inception of Single Port Access (SPA) surgery in April 2007, we have strived to develop a reproducible technique applicable to cholecystectomy. The ability of other surgeons in varying institutions to perform a new technique is an important step in determining its feasibility. In follow-up to the initial report of our training program presented at SAGES 2008, we report the first 100 cases performed in a multi-institutional and international review (SPA Consortium). We have collected the data on the initial patients undergoing SPA cholecystectomies by 14 surgeons. A retrospective review of the initial cases performed by these surgeons included evaluation of operative time, blood loss, incision length, addition of trocars, performance of IOC, and length of stay. In addition, wound follow-up was included.

The technique utilized by each surgeon included placement of a clear central trocar (5mm) and two lateral low profile trocars (5mm) through a single incision within the umbilicus with soft tissue and skin flaps raised off the fascia laterally. An additional fourth small fascial defect within the same incision was used by some to facilitate fundal retraction. Positioning of the camera and other instruments within the trocars was surgeon preference.

To date, over 100 SPA cholecystectomies have been performed by this group. Diagnoses include both acute and chronic gallbladder disease. Demographics included 70% women and 30% male. Age ranged from 21 to 78. Mean operative time was 79 minutes, decreasing with experience. IOC increased operative time by a mean of 20 minutes. Both the 2 and 3 instrument technique have been employed. Up to one additional port site was added in 8 cases. EBL was minimal. LOS has been 1-2 days, with most patients being discharged same day. Complications include seromas and minor post operative wound infections.

These results are comparable to standard multiport Cholecystectomy, with the exception of operative time which is longer in the SPA group.

We have demonstrated that Single Port Access (SPA) surgery is an alternative to multiport laparoscopic cholecystectomy with less scars and better cosmesis. Further, the reproducibility by other surgeons in community hospitals, medical centers and university settings is shown.

The strength of a new procedure is its reproducibility, and the results of the first 100 cases of SPA cholecystectomies in this multi-institutional and international review are indicative of its technical feasibility and success

S024

SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY, INITIAL EVALUATION OF A LARGE SERIES OF PATIENTS, Homero Rivas MD, Esteban Varela MD, Daniel Scott MD, Department of Surgery, University of Texas Southwestern Medical Center, Dallas, Texas

Introduction: Single Incision Laparoscopic Cholecystectomy (SILC) has been found to be feasible and safe. We have pioneered and mastered a two trocar SILC technique at UT Southwestern. Here we present our initial data using this technique on fifty patients.

Methods: Following an institutional review board, patients with symptomatic gallbladder disease were recruited from January until October of 2008. During this time, 50 patients underwent SILC through a 1.5 - 2 cm umbilical incision with a two- port (5mm) technique (Dexide, Covidien). For all but one patient a 30 degree angled scope from Storz was used. The gallbladder was retracted with 2-3 interrupted sutures placed in the gallbladder fundus, body and Hartmann's pouch. These sutures were either internally fixated or placed through the abdominal wall to obtain a critical view of Calot's triangle structures. Lap chole was then performed by standard technique with a single 5mm articulating dissector (Covidien) and/or conventional laparoscopic instruments. The cystic duct and artery were divided with a 5mm clip applier. Cholecystectomy was completed with electrocautery and the specimen retrieved through the umbilical incision.

Results: 41 Females (82%) and 9 males (18%) underwent SILC. The average age was 36 years (21-66), mean body mass index was 28 kg/m² (17.4-41). 47% of patients had previous abdominal surgery. The mean operative time was 73 minutes (35-120), mean estimated blood loss was 32cc (10-125), and 8% of patients had an intraoperative cholangiogram. There were no conversions of SILC technique. 10 % of patients had SILC due to problems including acute cholecystitis and or gallstone pancreatitis.

Conclusion: SILC with a two 5mm port technique is safe, feasible and quite reproducible clinically. Operating times are reasonable and can be lessened with experience. Even complex cases can be managed with this technique. Excellent exposure of the critical view was obtained in all cases. SILC is becoming the standard of care for most of our patients with gallbladder disease. Clinical trials are still warranted before is adopted universally.

S025

LEARNING CURVE SEEN WITH SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY, Pratibha Vemulapalli MD, Diego R Camacho MD, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY

Introduction Single Incision Laparoscopic Surgery (SILS) is laparoscopic surgery done via one incision usually through the umbilicus. Cholecystectomy lends itself well to a SILS approach. As these procedures become more widely adapted it is important to determine the approximate learning curve to decrease two surgical endpoints: 1) time to completion of the procedure and 2) decreased incidence of conversion.

Methods We prospectively reviewed our series of fifty cholecystectomies done via the SILS approach between May 2008-present. All cases were done by two advanced laparoscopic surgeons at a single institution. Data was collected immediately after the case and entered into an excel database. Cases were done by insufflating the abdomen with a veress needle through the umbilicus followed by placement of 5mm ports at the umbilicus.

Results Patient ages ranged between 21 and 82 with a median age of 45. BMI range was 21-42 with a mean of 30. Average length of time for cases was 1 hour 9 minutes with a range between 55 minutes and 120 minutes. The average length of time for the first ten cases was 96 minutes. When compared to cases 21 to 30 the average length of time was 56 minutes (p<.05).

The conversion rate to conventional laparoscopic cholecystectomy was 10% Conversion was accomplished through the addition of a 5 mm port elsewhere on the abdominal cavity. After SILS-cholecystectomy case 10 the incidence of conversion went down to zero. When conversions were further stratified they occurred within each individual surgeons first 10 cases

Conclusion The learning curve for successful consistent completion of SILS cholecystectomy cases appears to be after the 10th case. In addition, successful case completion in a timely manner of less than 1 hour appears to occur consistently after twenty cases.

S026

SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY IS SAFE AND FEASIBLE, Chris A Edwards MD, Alan Bradshaw MD, Pual Ahearne MD, David Mauterer MD, Peeter Soosaar MD, Randall Johnson MD, Ted Humble MD, Pierre Dematos, Regional Surgical Specialists, Mission Hospitals, Asheville NC

Objective: Single incision laparoscopic surgery (SILS) is a new advance wherein laparoscopic surgery is carried out through a single small incision hidden in the umbilicus. Advantages of this technique over standard laparoscopy are still under investigation. The objective of this study is to describe the short term outcomes of SILS cholecystectomies in a single community based institution. **Methods:** A retrospective review of a prospectively collected database was reviewed on all patients who underwent SILS cholecystectomy. Both true single incision and dual incision (training cases) were included under the ITT principle. Operative and perioperative outcomes were analyzed using standard statistical methods. Results: 32 SILS choles (3 dual incision and 29 single) were performed from 5/30/08 - 10/1/08 (indications: 20 stones, 5 cholecystitis, 7 biliary dyskinesia). Mean BMI was 26 (rng: 18.4 -35.2), mean OR time was 68 mins (rng: 29 - 126), mean EBL was 5cc and mean incision length was 1.6 cm. There were no open conversions but there was one 2 incision and one 4 incision conversion for poor visualization and severe cholecystitis, respectively. Complications include one bile leak managed with ERCP and percutaneous drainage. Mean 10-point pain score prior to discharge was 1.7 (rng: 0 - 7). Number of days of post op oral narcotic use was described as none in 6 pts (31%), minimal (1 day)

Scientific Session Oral Abstracts

in 9 pts (47%), moderate (1-3 d) in 3 pts (16%), and heavy (> 4 d) in 1 pt (5%) with follow up accomplished in 19 of 32 patients to date. **Conclusion:** SILS cholecystectomy is safe and feasible with acceptable morbidity. Although not directly compared in this study postoperative recovery appears less than standard laparoscopy but more studies are needed.

S027

MICROLAPAROSCOPY: AN UNCOMPLICATED ALTERNATIVE TO NOTES AND SILS, Keith Zuccala MD, Pierre F Saldinger MD, Danbury Hospital

INTRODUCTION: The recent quest to advance laparoscopy and to diminish incisions had led to the developments of NOTES, and more recently SILS (Single Incision Laparoscopic Surgery.) Both methods have increased the complexity of surgical procedures and inherently require a high level of surgical skills. We have explored microlaparoscopy as a simpler alternative to NOTES or SILS.

METHODS: This is a retrospective review of cases performed by a single surgeon at a single university hospital over the course of 12 months. Microlaparoscopy was performed on 425 cases using all 3 mm 45 degree laparoscopes and trocars in the usual configurations. A single larger port was used for stapling when necessary.

RESULTS: All cases were completed with the mentioned trocar configuration. No cases were converted to open or upgraded to larger trocars.

These cases crossed the entire general surgery spectrum including 98 gastric bypasses, 30 gastric bands, 71 TEPs, 50 ventral hernias, 58 cholecystectomies with cholangiograms, 5 adrenalectomies, 35 hiatal hernia/reflux procedures, 17 bariatric revisions, 2 colectomies, 3 Heller myotomies, 6 gastric resections, 3 splenectomies/pancreatectomies and 2 splenic artery aneurysm resections. There were no intra-operative complications related to the use of 3mm trocars/instruments.

CONCLUSION: Microlaparoscopy is safe and feasible across the whole spectrum of laparoscopic general surgery. Technological advancements in visualization and the use of advanced microlaparoscopic instruments have enabled the development of this technique. Microlaparoscopy is simply an extension of current laparoscopic techniques. Unlike NOTES or SILS this technique does not require surgeons to acquire new skills, and therefore is widely applicable. Microlaparoscopy represents an uncomplicated alternative to NOTES and SILS.

S028

TRANS-UMBILICAL SINGLE-PORT LAPAROSCOPIC APPENDECTOMY, Tea-Ho Hong MD, HL Kim MD, YS Lee MD, KH Lee MD, YK You MD, JG Kim MD, YH Kim MD, Department of Surgery, The Catholic University of Korea

Introduction: Laparoscopic appendectomy is generally performed with 3 port system. The authors performed a unique single-port laparoscopic appendectomy, which they refer to as Trans-Umbilical Single-Port Laparoscopic Appendectomy® (TUSPLA). **Methods:** From 19 April, 2008, 33 cases of TUSPLA were performed. A surgical glove was used as the single-port with an extra-small wound retractor, which was set up through a small umbilical incision. The surgical glove attached with one trocar and two pipes was then fixed to the outer ring of the wound retractor, which served as single port with three working channels. Using this single-port system, TUSPLA was performed. The overall procedure was similar to that used for three-port laparoscopic appendectomy. **Results:** TUSPLA was attempted in 33 patients (11 males and 22 females), of average age 31.2 years (14-73 years). Average patient body mass index was 22.8 kg/m² (16.8-35.8 kg/m²). TUSPLA was successfully completed in 31 patients. In 2 cases, the operation was converted to conventional 3 port laparoscopic appendectomy, due to gangrenous change at the base of the appendix in 1 case and the need for drainage in another. Mean operation time was 40.8 min (15-90 min) and mean postoperative hospital stay was 2.5 days (1-11 days). Postoperative complications occurred in 3 cases. 2 cases of localized pericecal abscess and 1 case of omphalitis, all were treated conservatively. **Conclusion:** TUSPLA is a safe and effective technique that allows nearly scarless abdominal surgery.



S029

SINGLE INCISION APPENDECTOMY FOR ACUTE APPENDICITIS: A PRELIMINARY EXPERIENCE, Elie K CHOULLARD MD, Abe L FINGERHUT MD, Poissy Medical Center (FRANCE)

Laparoscopic appendectomy is the treatment of choice for acute appendicitis. Further reduction of the invasiveness of the laparoscopic approach may increase postoperative advantages including reduction of pain, preservation of the abdominal wall, and cosmetic amelioration. We proposed to selected patients with acute appendicitis a purely laparoscopic technique of appendectomy using a single umbilical incision.

Single incision appendectomy was attempted in 55 patients (36 women and 19 men). Inclusion criteria were the presence of a non complicated acute appendicitis (i.e., without abscess or peritonitis), the absence of major abdominal surgical antecedent, and BMI < 35 kg/m². Patients informed consent was required. Under general anesthesia, an umbilical incision of 15 mm was performed. Two 5 mm trocars were inserted in the same umbilical incision. The meso-appendix was coagulated using bipolar cautery or energy scissors. Ligation was performed using material. The appendix was retrieved through the 5 mm port.

The procedure was a success in 41 patients (74.5 %). In 14 patients, conversion to conventional laparoscopic appendectomy occurred. The mean operative time was 36 minutes (14-111). The post-operative rate of complications was 1.8 % with one patient who had an umbilical superficial surgical site infection. The mean length of hospital stay was 34 hours (8-69).

Single incision appendectomy is a sure and feasible technique in selected patients with acute appendicitis. Further improvement of the minimally invasive virtues of laparoscopy may allow appendectomy to be performed on a day surgery basis in France.

S030

SINGLE PORT ACCESS (SPA) SURGERY: INITIAL 150 CASES USING A NOVEL LAPAROSCOPIC SINGLE INCISION APPROACH, Paul G Curcillo, II MD, Stephanie A King MD, Erica R Podolsky MD, Andrew S Wu MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

Our initial work with Single Port Access (SPA) Surgery was the application of the technique to cholecystectomy and oophorectomy. We have now developed the SPA technique into a platform that allows multiple abdominal procedures to be accomplished through a single incision, yet in most cases, maintaining the same instrumentation and dissection techniques as standard multiport laparoscopy.

Using a single site as the entry point into the abdominal cavity (most often the umbilicus), we begin with an incision < 2cm in length. We then separate skin and soft tissue flaps from the underlying fascia. This allows placement of one 5mm clear trocar, and two 5mm low profile trocars as well as a fourth single fascial defect for placement of a grasping/retracting instrument. We have applied this to a series of 150 patients undergoing various abdominal surgeries.

A total of 150 cases of Single Port Access surgery have been performed by two surgeons (PGC - General Surgery & SAK - Gynecologic Oncology). The SPA technique of instrument and trocar positioning and placement have been applied similarly in all cases. In our initial experience we utilized articulating instrumentation. In 90% of cases, standard laparoscopic instrumentation has been utilized. The series includes: cholecystectomy, colon resection, GE



Scientific Session Oral Abstracts

junction surgery, appendectomy, gastric feeding tube, splenectomy, adrenalectomy, adhesiolysis, omentectomy, hysterectomy, oophorectomy, pelvic node dissections, and ventral hernia repairs. All cases were successfully completed using this technique. Follow-up ranges from 2 to 18 months. LOS, EBL and postoperative follow-up has been similar to published standard multiport laparoscopic procedures. There has been one umbilical hernia to date. There were three wound infections treated with drainage. We demonstrate that the technique of Single Port Access (SPA) Surgery is a viable alternative to standard multiport laparoscopy. Utilizing a single incision for access, we are able to offer patients comparable results to multiport procedures requiring three to five incisions. Long term studies are needed to determine further benefits, if any, to Single Port Access Surgery.

S031

CHOPSTICK SURGERY: A NOVEL TECHNIQUE ENABLES USE OF THE DA VINCI ROBOT TO PERFORM SINGLE INCISION LAPAROSCOPIC SURGERY (SILS), Rohan A Joseph MD, Michael A Donovan MS, Matthew G Kaufman BS, Nilson A Salas MD, Alvin Goh MD, Brian Miles MD, Patrick R Reardon MD, Brian J Dunkin, Department of Surgery, The Methodist Hospital, Houston- Texas

INTRODUCTION: Single incision laparoscopic surgery (SILS) is limited by the coaxial arrangement of the instruments. A surgical robot with 'wristed' instruments could overcome this limitation but the 'arms' often collide when working coaxially. This study tests a new technique of 'chopstick surgery' to enable use of the robotic arms through a single incision without collision.

METHODS: Experiments were conducted utilizing the da Vinci S® robot (Sunnyvale, CA) in a box trainer with 3 laparoscopic ports (12mm, 2-5mm) introduced through a single 'incision'. Pilot work varied the arrangement of the ports, distance between ports, and depth of the remote center while performing Fundamentals of Laparoscopic Surgery tasks (FLS, SAGES/ACS). This work determined the optimal set-up for SILS to be a triangular port arrangement with 2cm trocar distance and remote center at the abdominal wall. Using this set-up, four experienced robotic surgeons performed three FLS tasks utilizing either a standard robotic arm set-up or the 'chopstick' technique. The chopstick arrangement crosses the instruments at the abdominal wall so that the right instrument is on the left side of the target and the left instrument on the right. This arrangement prevents collision of the robotic arms external to the box. To correct for the change in handedness, the robotic console is instructed to drive the 'left' instrument with the right hand effector and the 'right' instrument with the left. Performances were compared while measuring time, errors, number of clutching maneuvers, and degree of instrument collision (Likert Scale 1-4). Each drill was performed 3 times. If a task could not be completed within 10 min., it was terminated and the maximum time recorded (Results in minutes, mean±SEM).

RESULTS: Compared to the standard, the chopstick configuration enabled significantly improved times in all tasks (PEG transfer 1.6±0.2 vs. 5.5±1.1, p<0.006, Pattern cut 3.5±0.7 vs. 6.5±1.6, p<0.05 and Suture 1.6±0.1 vs. 7.1±1.2, p<0.01). Number of errors (Standard-2, Chopstick-0) and robotic arm collision (Standard-4, Chopstick-1) were also significantly less. Collision using the standard configuration often resulted in instrument failure and inability to complete the task. Clutching tended to be less necessary as well with the chopstick approach.

CONCLUSION: Chopstick surgery significantly enhances the functionality of the surgical robot when working through a small single incision. This technique will enable surgeons to utilize the robot for SILS and possibly for intraluminal or transluminal surgery.

S032

TRANSORAL INCISIONLESS FUNDOPPLICATION FOR GERD: EARLY NORTH AMERICAN RESULTS, Sebastian V Demyttenaere MD, Simon Bergman MD, Joel Anderson MD, Rebecca Dettorre BA, Dean J Mikami MD, W Scott Melvin MD, The Ohio State University Medical Centre

Introduction: EsophyX is an endoluminal approach to the treatment of gastroesophageal reflux disease (GERD). We report one of the earliest and largest North American experiences with this device.

Methods: Prospective data were gathered on consecutive patients undergoing EsophyX fundoplication for a one-year period between September 2007 and 2008, during which time the procedure evolved to the current technique. Data are expressed as mean (SD), p<0.05 significant.

Results: 21 patients with mean age 42 (16) were studied. There

were 7 males (33%) with BMI of 32 (5) and ASA of 2 (1). Average valve circumference was 222 degrees and valve length was 2.9 cm. 10 patients had associated hiatal hernias, 3 patients had Barrett's, 4 patients had esophageal dysmotility and 1 patient had an esophageal stricture. Mean procedure time was 71 (28) mins and mean length of stay was one day. There was one procedural complication consisting of a postoperative bleed requiring transfusion. Mean follow-up was 6 months. Comparing preoperative with postoperative scores, the mean Anvari (39 to 18, p=0.004) and Velanovich (54 to 8, p=0.004) scores decreased significantly. 69% of patients were still taking antireflux medications and only 32% of patients were entirely satisfied with the procedure. Three patients had persistent symptoms requiring Nissen fundoplication and there was one death unrelated to the procedure.

Conclusion: This study represents an initial single institution experience with EsophyX. While mean subjective reflux scores improved after treatment, 69% of patients were still taking antacids at follow-up. Because of 3 patients with early failure of symptom control, the technique has been modified. EsophyX may be a viable alternative for patients with symptomatic reflux therapy for GERD. Further follow-up and objective testing is required.

S033

MANAGEMENT OF ESOPHAGEAL PERFORATIONS, Guido Schumacher MD, Sven C Schmidt MD, Sascha S Chopra MD, Stefan Strauch, Wilfried Veltzke MD, Peter Neuhaus MD, Departments of General-, Visceral-, and Transplantation Surgery; Department of Gastroenterology, Charité University Hospital Berlin, Germany

Background: Perforation of the esophagus remains a life threatening event, which requires rapid diagnosis and treatment. Possible therapeutic modalities are surgical repair, interventional endoscopic or conservative treatment.

Objectives: We were interested to examine our experience on the management of esophageal perforations with the aim to find parameters for the recommendation of the best therapeutic modality.

Methods: From 1998 to 2006 we treated sixty-two patients with esophageal perforation and performed a retrospective analysis. Data were evaluated for cause of perforation, symptoms, therapeutic regimen, complications and mortality.

Results: Causes of perforation were iatrogenic or suicidal (n=33), or spontaneous (n=29). In the first group, the causes were dilatation of stenosis (n=16), endoscopy (n=7), transesophageal echography (n=4), ingestion of acid or leach (n=2), intubation (n=2), ingestion of a foreign body (n=1), and migration of a screw after osteosynthesis (n=1). The spontaneous perforations were caused by tumors (n=19), Boerhaave syndrome (n=6), unknown origin (n=3), and Barrett's ulcer (n=1). Most frequent symptoms were dysphagia (n=50), pain (n=35), fever (n=24), and vomiting (n=18). Twentyeight patients had a malignant tumor at the time of perforation, which was an esophageal cancer in eighteen cases. The treatment included surgery (n=32), which consisted of double layer oversuture and covering with adjacent tissue (n=26), or of esophageal resection (n=6). Thirty patients were treated interventionaly with implantation of a stent (n=21), clipping (n=1), or conservatively without further measures (n=8). Patients of the surgery group presented a severe primary and postoperative general condition with renal failure (25%), respiratory insufficiency (65.5%), and need of Catecholamines (62.5%). This multiorgan involvement we found only occasionally in the interventional endoscopic and conservative group. During the posttherapeutic course, we observed a fistula in nineteen patients (30.6%), which occurred after stenting (n=14) or after surgery (n=5). The fistulas were treated conservatively (n=16), or surgically (n=3). Overall hospital mortality was 14.5% (n=9) and was similar in the surgery group (n=5) and the interventional or conservative group (n=4).

Conclusion: The choice of the best therapeutic modality has to be done still individually. It appears that surgical treatment is necessary in cases of severe general conditions. Interventional stenting or conservative treatment may be sufficient in case of localized mediastinitis with good general condition of the patient.

S034

GASTRIC ELECTRIC STIMULATION FOR SEVERE GASTROPARESIS, Steven M Yood MD, Stacie E Perlman MD, Marianne Ulcickas Yood PhD, Rajan Chahal MD, Hospital of Saint Raphael

Objective: The purpose of this study is to investigate the effect of gastric electrical stimulation (GES) on solid phase gastric emptying, total symptom score (TSS), health-related quality of life (HRQOL),

Scientific Session Oral Abstracts

and patient satisfaction in patients with severe drug refractory gastroparesis.

Design: Prospective single-center study

Setting: Community hospital

Patients: 40 consecutive patients presenting between 2002 and 2008 for refractory gastroparesis

Interventions: Open or laparoscopic gastric electrical stimulator placement (Enterra Therapy, Medtronic, Minneapolis, MN)

Main Outcome Measures: Solid phase gastric emptying, total symptom score, health-related quality of life (SF-36)

Results: Forty patients received GES. One patient was lost to follow-up and one patient died of unrelated illness. The average percentage of gastric retention preoperatively was 86.4% at 2 hours. Postoperatively, the number dropped to 40.7%. After 6 months, all patients' gastric retention decreased by an average of 45% ($p < 0.05$). The average TSS preoperatively was 44 (range 25-56) compared to 29.5 (range 4-42) postoperatively. Overall, 86% of patients had improved TSS scores, with an average of 17 points improvement. HRQOL scores were broken into physical and mental components. The average preoperative physical HRQOL component score was 30.1, with a postoperative score of 36.0. The preoperative mental component HRQOL score of 35.3 improved to 45.9 postoperatively. The average improvement in physical score was 5.9 ($p < 0.05$, CI 1-10.8) while the average improvement in mental score was 10.6 ($p < 0.05$, CI 3.8-17.4). 100% of patients stated that they would undergo the procedure again.

Conclusions: Gastric electrical stimulation improves solid phase gastric emptying, total symptom scores, and health-related quality of life in patients with severe drug refractory gastroparesis.

S035

ISCHAEMIC CONDITIONING INFLUENCE FATE OF THE GASTRIC CONDUIT AND QUALITY OF LIFE OUTCOMES FOLLOWING MINIMALLY INVASIVE OESOPHAGECTOMY, Darmarajah

Veeramootoo, Rajeev Parameswaran, Rakesh Krishnadas, Richard G Berrisford MD, Saj A Wajed MD, Department of Thoracic and Upper GI Surgery, Royal Devon and Exeter NHS Foundation Trust, UK

INTRODUCTION Minimally Invasive Oesophagectomy (MIO) is now established as a valid alternative to open surgery for the management of oesophago-gastric cancers. However, a high incidence of ischaemia related gastric conduit failure (ICF) is observed which is detrimental to any potential benefits of this approach.

METHODS AND PROCEDURES MIO has been the procedure of choice for oesophago-gastric resection in our unit since April 2004. This involves a thoracoscopic and laparoscopic oesophageal and gastric mobilisation, resection and conduit formation, with a cervical anastomosis. Data relating to the surgical technique was collected, with focus on ischaemic conditioning by laparoscopic ligation of the left gastric artery (LIC) at two weeks, or five days prior to resection. A prospective longitudinal study was simultaneously set up to collect data on health related quality of life using the validated EORTC QLQ-C30 and OES18 questionnaires.

RESULTS 97 patients underwent a planned MIO. There were 4 in-patient deaths (mortality 4.1%) and overall 21 patients (21.6%) developed ICF. 54 patients did not undergo ischaemic conditioning and conduit failure was observed in 11 (20.4%). 36 patients had a laparoscopic ischaemic conditioning at two weeks and 3 (8.3%) had ICF whilst all 7 patients who had LIC at 5 days had ICF (100%). Timing of ischaemic conditioning ($p < 0.0001$) had a definite impact on conduit failure rate and the benefit of ischaemic conditioning at two weeks neared significance ($p = 0.1$). 4 cases of ICF (4.1%) were recognised and dealt with intra-operatively. 17 patients (17.5%) developed a post-operative ICF, of which 7 (7.2%) were managed conservatively. There was no conduit failure related death, however, there was a profound negative effect on health related quality of life with a recovery rate of only 24% of domains assessed compared to 60% in those without morbidity.

CONCLUSIONS Ischaemic failure of the gastric conduit is a serious problem in minimally invasive oesophagectomy and this complication significantly impairs health related quality of life. Ischaemic conditioning, two weeks prior to surgery, may reduce this morbidity and allow the benefits of this approach to be realised.

S036

A SIMPLIFIED TECHNIQUE FOR INTRATHORACIC STOMACH REPAIR: LAPAROSCOPIC FUNDOPPLICATION WITH VICRYL MESH AND BIOGLUE CRURAL REINFORCEMENT, Joerg Zehetner MD,

John C Lipham MD, Shahin Ayazi MD, Arzu Oezcelik MD, Emmanuele Abate MD, Weisheng Chen MD, Steven R DeMeester MD, Farzaneh

Banki MD, Jeffrey A Hagen MD, Melissa Dickey RN, Tom R DeMeester MD, Division of Thoracic and Foregut Surgery, Department of Surgery, Keck School of Medicine, University of Southern California

Background: The laparoscopic repair of an intrathoracic stomach has been associated with a high recurrence rate of up to 50%.

Studies describing the use of biological and non-absorbable mesh report a more durable repair. The aim of our study was to assess a simplified technique for intrathoracic stomach repair using absorbable vicryl mesh and bioglue for crural reinforcement.

Methods: In a retrospective chart review, all patients that underwent laparoscopic repair of an intrathoracic stomach from June 2006 to May 2008 using this new simplified technique were included in this study. Intrathoracic stomach was defined as >50% of the stomach herniated into the chest. All patients had undergone laparoscopic reduction of the stomach and hernia sac, nissen fundoplication and crural closure using ethibond suture. The crural closure was reinforced by using an on-lay vicryl mesh that was secured using bioglue only. No sutures or tacks were used to secure the mesh. Follow up was routinely done at 1 year post-op and included upper endoscopy (EGD), videoesophagogram (VEG), Bravo 48h pH and GERD-HRQL.

Results: A total of 25 patients (M:F=7:18) underwent repair using this technique with a mean age of 72.7yrs (51-89) and a mean BMI of 30.2 kg/m² (20.4-44.8). 22 were completed laparoscopically and 3 patients were converted to open. Mean operating time was 148min (101-245) with a median hospital stay of 3 days (1-8). Complications were bougie perforation in 1 patient repaired after conversion to open and pneumothorax in another treated by chest tube placement. Postoperative 1yr follow-up has been obtained in 14 patients (mean follow-up 16.7 months (11-28). Symptoms were gas/bloating in 3 patients and mild dysphagia in 2 patients. There were no symptomatic recurrences with a mean GERD-HRQL of 5.5 (2-15). 93% of patients were satisfied and 100% would have the operation again. EGD identified one patient with a 2cm asymptomatic paraesophageal hernia. There were no recurrences by VEG and all patients had normal 48 hr pH composite score.

Conclusion: Laparoscopic repair of an intrathoracic stomach with this new technique of crural reinforcement using vicryl mesh and bioglue is simple and appears durable with a low recurrence rate at 1 year follow-up. Long term follow-up is underway to confirm these encouraging preliminary results.

S037

LAPAROSCOPIC COLECTOMY IS SAFER THAN OPEN COLECTOMY: A PROPENSITY SCORE MATCHED, RISK-ADJUSTED ANALYSIS FROM 183 HOSPITALS, Robert T Lancaster MD, David M Shahian MD, Matthew M Hutter MD, Codman Center for Clinical Effectiveness

in Surgery, Massachusetts General Hospital

INTRODUCTION: Though patient preference appears to drive the move to laparoscopic colectomy, it is uncertain whether surgeons should preferentially offer a laparoscopic approach over an open approach because of increased safety alone. There has not been adequate multi-institutional evidence comparing appropriate patient cohorts to answer this important question.

METHODS: From 2005-2007, 183 hospitals participating in the ACS-NSQIP collected clinical information on a sample of 21,083 segmental colectomies without colostomy. In order to construct a study group for which there was plausible equipoise regarding surgical approach (open v. laparoscopic), this cohort of patients was further restricted via clinical exclusions and propensity score matching. Only same-day admissions were considered, and patients with emergency cases, contaminated operative fields and other relevant clinical factors were excluded. From this restricted cohort, propensity scores for laparoscopy were then used to match (1:1) members of the laparoscopic and open groups, yielding 5,984 patients. Univariate analyses, and risk adjusted analyses with stepwise multivariate models were performed.

RESULTS: Matched on propensity score, open and laparoscopic cohorts showed statistically similar rates of nearly all comorbidities. Univariate analyses show:

Univariate Outcomes	Open (n=2992)	Lap (n=2992)	p-value
Mortality	0.4% (n=12)	0.4% (n=12)	1.0
Major complication	9.8%	6.2%	<0.0001
Any complication	20.0%	12.9%	<0.0001
Return to OR	3.7%	4.1%	0.4573
Median Postop LOS (d) [IQR]	6d [5, 7]	4d [3, 6]	<0.0001

After risk-adjustment, the laparoscopic approach continues to have a lower rate of major complication (OR= 0.61 [95% CI: 0.50, 0.73]).



Scientific Session Oral Abstracts

CONCLUSIONS: This risk-adjusted, propensity score matched analysis demonstrates that patients undergoing laparoscopic (compared to open) segmental colectomy have fewer major and minor complications and have a shorter postoperative length of stay. In appropriate patients, laparoscopic colectomy should be performed instead of open colectomy when feasible.

S038

A POPULATION-BASED ANALYSIS OF EMERGENT VS. ELECTIVE HOSPITAL ADMISSIONS FOR AN INTRATHORACIC STOMACH,

Marek Polomsky MD, Boris Sepesi MD, Matthew C O'Connor BA, Daniel P Raymond MD, Virginia R Litle MD, Carolyn Jones MD, Thomas J Watson MD, Jeffrey H Peters MD, University of Rochester School of Medicine and Dentistry

Introduction: Large scale population based analyses of the demographics and management and healthcare resource use in patients with an intrathoracic stomach are largely unknown. This issue has become even more important with the aging of the population. Our objective was to estimate the magnitude of the problem and to assess the use of hospital resources in elective versus emergent admissions of patients with an intrathoracic stomach in a large population based study.

Methods and Procedures: The New York Statewide Planning and Research (SPARCS) administrative database was queried for primary ICD-9 codes 553.3 & 552.3 in patients over 18yo. 4,858 hospital admissions were identified over a 5-year period (2002 to 2006). Database variables included type of admission, surgical repair, hospital mortality, length of stay, cost, age, gender, and race.

Results: Approximately 1000 patients are admitted to the hospital each year with a primary diagnosis of intrathoracic stomach, roughly 50 per 1 million of the population in New York State. Over half of those (2562/4858, 52.7%) were emergent admissions. Interestingly, the majority of emergent admissions (1703/2562, 66.5%) were discharged without a surgical intervention. Patients admitted emergently were older (68.0yo vs. 62.1yo, $p<.0001$) and more likely to be African-American (303/2562, 11.8%, vs. 139/2296, 6.1%, $p<.0001$). Compared to elective admissions, emergent admissions had higher hospital mortality (69/2562, 2.69%, vs. 27/2296, 1.18%, $p<.001$), longer LOS (7.32 days vs. 4.96 days, $p<.0001$), and higher cost (\$28,484 vs. \$24,069, $p<.001$). Among patients undergoing surgery, emergent admissions also had higher hospital mortality (44/859, 5.12%, vs. 23/2144, 1.07%, $p<.0001$), greater LOS (13.06 days vs. 4.95 days, $p<.0001$), and higher hospital cost (\$55,460 vs. \$24,760, $p<.0001$). They were more likely to be older (67.3yo vs. 61.9yo, $p<.0001$), male (316/859, 36.8%, vs. 671/2144, 31.3%, $p<.005$), and African-American (61/859, 7.1%, vs. 115/2144, 5.4%, $p=.07$).

Conclusion: Strikingly more than half of admissions for an intrathoracic stomach were emergent and a third of these underwent surgery. Emergent admissions with and without surgery had higher mortality, longer LOS, and higher cost than elective admissions. These data support another consideration of early elective repair.

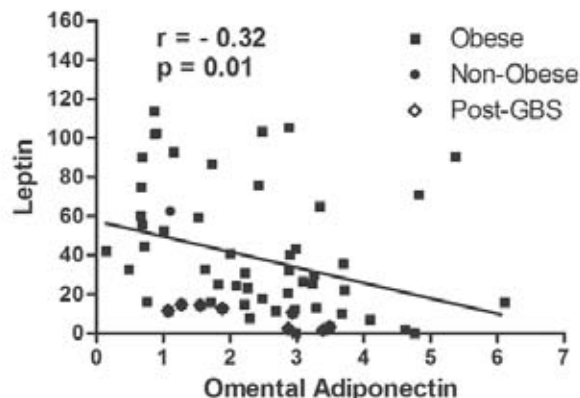
S039

SERUM LEPTIN LEVELS ARE INVERSELY CORRELATED WITH OMENTAL GENE EXPRESSION OF ADIPONECTIN AND ARE MARKEDLY DECREASE AFTER LAPAROSCOPIC GASTRIC BYPASS SURGERY,

Sarah Evans MD, Jiegen Chen PhD, Zehra Pamuklar PhD, Alfonso Torquati MD, Duke University, Department of Surgery

Adipose tissue is the most abundant endocrine tissue in the body, producing leptin, a hormone important in regulating hunger, and adiponectin, a hormone involved in insulin sensitivity and inflammation. The aim of this study was to assess the impact of gastric bypass surgery (GBS) on leptin levels and its relation to omental adiponectin expression. Methods: Omental fat biopsies and plasma were obtained from 40 obese patients undergoing laparoscopic GBS, 12 patients one year post-GBS, and 16 normal weight individuals (BMI 20-29). Adiponectin gene expression was measured by quantitative real time PCR and the gene expression was normalized for the GAPDH gene. Leptin was measured by a high-sensitivity assay. Results: Leptin levels were significantly lower in the post-GBS patients as compared to pre-GBS patients (19.8 ± 6.7 vs 59.0 ± 5.1 , $p=0.0001$) and similar to normal weight controls (19.8 ± 6.7 vs 18.2 ± 4 , $p=0.8$). As shown in the Figure, after adjusting for confounding factors, the multivariate analysis revealed that there is an inverse correlation between leptin levels and omental adiponectin expression ($r=-0.32$, $p=0.01$). Conclusions: Gastric bypass surgery results in resolution of the leptin resistance status that characterizes obese subjects. Furthermore, we are the first group to report that

leptin levels inversely correlated with omental gene expression of adiponectin.



S040

REGRESSION OF DYSLIPIDEMIA IN TYPE 2 DIABETIC PATIENTS WITH BMI BELOW 30 SUBMITTED TO THE LAPAROSCOPIC ILEAL INTERPOSITION,

Aureo L De Paula PhD, Antonio L Macedo MD, Cesar A Machado MD, Vladimir Schraibman MD, Luis Q Silva MD, Bruno Mota MD, ergio Vencio, Hospital de Especialidades, Goiania, Brazil

Background: Lipid management aimed at lowering LDL cholesterol, raising HDL cholesterol, and lowering triglycerides reduces macrovascular disease and mortality in patients with T2DM, particularly in those who had prior cardiovascular events. The objective of this study is to evaluate the control of dyslipidemia in patients with Type 2 Diabetes (T2DM) with BMI below 30 that were submitted to the laparoscopic ileal interposition associated to a sleeve gastrectomy (LII-SG).

Methods: The procedure was performed in 72 patients. 51 were men and 21 women. Mean age was 52.8 years (38-66). Mean BMI was 26.7 kg/m² (22.1 - 29.4). All patients had the diagnosis of T2DM for at least 3 years and evidence of stable treatment with oral hypoglycemic agents and/or insulin for at least 12 months. Insulin therapy was been used by 51.4 of the patients. Mean duration of T2DM was 10.5 years (3-22). Mean A1c was 8.5%. Hypercholesterolemia was diagnosed in 68% of the patients and Hypertriglyceridemia in 60.6%. LDL was abnormal in 68% of the patients and HDL in 34.7%. Mean NEFFA was 0.68mmol/l. Forty patients (55.5%) had arterial hypertension.

Results: Mean post-operative follow-up was 24.5 months (12-38). Mean postoperative BMI was 21.2.kg/m² (17 - 26.7). Mean A1c was 6.1%, ranging 4.4 to 8.3. Overall, 91.4% of the patients achieved an adequate glycemic control (A1c < 7) without anti-diabetic medication. A1c below 6 was achieved by 50%, 41.4% had A1c between 6 and 7 and 8.6% had A1c above 7. Total hypercholesterolemia was normalized in 96.2% and Hypertriglyceridemia in 86.4% of the patients. LDL below 100 mg/dl was seen in 85.7% of the patients. Mean NEFFA decreased to 0.5mmol/l.

Conclusions: The LII-SG was an effective operation for the regression of dyslipidemia and T2DM in a non-obese (BM<30) population.

S041

TOTALLY LAPAROSCOPIC LIVER RESECTION FOR HEPATOCELLULAR CARCINOMA LOCATED IN ALL SEGMENTS OF THE LIVER,

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Introduction: Laparoscopic liver resection (LLR) is still not a well established treatment modality for hepatocellular carcinoma (HCC). Moreover, most of reported cases have been limited to the anterolateral segments (segments 2, 3, 4b, 5, 6). We evaluate the clinical and oncologic outcome after LLR for HCC including the lesions located in the posterosuperior segments (segments 1, 4a, 7, 8). **Methods and Procedures:** Sixty-nine patients underwent LLR for HCC between September 2003 and September 2008. LLR was applied to the lesions in all segments with totally laparoscopic procedure unless the tumor was close to the hilum or the main hepatic veins. We retrospectively analyzed the clinical outcome of

Scientific Session Oral Abstracts

the 64 patients, excluding 5 patients requiring conversion to open surgery. **Results:** The operative type of resection were tumorectomy (n=18), segmentectomy (n=18), left-lateral sectionectomy (n=8), left hemihepatectomy (n=3), right hemihepatectomy (n=5), right posterior sectionectomy (n=10), central bisectionectomy (n=1) and caudate lobectomy (n=1). Mean tumor size was 3.3 cm and mean resection margin was 1.5 cm. Mean operative time was 274.8 minutes and intraoperative transfusion was needed in 19 patients (29.7%). There was no postoperative mortality. Postoperative complications occurred in 15 cases (23.4 %), which were improved by conservative management. Mean postoperative hospital stay was 9.7 days. After a mean follow-up of 20.1 months, recurrence was detected in 16 patients (25.0 %): intrahepatic (n=14), extrahepatic (n=1) and both (n=1). The sites of intrahepatic recurrence were ipsilateral (n=3), contralateral (n=6) and bilateral (n=6). The cumulative 3-year overall survival and disease-free survival rates were 87.8% and 67.3%, respectively. **Conclusions:** Our experience shows that LLR can be safely applied to HCC in all segments of the liver with acceptable survival and recurrence rates.

S042

IS NAVIGATION USEFUL IN LAPAROSCOPIC COLON RESECTION, Maurits deBrauw PhD, Anke Smits PhD, Christiaan vanswol PhD, Rene Wiezer PhD, Bert vanramshorst PhD, Antonius Mesos Hospital, Nieuwegein

An optical navigation system was adapted for abdominal surgical purposes. The feasibility and potential usefulness was investigated in 24 patients with a colorectal tumor or diverticulitis. The information from a preoperative CT scan was integrated in the real time live video images. Instruments were marked and identifiable during the navigation. All patients underwent a laparoscopic colorectal resection.

The feasibility of the system was established. The accuracy of finding the tumor [21 patients] was evaluated, as well as the identification of the tumor borders, the optimal placement of the trocars, the accuracy of localization of the ureters [19 patients], the accuracy of localization of arterial vessels supplying the bowel, and the number of conversions and positive margins. The feeling of safety of the surgeon was evaluated during the procedure.

The feasibility of the system was established, and the images were accurate within a 0,5 cm. All 21 tumors were accurately found by navigation. Extension and ingrowth were visible on the navigation images [3 patients]. All ureters except for one were easily found using the navigation system. The placement of the trocars was changed by a mean of 1,9 cm using the navigation system. When the arterial phase was scanned preoperatively an accurate imaging of the arteries was obtained draining the bowel part to be resected [5 patients].

No patient was converted during the procedure to an open version. There were no positive tumor margins in the 21 patients with colorectal cancer.

The feeling of safety during the procedure increase by a mean of 28% as assessed by the operating surgeon using the navigation system.

Conclusion: The navigation system is a useful addition to laparoscopic colon resection. The reduced sense of feeling, and the increased problem of orientation by 2D images during the laparoscopic procedure can be translated into an advantage by being able to see through the tissues and identifying landmarks and the tumor. These are otherwise not visible to the surgeon. The 3D information of a preoperative CT scan which is integrated in the real time live video images during the procedure appeared to be accurate and reproducible.

Localization of the tumor is often difficult, but was easy and reliable by using the navigation system. Potential complications like transecting the ureter or leaving positive margins are less probable by using the navigation system.

The surgeon is able to feel more secure about the orientation of the instruments in relationship to the tumor and other important structures. Possibly conversions to an open procedure will be reduced, although this was not proven by this feasibility study. We have the impression that this navigation system might prove to be advantageous in laparoscopic colorectal surgery.

S043

LAPAROSCOPIC APPENDECTOMY IS AS COST EFFECTIVE AS OPEN APPENDECTOMY, Vadim Nakhamiyayev MD, Lars M Galldin MSc, Mario Chiariello MD, Angela Lumba MD, Piotr J Gorecki MD, Dept of Surgery, New York Methodist Hospital

Introduction: The aim of this study is to compare the results of

laparoscopic (LA) versus open (OA) approaches for appendectomy in a teaching community hospital.

Methods: A retrospective analysis of 264 patients who underwent appendectomy over an 8-year period (155 Lap versus 109 Open). Two surgeons performed all LA procedures and all were initially approached for laparoscopically. The variables analyzed included patient data (WBC count, duration of symptoms), operating room data (length of the procedure and pathology), post-operative data (post-op complications and length of hospital stay) and total costs. The two approaches were compared using a t-test and chi-square statistical analysis.

Results: Patient demographic data (age and sex), preoperative WBC, duration of symptoms and pathology were all comparable in the two study groups. Six cases were converted to open appendectomy and were included in the LA group data. There was no statistical difference in the average operative time between LA (mean min 55.7+22.3, range 20-128) and OA (mean min 58.9+23.7, range 29-135) groups with a difference of 3.2 minutes, 95% CI (-8.8 to 2.43) and p-value 0.26. The overall incidence of minor and major complications was significantly less in the LA group at 2.0% (3 incidents) compared with 17.4% in the OA group (19 incidents) with p-value <0.001. The median length of hospital stay (LOS) was significantly shorter in the laparoscopic group (median 2, range 1-8) versus the open group (median 3, range 1-11) with p-value <0.001. The mean total cost for the laparoscopic group versus the open group was \$5,663 and \$6,031 respectively with a non-significant difference of -\$368, 95% CI (-\$926 to \$190) and p-value 0.19.

Conclusion: LA is associated with similar total costs as compared to OA. Significantly decreased hospital stay and reduced post-operative complications in LA group makes this approach an attractive therapeutic option. LA can be recommended as a cost effective approach to appendectomy.

S044

AB PREP A NEW COLON CLEANSING, Semaan M Abboud MD, Cedar Tree Medical Center

With the colonoscopy being the main procedure that evaluates and prevents colon cancer; efforts to make the experience tolerable and pleasant has always been a priority and a challenge.

In the United States out of all the people meeting the criteria for screening colonoscopy only 35% of the people actually undergo the procedure. Therefore, thousands of people still develop colon cancer and die unnecessarily.

The AB Prep is made out of three FDA approved generic medications. The mechanism of cleansing is a combination of osmotic and stimulant laxatives).

A total of 16 tablets taken over two main steps.

Clinical trial was conducted to evaluate the safety and efficacy of the prep.

1-Patients' electrolytes including Glucose, Sodium, Potassium, Chloride, Bun, Creatinine, Co2, Calcium, Alkaline Phosphatase, ALT, AST, Magnesium, and Phosphorus, EKG with QTc were compared before and after Prep consumption.

2-In addition subjective data was collected from the patients to grade compliance, satisfaction, abdominal bloating, abdominal pain, nausea, and vomiting, also would they recommend the prep to their family members and friends.

3-To objectively grade the colon cleansing, the colon cleansing was divided into either achieved or not achieved. A picture of the colon was obtained at the end of the procedure to document the colonic mucosa appearance in the cecum, transverse, left colon, and the rectum; the amount of irrigation used to achieve the final cleansing and the duration of the procedures were documented, and graphed, presenting an objective reproducible grading of the cleansing.

A total of 200 patients were evaluated in phase II: 54% women and 46% men, with the mean age of 61, and included patients with hypertension, diabetes, renal, cardiac, pulmonary, liver and or seizure disorder. SPSS program was used to evaluate the data.

Results: The prep was noted to be 99.5% effective, 89% had excellent to good cleansing (the mean average plus a standard deviation) and 10.5% had fair cleansing. There was an excellent tolerability, with 100% compliance, 100% satisfaction, 1.5% had abdominal pain, 1.5% abdominal bloating, 2% had nausea, and none had any vomiting.

The electrolytes, QTc interval and EKG remained within normal limits throughout the study with:

-No statistically significant changes noted in:

1-Creatinine 2-Sodium 3-Chloride 4-CO2 5-Calcium 6-Alk Phos.

7-Magnesium 8-Phosphorus

-Statistically significant changes after taking the Prep were noted in:



Scientific Session Oral Abstracts

1-Glucose 8% decrease 2-Bun 23.6% decrease 3- Potassium 3.87% decrease 4-AST 12.6% increase 5-ALT 8.5% increase 6-QTC 2.4% increase, (on the average).

The most important finding throughout phase I and Phase II, that despite the statistical significant changes noted; all the variables studied remained within normal limits. That safety profile was also observed in patients with cardiac, hypertension, renal, diabetes, and seizure disorder.

Patients with severe constipation (One bowel movement per week or more, or one bowel movement every three days or more with the help of laxatives) were treated with two days prep, and the same safety profile was observed.

Conclusion: Although The AB Prep is an effective colon cleansing as the rest of the available preparation; it does however, offer an excellent unmatched safety profile with minimal side effects even when it is taken over two days, with no contraindication even in patients with renal disease. Furthermore, it could be used as a safe and an effective treatment for patients with severe chronic constipation.

S045

HOSPITAL COLECTOMY VOLUME AS A SURROGATE FOR

ADVANCED LAPAROSCOPY, Anand Singla BA, Jessica P Simons MD, James Carroll MD, Sing Chau Ng MS, Jennifer F Tseng MD, Shimul A Shah MD, Department of Surgery, Surgical Outcomes Analysis and Research, University of Massachusetts Medical School, Worcester, MA

Although laparoscopic colectomy has been reported to have favorable outcomes compared to open colectomy, it has yet to gain widespread acceptance in the United States. We sought to investigate whether hospital volume for colectomy was an important factor to predict the likelihood of having colectomy performed laparoscopically.

Methods: Using the Nationwide Inpatient Sample (NIS) from 1998 - 2006, patients undergoing elective colon resection with and without use of laparoscopy were identified. Unique hospital identifiers were used to divide hospital volume into thirds based on number of colectomies performed per year (lowest third (LV) < 50/year; 50 <= medium third (MV) < 105/year; highest third (HV) >= 105/year). Primary endpoint was the use of laparoscopy after adjusting for patient and hospital covariates.

Results: A total of 209,769 colon resections were performed from 1998 - 2006. Overall, only 8,407 (4.0%) of these were performed with laparoscopy. Both the number of colectomies and those performed with laparoscopy increased over time. HV hospitals used laparoscopy more (5.2% vs. 3.8% vs. 3.0%). HV hospitals tended to be large (83.1%), urban (99.1%), teaching (69.0%) hospitals that treated more patients in the highest income bracket and with private insurance when compared to either MV or LV centers. A mortality benefit overall was observed at HV centers compared to LV hospitals (OR 0.6; 95% CI 0.6-0.7) and MV hospitals (OR 0.8; 95% CI 0.7-0.9). After adjusting for covariates, patients with private insurance (OR 1.2; 95% CI 1.1-1.3) and high income (OR 1.2; 95% CI 1.2-1.3) were more likely to independently undergo laparoscopy. In addition, HV hospitals were more likely to use laparoscopy than LV hospitals (OR 1.3; 95% CI 1.2-1.4) and MV hospitals (OR 1.1; 95% CI 1.1-1.2).

Conclusions: Socioeconomic differences appear to exist at HV hospitals compared to MV/LV hospitals for colectomy. Laparoscopy is still only used in small percentage of colon resections. Using colectomy as a model, annual hospital volume appears to be an important surrogate for the advancement of laparoscopy and future technology.

Factors Associated with Laparoscopy in Colectomy		
Variable	Odds Ratio	95% CI
Increasing Age	0.99	0.99-1.0
Private Payer	1.2	1.1-1.3
High Income Brk	1.2	1.2-1.3
Comorbidity	0.74	0.71-0.78
High Volume	1.3	1.2-1.4

S046

GASTROINTESTINAL RECOVERY AFTER LAPAROSCOPIC PARTIAL LARGE BOWEL RESECTION: RESULTS OF A PROSPECTIVE, OBSERVATIONAL, MULTICENTER STUDY

Conor Delaney, Peter Marcello, Toyooki Sonoda, Paul Wise, Joel Bauer, Lee Techner, University Hospitals Case Medical Center, Lahey Clinic, Weill Cornell Medical Center, Vanderbilt University, Mt. Sinai School of Medicine, Adolor Corporation

Introduction: A prospective, multicenter, observational study (14CL401) investigated gastrointestinal (GI) recovery, length of hospital stay (LOS), and postoperative ileus (POI)-related morbidity after laparoscopic bowel resection (LBR). **Methods:** Adult patients undergoing LBR with primary anastomosis performed by straight (SL) or hand-assisted (HAL) laparoscopy with scheduled postoperative intravenous patient-controlled analgesia were enrolled. The study design was similar to alvimopan phase III open laparotomy BR studies, including the use of a standardized accelerated care pathway; in this study, >80% of sites participated in one or more phase III open BR trials. Primary endpoints were GI-2 recovery (first bowel movement and tolerating solid food) and postoperative LOS (hospital discharge day minus day of surgery). Secondary endpoints included POI-related morbidity (postoperative nasogastric tube insertion and investigator-assessed POI resulting in prolonged hospital stay or readmission), conversion-to-open (CTO) rate, and protocol-defined prolonged POI (GI-2 >5 postoperative days [POD]). **Results:** Of 148 patients enrolled (mean, 58.3 years old), 67 patients received a right partial colectomy by SL, 42 received a left partial colectomy by SL, and 39 received a left partial colectomy by HAL. The CTO rate was 18.8%, with approach-specific CTO rates of 25.4% (SL left), 17.3% (HAL left), and 15.0% (SL right). Mean time to GI-2 recovery was 4.4 days and mean postoperative LOS was 4.9 days (range, 2-41 days), neither of which varied substantially by surgical approach. Prolonged POI (GI-2 >5 POD) occurred in 15 (10.1%) patients and overall POI-related morbidity occurred in 17 (11.5%) patients; 7 (4.7%) patients had nasogastric tube insertion and 15 (10.1%) patients had prolonged stay because of investigator-assessed POI. No patients were readmitted because of POI whereas 3 (2%) patients were readmitted for all causes (excluding POI). **Conclusions:** Mean GI recovery and LOS after LBR were 0.7 and 1.7 days earlier, respectively, versus the pooled open placebo BR population in the phase III alvimopan POI trials. Overall POI-related morbidity, however, was similar across the LBR and open BR populations. In conclusion, while the use of laparoscopic technique with a standardized accelerated care pathway resulted in marginally earlier GI recovery and a slightly decreased LOS compared with the pooled open placebo BR population in the phase III alvimopan POI studies, POI continues to present an important morbidity regardless of surgical approach.

S047

HEPATIC IRON OVERLOAD IN PATIENTS UNDERGOING RYGB, Ravi J Chokshi MD, G. Craig Wood MS, Glenn Gearhart PhD, Christopher Still DO, Anthony T Petrick MD, Geisinger Medical Center

BACKGROUND: The most common cause of hepatic iron overload is a genetic mutation (C282Y) that causes an increase in serum transferrin saturation and ferritin levels. Abnormalities in iron metabolism as well as nonalcoholic steatosis are known conditions associated with obesity. The purpose of this study was to analyze the hepatic DNA of morbidly obese patients undergoing Roux-en-Y gastric bypass (RYGB) for genetic mutations. Additional goals were to measure serum ferritin and iron levels in these patients and correlate genetic mutations leading to hepatic iron overload with surgical outcomes after RYGB.

METHODS: Prospective data was collected from 760 patients undergoing Roux-en-Y gastric bypass and wedge liver biopsies. These were analyzed for hepatic iron overload. Patients were stratified into hepatic iron overload (HFE) and non-overload groups (Normal). DNA from patients in both groups was analyzed using polymerase chain reactions (PCR) for the C282Y and the H63D gene mutations. 136 patients were found to have hepatic iron overload (HFE) and 624 patients were found to have normal hepatic iron levels (Normal). The groups were compared for gender, age, BMI and liver histology. 127 of the HFE patients had specimens with analyzable DNA as did 583 patients in the normal group. Serum iron, TIBC and Ferritin were measured. The perioperative mortality, LOS, and complications including leak rate and wound infection were calculated to evaluate differences in outcomes.

Scientific Session Oral Abstracts

RESULTS: There was no significant difference in age, gender or liver histology between the HFE and normal groups. The body mass index in the HFE group was 48.50 versus 47.79 ($p=0.37$) in the normal iron group. The C282Y mutation was not significantly different between the groups. However, the H63D mutation was significantly more common in the HFE group (TABLE). TIBC and serum iron were not different between groups but serum ferritin levels were significantly higher in the HFE group ($169 \text{ v } 49; p<0.0001$).

Genetic Analysis			
	Fe Overload	Normal Fe	p value
C282Y			
Normal	108	532	
Mutation	19	52	0.065
H63D			
Normal	83	440	
Mutation	44	143	0.045

Fisher's exact test

Length of stay was slightly shorter for the HFE patients (2.48d) compared with the normal iron patients (2.77d; $p=0.41$). This was not significant. The overall surgical complication rate was not significantly different in the HFE group (17% v 16%). Anastomotic leaks (4% v 2%) and wound complications (8% v 5%) were higher in the HFE group but this was not statistically significant. There was only 1 death (normal group) with no significant difference in mortality between the groups.

CONCLUSIONS: This study found that the most common genetic mutation for hepatic iron overload (C282Y) was not significantly overexpressed in our morbidly obese patients. However, the H63D mutation was overexpressed, perhaps suggesting a novel mechanism for hepatic iron overload in the morbidly obese. Clinical outcomes of RYGB in HFE group showed no statistically significant difference in length of stay, complications or mortality. There was a nonsignificant trend toward a higher mean BMI as well as anastomotic leak rate and wound complication rate in the HFE patients.

S048

HEPATIC ADIPONECTIN AND LEPTIN IN MORBIDLY OBESE

PATIENTS, A Katharine Hindle MD, Claire Edwards MD, Jason Kasza MD, Marcos Rojkind PhD, Sidney W Fu MD, Fred Brody MD, The George Washington University

Background: Pathologically, hepatic changes are common in morbidly obese patients. Insulin resistance impacts the pathogenesis of non-alcoholic fatty liver disease and may potentiate the progression of non-alcoholic steatohepatitis and fibrosis. This study investigates the impact of leptin and adiponectin in morbidly obese diabetic and non-diabetic patients with regards to histopathological hepatic changes.

Methods: Twenty morbidly obese patients undergoing bariatric surgery with liver biopsy were enrolled in the study. All patients were obese with a BMI greater than 35. Six were diabetic and fourteen were non-diabetic. Liver tissue, obtained intra-operatively, was flash frozen in liquid nitrogen. Total RNA was extracted with Trizol and the RNA was purified (Qiagen). RNA was reverse transcribed to cDNA using the iScript cDNA synthesis kit (Biorad), and real time quantitative PCR was performed to determine relative gene expression. The data were analyzed using a logarithmic transformation and normalization with 18s.

Results: In liver, there is an over expression of leptin in the diabetic patients by a factor of 1.72 ± 0.74 (p value less than 0.05). Leptin expression in patients with steatotic changes showed a down regulation by a factor of 1.3 ± 1.9 ($p=0.2$). Adiponectin levels were over-expressed in diabetic patients with and without steatosis by 4.6 ± 3.1 (p value less than 0.05). A student t-test was used for statistical analysis.

Conclusions: To date there is limited data regarding adiponectin and leptin expression in hepatic tissue. This study illustrates an association between altered adiponectin and leptin levels with hepatic steatosis in diabetic patients. This interesting correlation is currently undergoing investigation with an established line of hepatic stellate cells to elucidate the mechanisms of steatosis and diabetes.

S049

HUMAN MONOCYTE ACTIVATION BY BIOLOGIC AND

BIODEGRADABLE MESHES IN VITRO, Sean Orenstein MD, Don Kreutzer PhD, Yuri Novitsky MD, Department of Surgery, University of Connecticut Health Center, Connecticut Comprehensive Center for Hernia Repair

INTRODUCTION: We hypothesize that various biologic and

biodegradable meshes (BM) differentially induce macrophage (MØ) activation in vitro. Inflammation and wound healing play critical roles in the integration of biologic and biodegradable meshes (BM) at the sites of hernia repair. Macrophages (MØ) are the key cells controlling inflammation and wound healing. Interleukin-1beta (IL-1b), IL-6, and IL-8 are major MØ-derived cytokines that are produced proportionally to the degree of MØ activation. Although BMs have been increasingly used in hernia repairs worldwide, immune responses to various human tissue-derived as well as biodegradable meshes has not been investigated to date.

METHODS: Twenty-four 10-mm circular mesh samples of 3 acellular human dermis biologic meshes (AlloDerm (AD), LifeCell Corp; AlloMax (AM), CR Bard/Davol Inc; FlexHD (FX), MTF/Ethicon Inc) and one biodegradable synthetic mesh (Bio-A (BA), WL Gore & Assoc) were placed in 48-well plates. Peripheral blood mononuclear cells (PBMCs) were isolated from whole blood of 3 healthy subjects. Next, 2-5 million PBMCs were added to each well and the cultures were incubated at 37°C/5%CO₂ for 7 days. The resulting culture supernatants were assayed for IL-1b, IL-6, and IL-8 levels using a multiplex bead-base immunoassay system (Bio-Plex, Bio-Rad) and expressed as picograms (pg) of cytokine per ml.

RESULTS: All four mesh products induced macrophage activation in vitro. Cytokine expression varied for each BM. Both AD and BA induced significantly smaller quantities of IL-1b production (94 and 265 pg/ml, respectively) vs. both AM (2,001 pg/ml, $p<0.05$) and vs. FX (2,303 pg/ml, $p<0.05$). Similarly, AD and BA induced significantly lower levels of both IL-6 and IL-8. There was no significant difference in cytokine production between AD and BA.

CONCLUSION: We have demonstrated that human macrophages are activated by human dermis-derived biologic as well as a biodegradable meshes in vitro. For the first time, our data show that AlloMax and FlexHD both induced significantly more MØ activation than either AlloDerm or Bio-A. These differences in MØ activation may be related to the proprietary processing technologies of the studied meshes. Our results raise the possibility that these differences in MØ activation could indicate varying intensity of inflammation that control integration of different biologic meshes at the sites of hernia repair.

S050

A METASTATIC COLON CANCER MODEL USING NON-OPERATIVE TRANS-ANAL RECTAL INJECTION,

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([^]) denotes superscript
Background: This study was conducted to develop a non-invasive orthotopic model for metastasis of colon and rectal cancer using a trans-anal approach that is non-operative, reproducible, and easy to perform. Currently, the most accurate orthotopic representation of metastatic human colon cancer is a cecal injection. The trans-anal model allows for further examination of systemic immune responses, tumor take, and onset of metastasis without prior surgical intervention.

Methods: Sixty (60) Balb/c mice were anesthetized and received gentle anal dilation using blunt tipped forceps at the anal opening. Using a 29 gauge syringe, murine colon cancer parental CT26 (CT26) or luciferase labeled CT26 (CT26-luc) cells were injected submucosally into the distal, posterior rectum (CT26 N=30 and CT26-luc N=30) at various concentrations: 2.5×10^4 ([^]4), 1×10^5 ([^]5), or 1×10^6 ([^]6) in a volume of 50µL. All mice were injected using 100 x magnification. Tumor growth and metastatic development was monitored in CT26-luc (N=3) and grossly in CT26 (N=1) at 5 day intervals for 50 days. CT26-luc mice were anesthetized and injected with 150 µg/kg luciferin, then imaged with x-ray (15 second exposure) followed by luminescence (6 minute exposure) using the Kodak Molecular Imaging software. All remaining mice were sacrificed at post-injection day 50. The rectum, rectal wall, and liver were photographed, measured, processed for histology, and reviewed by a pathologist.

Results: The optimal concentration for metastasis and survival of mice was 2.5×10^4 ([^]4) cells. Higher concentrations of CT26 or CT26-luc cells yielded higher mortality and did not result in metastasis. The overall success of tumor growth using the trans-anal rectal injection was 65%. Histology revealed that all tumors were poorly differentiated adenocarcinoma. Two mice (33%) from the 2.5×10^4 ([^]4) CT26-luc group developed metastatic colonic adenocarcinoma to the



Scientific Session Oral Abstracts

liver at post-injection day 50. Luminescence monitoring of metastasis added no additional value.

Conclusion: Trans-anal rectal injection of colon cancer cells offers a non-operative orthotopic murine model for colon cancer that may lead to the development of metastasis. By using an orthotopic model that does not require abdominal surgery for implantation, more aspects of metastatic colon cancer can be evaluated without the influence of a previous abdominal incision. These results warrant more investigation into the metastatic capabilities of this model.

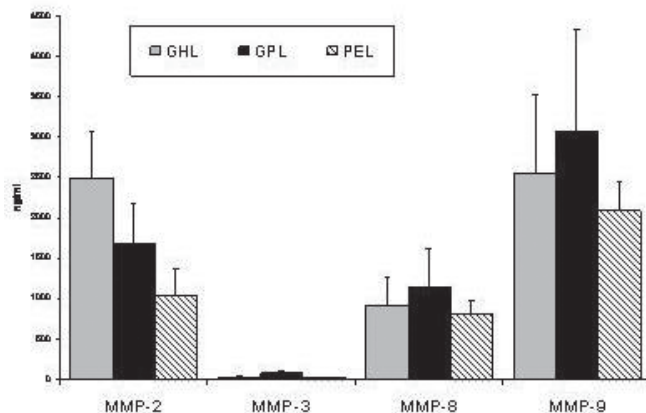
S051

DIFFERENTIAL EXPRESSION OF MMP-2 IN THE GASTROHEPATIC LIGAMENT OF THE GASTROESOPHAGEAL JUNCTION, Lora

Melman MD, Phillip R Chisholm BS, John A Curci MD, Batool Arif BS, Richard A Pierce MD, Eric D Jenkins MD, L Michael Brunt, J Christopher Eagon MD, Margaret M Frisella RN, Kathryn Miller, Brent D Matthews MD, Department of Surgery, Section of Minimally Invasive Surgery, Washington University, St. Louis, Missouri

Introduction: Ligamentous attachments maintain the normal anatomical position of the gastroesophageal (GE) junction. Failure of these elastic ligaments through an alteration in collagen synthesis, deposition and metabolism may be a primary etiology of hiatal hernia formation. Differential expression of zinc-dependent matrix metalloproteinases (MMPs) is largely responsible for collagen remodeling. The purpose of this study was to survey metalloproteinase expression in the supporting ligaments of the GE junction.

Methods: Under an IRB-approved protocol, tissue biopsies of the gastrohepatic ligament (GHL), gastrophrenic ligament (GPL) and phrenoesophageal ligament (PEL) were obtained in six patients without a hiatal hernia during laparoscopic anterior esophageal myotomy for achalasia. Total protein extracts from tissue biopsies were analyzed for elastases MMP-2, -9, -12 and collagenases MMP-1, -3, -8, 13 using a multiplex profiling kit (R&D Systems, Minneapolis, MN). Data are given as means \pm SD. Statistical significance ($p < 0.05$) was determined using Tukey's test and analysis of variance. Results: In control patients without hiatal hernias, there was a significant ($p < 0.02$) increased expression of MMP-2 in the GHL compared to the GPL and PEL, respectively. Tissue levels of MMP-1, -12 or -13 were not detectable.



Conclusions: Gelatinase-A (MMP-2) has a tissue-specific increased expression in the gastrohepatic ligament of control patients. The GHL may provide the primary GE junction supporting ligament to compare tissue from patients with Type I (sliding) and Type III (paraesophageal) hiatal hernias to examine the role of altered collagen metabolism in hiatal hernia formation.

S052

THE IMPACT OF CO₂-PNEUMOPERITONEUM ON LIVER REGENERATION AFTER LIVER RESECTION IN A RAT MODEL., Sven

C Schmidt MD, Guido Schumacher MD, N Klage, U Neumann MD, S Chopra MD, P Neuhaus MD, University Medicine Berlin, Charité Campus Virchow Clinic, Department for General-, Visceral- and Transplantation Surgery

Introduction: During the past years, laparoscopic hepatic resection is being performed by an increasing number of surgeons. Despite many advantages of the laparoscopic procedure, it is unclear if the

pneumoperitoneum affects the postoperative liver regeneration after liver resection. The aim of the present study was to investigate the influence of a CO₂-pneumoperitoneum (PP) on liver regeneration in a rat model.

Methods: 60 male wistar rats were subjected to 70% partial hepatic resection. 30 of these animals underwent preoperative PP with 9 mm Hg for 60 minutes. After hepatic resection, rats were killed at 12, 24, 48 hours, 4 and 7 days. Outcome parameters were: hepatocellular injury (plasma aminotransferases), oxidative stress (malondialdehyd) and liver regeneration (mitotic index, KI-67, regenerating liver mass).

Results: Mitotic index was significantly lower in the PP group compared with the group without PP at all time points ($p < 0.05$). KI-67 was significantly lower in the PP group compared to the control group on day 4 ($p < 0.05$). Liver regeneration rate was significantly lower in the PP group compared to the control group on day 2 and 4 ($p < 0.05$). Postoperative hepatocellular injury was significantly higher after PP compared to the animals without PP at 12, 24 and 48 hours ($p < 0.05$). Malondialdehyd was significantly higher in the PP group compared to the control group at 24 h and on day 4 ($p < 0.05$).

Conclusion: Pneumoperitoneum before liver resection impaired postoperative liver regeneration. Oxidative stress reaction and hepatocellular damage and was markedly higher after pneumoperitoneum. The results suggest an increased risk of performing extended laparoscopic liver resections.

S053

QUANTIFIED SURGEON SPARED MENTAL RESOURCE IN A LAPAROSCOPIC SUTURING TASK, Bin Zheng MD, Maria A Cassera

BS, Danny V Martinec BS, Georg O Spaun MD, Lee L Swanstrom MD, Centre of Excellence for Surgical Education & Innovation of UBC, Legacy Health System

Introduction: A surgeon's level of mental workload is elevated in suturing, particularly during the learning phase. Training decreases the workload of the surgeon as movements become automatic and require less mental resources. To objectively quantify mental workload during learning, we developed a simple bench-top measurement tool to assess the spared mental resources that are available for surgeons during suturing. We hypothesize that surgeons who are confident in making sutures would have better mental workload reserves to allow accurate detection of distractive visual signals, compared to surgeons who are still learning laparoscopic suturing skills.

Methods: Suturing tasks were performed on a bench-top training box. Participants performed as many sutures as possible in 6 minutes while an adjacent monitor, placed 15 degrees off axis, randomly displayed 30 true visual signals. Each true signal appeared for 1 second. Ninety false signals also appeared randomly. Participants were required to identify the true signals while suturing. Participants included 12 junior residents (novices) and 9 fellows and attending surgeons (experts). Suturing was evaluated using the FLS scoring system. The secondary (visual detection) task was evaluated by calculating the rate of missing true signals and detecting false signals.

Results: Experts completed significantly more secure sutures (6 ± 2) than novices (3 ± 1 ; $P = 0.001$). The suture performance score was 50 ± 20 for experts, significantly higher than novice (29 ± 10 ; $P = 0.005$). The rate for detecting visual signals was higher for experts (98%) compared to novices (93%; $P = 0.041$).

Conclusion: Practice develops automaticity, which reduces the mental workload and allows surgeons to have more mental resources for responding to environmental factors. The ability to quantify mental resources has implications for surgical training (measuring expertise) and for measuring situation awareness ability during real surgeries.

S054

ROBOTIC ASSISTED PANCREATIC SURGERY: SINGLE SURGEON EXPERIENCE., Enrique Elli MD, Fabio Sbrana MD, Francesco Bianco

MD, Galaxy Shah MD, Pier C Giulianotti MD, Ospedale Misericordia Grosseto, Italy; University Of Illinois, Chicago

BACKGROUND: Robotic surgery had widespread in the last years. There are few reports for advanced pancreatic robotic surgery. The indication of robotic surgery for pancreatic diseases has created controversy. The purpose of this review is to analyze the indications and outcomes of robotic surgery for complex pancreatic diseases trying to give an answer to the created controversy.

METHODS: A retrospective review of the charts of all the patients that underwent robotic surgery in two different teaching institutions by a single surgeon for pancreatic diseases was performed.

Scientific Session Oral Abstracts

RESULTS: From May 2001 to September 2008 134 patients underwent robotic assisted surgery for different pancreatic pathologies. All the procedures were performed with the robotic system with the fourth arm. Seventy nine patients were female, average age was 58 (Range 25-86).. Average OR time was 325 min (120-660). There were 14 conversions to open surgery. Average length of stay was 9.3 days (3 to 103). Post operative morbidity rate was 26%, mortality rate was 2.9% (4 patients). Among the procedures performed were 50 duodenopancreatectomies, 18 spleen preserving distal pancreatectomy, 32 splenopancreatectomies, 1 total pancreatectomy and 33 patients underwent different surgical procedures for the treatment of acute and chronic pancreatitis.

CONCLUSIONS: This is the largest series of robotic pancreatic surgery presented to date. Robotic surgery allows performing difficult technical gestures that facilitate the success of pancreatic minimally invasive surgery. Preliminary results showed that pancreatic robotic surgery is feasible, safe and with a complication and mortality rates comparable to open surgery while maintaining the advantages of minimally invasive surgery.

S055

ATTENTION DISRUPTIONS TO THE OPERATING SURGEON DURING LAPAROSCOPIC CHOLECYSTECTOMY, *Nora Meehaghan MD, Erica Sutton MD, Yassar Youssef MD, Yan Xiao PhD, Tommy Lee MD, David Dexter MD, Adrian Park MD, Department of Surgery, University of Maryland School of Medicine*

Introduction: Disruptions to surgical workflow have been correlated with an increase in surgical errors and suboptimal outcomes in patient safety measures. Yet, our ability to quantify such threats to patient safety are woefully inadequate. Data is needed to gauge how the laparoscopic operating room (OR) work environment, where the visual and motor axes are no longer aligned, contributes to such disruptions. We used time motion analysis techniques to measure surgeon attention during laparoscopic cholecystectomy in order to characterize disruptive events imposed by the work environment of the OR. In this investigation, we identify attention diversions as they occur to the operating surgeon. We then quantify the diversions and also establish what occasioned them.

Methods: With approval of the institutional review board, ten laparoscopic cholecystectomy procedures were recorded with both intra- and extra-corporeal cameras (laparoscopic view and room view). The views were synchronized to produce a video that was subsequently analyzed by a single independent observer. Each time the surgeon's attention was diverted from the operation's video display, the event was recorded via time-stamp. The reason for looking away (e.g. instrument exchange) was also recorded when discernable and categorized. Disruptions were then reviewed and analyzed by an interdisciplinary team of surgeons and human factors experts.

Results: Attention disruptions fell into one of four categories: instrument exchange, extracorporeal work, equipment troubleshooting, and communication. There were on average 40 breaks in operating surgeon attention per 15 minutes of operating time. The most frequent reasons for these disruptions involved instrument exchange (38% of disruptions) and downward gaze for extracorporeal work (28% of disruptions).

Conclusions: This study reveals that there is a high distraction rate in laparoscopic cholecystectomy in the current OR work environment. Improvements aimed at reducing disruptions (and thus potentially surgical error) should center on better instrument design and realigning the axis between surgeon's eye and visual display.

S056

SIDE-TO-SIDE DUODENO-COLIC ANASTOMOSIS WITH ENDOTRACK TM PROVIDES EXCELLENT WEIGHT LOSS., *Michel Gagner MD, Dave Blaeser, Dale Spencer, Mount Sinai Medical Center, Florida International University, and EMS, Inc.*

INTRODUCTION: Partial bypass of the GI tract may promote weight loss by decreased absorption of nutrients and changes in incretins. The aim of the study was to evaluate the safety and efficacy of performing a side-to-side duodeno-colic anastomosis with a new device called EndoTrack TM.

METHODS: Seven 40-50 Kg female Yorkshire pigs were allocated to a Duodeno-colic anastomosis (DCA) with an Endotract device TM, and were compared to a control group (SHAM). Swine's weights were followed for 56 days. Gastrosopies were also performed at 8 and 28 days. Blood samples were also taken at regular intervals

(CBC and Basic biochemistry profiles). At autopsy, gross changes and histological changes of the liver, duodenum and colic samples were performed.

RESULTS: While the SHAM group gained 33.2% more weight at 56 days, the DCA group had shown a weight loss of -18.2%, for a difference of 54.4% between the 2 groups ($p < 0.05$). On pig in each group developed an incisional hernia that required treatment and one pig in the DCA group had to be autopsied at day 6 for lethargy. No specific cause was identified for this lethargy (post surgical stress?). Histological examination of the anastomosis showed normal and smooth healing, with absence of liver toxicity.

CONCLUSION: Placement of an EndoTract safely and effectively creates an anastomosis between portions of the large and small bowel. The anastomosis that is created is robust and permanent, and facilitates a partial diversion of nutrient flow and thus alters the absorption of nutrients. In this porcine model with short follow-up, a side-to-side duodeno-colic anastomosis provided excellent weight loss without apparent nutritional or aberrant histological changes.

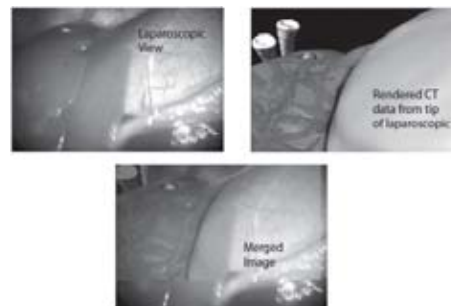
S057

AUGMENTED REALITY FOR LAPAROSCOPIC SURGERY USING A NOVEL IMAGING METHOD- INITIAL RESULTS FROM A PORCINE MODEL, *R Shekhar PhD, C Godinez MD, S Kavic MD, E Sutton MD, I George, A Park BA, Department of Surgery, University of Maryland School of Medicine*

Background: Intraoperative appreciation of visible anatomy along with awareness of underlying structures and vasculature is invaluable to the operating surgeon. The advent of minimally invasive techniques, with reduced tactile feedback and limited visual displays has only heightened the need for improved visualization of target anatomy and adjacent but visually imperceptible structures. Current laparoscopic images are rich in surface detail but provide no information on deeper features. We are developing a novel method of performing laparoscopic surgery using a 64-slice computed tomography (CT) scanner with continuous scanning capability. This study describes our work to date to produce an augmented reality (AR) image that instantaneously renders intraoperative CT images with the live images from the laparoscope.

Methods: Under an Institutional Animal Care and Use Committee (IACUC)-approved protocol, we conducted a series of CT-guided laparoscopic operations using a non-survival porcine model. A fully equipped laparoscopic surgical suite was assembled within the CT scan room. A multidisciplinary research team comprised of minimally invasive surgeons, radiologists, and biomedical engineers contributed to study design and conducted the experiments. We employ a 64-slice CT scanner with continuous scanning capability to image the surgical field approximately once per second. An infrared detection system tracked the position of a specially-equipped laparoscope in order to reconcile the laparoscopic view with the corresponding 3-D CT image. Laparoscopic operations performed included peritoneoscopy, cholecystectomy, hepatic wedge resection, and gastrotomy, with intraoperative CT scanning. Deformable image registration (alignment) techniques and low-dose reconstruction methods allow intraoperative CT scanning at 25 mAs, roughly 10 times lower than the standard diagnostic dose. Using commercially available software, we generate an AR image that merges reconstructed intraoperative CT with images from the laparoscope.

Results and Conclusions: Through a series of six operative experiments, we have amassed a data set that includes rendered video and laparoscopic images, demonstrating the feasibility of merging optical surface information with radiographically imaged deep anatomic features (Fig 1). Our method represents an accurate, instantaneous high refresh-rate approach to AR, which we have termed 'live AR.' These initial experiments represent the first use of a new surgical visualization capability, with potential to significantly enhance operative performance.





Scientific Session Oral Abstracts

S058

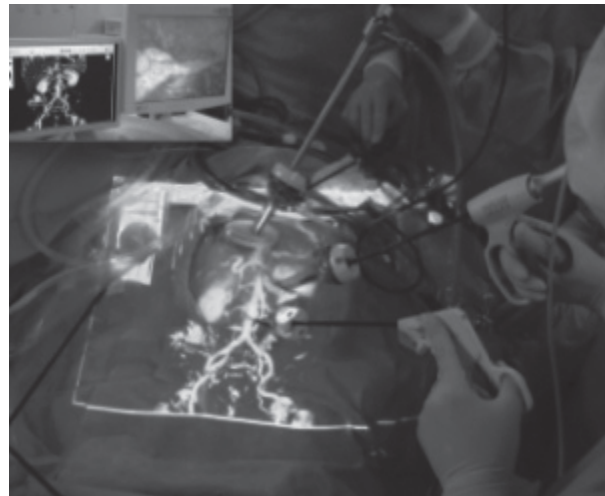
IMAGE OVERLAY NAVIGATION BY FLUCTUATION ADJUSTING ACCELEROMETER IN LAPAROSCOPIC SURGERY AND NOTES, Maki Sugimoto MD, Veterans Affairs Palo Alto Health Care System, Stanford University

Purpose: Manipulating instruments inside the human body during laparoscopic surgery and NOTES transluminal surgery can be very difficult for even well experienced surgeons due to the loss of 3D depth perception. Classical navigation techniques are often incapable of providing support in such situations, as the augmentation of the scene with the necessary artificial markers is usually cumbersome and leads to increased invasiveness. To overcome this limitations, we developed the novel virtual image overlay navigation with flattery support system by wireless motion sensing technology using fluctuation adjusting accelerometer, that fuses together the actual and the virtual space.

Methods: We subjected 20 laparoscopic surgeries and 10 NOTES procedures.

From the volume data acquired with MDCT we generated the virtual laparoscopic navigation view by using volume rendering method in OsiriX application during surgery. Surgical navigation was superimposed on the body surface projected from above the operative field. A 3-D accelerometer was attached to the endoscopes for adjusting its image fluctuation to OsiriX navigation system. We evaluated the utility of this flattery support system Results and discussions:

Volume rendering method by OsiriX could show virtual anatomies of the patients from skin level to the internal organs immediately. This situation provided the marker less registration by adjusting the physiological markers such as the navel, nipples, and the iliac bones. An operator raised surgical recognition as more intuitive navigation by wireless operation to link the change of actual field and support images. The augmented reality projection had within 10mm range error and improved hand-eye coordination. Motion sensing technology had the ability to sense both rotational orientation and translational acceleration along 3-D axes, providing six degrees of freedom, through the use of accelerometers. It could revise the visual navigation aid from preoperative imaging with a fine adjustment. Moreover it was useful for corporation the endoscopic video stream and registered on body surface when a 3D surface is intraoperatively reconstructed from volume rendering in OsiriX. There was also no complication within this study.



Conclusions: Image overlay navigation by fluctuation adjusting accelerometer can synchronize an endoscopic view and operative field with a fine adjustment by flattery support system. It improves space perception and misconception in laparoscopic surgery and NOTES.

S059

BIOLUMINESCENT ENDOSCOPIC IMAGING: TECHNICAL REQUIREMENTS OF THE CHEMISTRY AND CAMERA SYSTEM, Philip Neff MD, Bruce Bryan MD, Randall Murphy PhD, Foothills Surgical Associates, Wheat Ridge, Colorado and BioLume, Inc., Morrisville, North Carolina.

Objective: Bioluminescent chemistry can be infused as an angiography media and by developing endoscopic techniques for

bioluminescent imaging (BLI) we have previously demonstrated sensitive visualization of anatomic structures, including the biliary tree and vascular beds. In nature bioluminescence is light produced by a chemical reaction within a living organism. In BLI applications, a luciferin (the substrate coelenterazine) when combined with a luciferases (protein or enzyme) in the presence of oxygen produces visible light at the 480 nm wavelength. In this study we describe and define the chemistry of the bioluminescent coelenterazine-luciferase system and the technical specifications required of a scientific grade cooled CCD camera adapted for laparoscopic use by coupling to a standard Hopkins rod-lens. **Methods:** a human umbilical cord model was developed to allow multiple, easily repeated and standardized infusions of bioluminescent chemistry titrations in a dark laparoscopic training box. The chemistry of the renilla luciferase, gaussia luciferase and coelenterazine (BioLume, Inc.) is described. The range and ability of the camera to capture bioluminescent images was assessed. The exposure time, gain and pixel bin settings were varied using the software controls of a scientific grade CCD camera (Diagnostic Instruments, Inc.). The image processing software post capture was evaluated. In addition, umbilical cord tissue was assessed by standard fluoroscopic angiography and frozen section measurement of the specimens. **Results:** titrations of the bioluminescent chemistry determined the concentrations required for excellent imaging. Static image capture at longer exposure times but with relatively low gain and no pixel binning allows excellent anatomic visualization and definition. Dynamic imaging using a sequential image series benefits from shorter exposure times, high gain and increased bin settings. Post imaging processing with the camera software allows rapid adjustment of image intensity to maximize the image quality. **Conclusions:** Endoscopic bioluminescent imaging is a completely new way of instantly and directly imaging precarious anatomy in real time. The images obtained in this bench model define the technical requirements of endoscopic BLI and demonstrate the utility of this imaging technology.

S060

USING A FLEXIBLE ROBOTIC ENDOSCOPIC NOTES PLATFORM TRANSGASTRICALLY IN A CADAVER TO TEST ACCESS, NAVIGATION, MANEUVERABILITY AND STABILITY, Dan Eisenberg MD, Stanford School of Medicine and Palo Alto VA Health Care System

OBJECTIVE: The advancement of NOTES highly depends on the availability of suitable platforms and instruments. A NOSCAR working group has identified access, navigation, maneuverability and stability to withstand instrument forces as essential requirements for a successful NOTES platform. No platform used for NOTES to date can adequately achieve all four of these key capabilities. Here we test a novel flexible endoscopic robotic platform in a cadaver to determine how it performs with respect to these requirements.

METHOD: A highly maneuverable multi-channel flexible robotic endoscopic platform developed for NOTES was used in a transgastric NOTES procedure in an adult cadaver to test the system's ability to reach regions within the abdomen for cholecystectomy, appendectomy, oophorectomy and splenectomy. A laparoscopic surgeon was under complete control of the device throughout the procedure and was blinded to a laparoscopic camera placed for documentation. At each target organ, the platform was maneuvered via joystick to provide different camera views and tool access orientation appropriate for the surgical tasks of each procedure. Standard non-articulating endoscopic tools were used in the platform's two working channels to demonstrate the platform's ability to withstand the forces generated during dissection, clipping and tissue manipulation.

RESULTS: The platform was able to reach each target organ site without difficulty and without relying on the laparoscopic image. The platform was able to maintain stability by resisting the forces exerted by tools in the tool channels used for dissection, tissue manipulation and clipping. Visualization was determined to be adequate and the surgeon could easily reposition the platform to gain a different camera view or tool access orientation about an organ.

DISCUSSION: The access, navigation, maneuverability and stability identified as critical by NOSCAR were demonstrated by the flexible robotic endoscopic platform in this study and may therefore further the advancement and adoption of NOTES by providing four essential capabilities in a single device.

Scientific Session Oral Abstracts

S061

A NOTES SURVIVAL STUDY OF A NOVEL GASTRIC CLOSURE

DEVICE: LOOP-ANCHOR PURSE-STRING, David J Desilets (1) MD, John R Romanelli (1) MD, Vihar C Surti (2) BS, Carolanne Lovewell (1) BS, Christopher N Chapman (1) MD, David B Earle (1) MD, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA (1); Cook Endoscopy, Inc. (2), Winston-Salem, NC

INTRODUCTION: Gastric closure is a key consideration in NOTES. Numerous closure methods have been reported, but none stands out as superior. Whatever the method, it should be effective, durable, tight, and easy to perform. We report our results with a new enteric closure device: Loop-Anchor Purse-String (LAPS).

METHODS: Our method was previously described on explanted stomachs. It comprises 4 T-anchors with metal loops suspended by the loops on a single 2-0 nylon suture. For this study we used 4 female pigs weighing 40 kg. Parenteral preoperative antibiotics, orogastric lavage with dilute betadine solution, and sterile technique were used insofar as possible. A percutaneous gastric puncture was made in the stomach as for PEG placement, and a guidewire was inserted and brought out through the mouth. Pneumoperitoneum was obtained using a Veress needle. Using a standard gastroscope, the T-anchors were then arrayed in a square pattern, 1.5-2 cm on a side, around the guidewire. The tract was then dilated over the wire to 18-mm. The stomach was exited with the endoscope still over the guidewire. A minor procedure was performed in the abdomen (deployment of an endoscopic tack into the abdominal wall) and the endoscope was then withdrawn. The gastrotomy was closed by cinching the suture tightly with a pushing catheter and securing it with a press-fit metal collar. The animals were then survived for 14 days, and gross examination upon necropsy as well as histologic examination of the closure site was performed.

RESULTS: The procedure times ranged from 50 minutes to 3 hours. Three of the four animals survived the postoperative period without sequelae and behaved normally. The fourth animal was sacrificed early due to signs of peritonitis; at necropsy only a microabscess was found near the abdominal wall tack. The animals were fed Ensure the next day and were advanced quickly to standard laboratory feeds. The three pigs that survived the 14 days all gained appropriate weight. None of the three survival animals developed fever, tachycardia, or any behavioral or physical signs of peritoneal irritation. On the 14th postoperative day the animals were sacrificed and the involved areas of stomach were harvested for gross and histologic analysis. Upon gross inspection there were no signs of peritoneal inflammation, intra-abdominal adhesions, or gastric spillage. The suture, T-anchors, and press-fit collars were still present. The looped T-anchors, which had been placed transmurally, had migrated into the submucosa. Histologic examination revealed gastric wall with focal, mucosal ulcer or focal mucosal regenerative changes. Dense granulation tissue, fibrosis, and foreign body type giant-cell reaction were seen in all specimens. The animal that was sacrificed prematurely had similar histologic findings.

CONCLUSION: LAPS provides a durable closure of the gastrotomy site in NOTES. The devices migrate inward and likely will slough. Three of the four laboratory animals survived placement and thrived without infectious or other adverse sequelae. LAPS is safe and effective when used for gastric closure in NOTES.

S062

THE DEVELOPMENT AND TESTING OF A TETHERED, INDEPENDENT CAMERA FOR NOTES AND SINGLE-SITE LAPAROSCOPIC PROCEDURES

Paul Swain MD, Ralph Austin MD, Kurt Bally BS, Robert Trusty MS, The NOTES Development Group, Imperial College, London UK; Colchester General Hospital, UK; Ethicon Endo-Surgery, Cincinnati, Ohio

Background: 'Tunnel vision' associated with flexible endoscopes used in NOTES and rigid laparoscopes used in Single Site Laparoscopic (SSL) procedures can present the surgeon with a disorienting view of familiar surroundings. Because the working tools are in-line with the view in these approaches, it is also difficult to achieve adequate instrument triangulation, a critical component of successful surgical technique. A more familiar - and potentially more useful - vantage point would be from above, looking down at the surgical field, i.e. a 'Stadium View'.

Objective: Develop mobile 'stadium-view' camera prototypes that are deployable, operable and retrievable using NOTES techniques.

Materials and Methods: Cylindrical (15mm diameter, 29 mm length) prototypes were built using white light LEDs for illumination and a near-VGA (640x480) resolution CMOS camera. The prototypes

were delivered to the abdominal cavity through an overtube (Steerable Flex Trocar, Ethicon Endo-Surgery, Cincinnati, Ohio); the electronic tether for power and video signal was pulled through the abdominal wall using a 2mm rigid grasper. The prototype was attracted to the abdominal wall magnetically. Surgeons and a gastroenterologist performed the procedures in IACUC-approved porcine labs with assistance from an Olympus two-channel gastroscope. Video was acquired by both the gastroscope and the prototype camera.

Preliminary Results: Introduction of the device through the Steerable Flex Trocar into the peritoneal cavity, as well as magnetic coupling to the abdominal wall, was straightforward. Illumination was adequate to provide reasonable imagery of nearby abdominal organs. Bowel was successfully sutured laparoscopically under visualization provided by the prototype. The tether was only slightly limiting to device mobility. For example, with rigid trocars in place to acquire lap video, while magnetically manipulating the camera for a different view, the tether would hang up on the lap trocar tip and cause the camera to be released from the external magnetic attraction. Reacquiring the camera magnetically, however, was trivial. All points on the abdominal wall could be reached via the magnetic control, and the camera could be successfully aimed through abdominal palpation. Retrieval of the camera through the Steerable Flex Trocar was uncomplicated.

Conclusions/Expectations: The prototype camera provides the NOTES surgeon a point of view similar to that of a laparoscope, but would leave virtually no abdominal scar. The image quality is not currently as good as commercial laparoscopes or endoscopes, but this issue will be resolved as CMOS technology improves. The stadium view helps to overcome limitations associated with in-line visualization and working tools. Use of such a camera in NOTES or SSL could enable reduction of the number/size of ancillary trocars, reduce the size of the SSL port, and/or increase the number of working devices that can be deployed through a scope or port.

S063

SINGLE PORT CHOLECYSTECTOMY WITH THE TRANSENERIX

SYSTEM: SIMPLE AND SAFE, Aurora D Pryor MD, Lou DiBernardo MD, Duke University Medical Center, Durham, NC

Introduction: Single port or single incision cholecystectomy with current devices is limited by in-line visualization and instrumentation. A single port access system with articulating arms and strong instrumentation should minimize these issues. The TransEnterix system may facilitate safe and straightforward single port surgery.

Methods: The TransEnterix single port surgery system was used to complete laparoscopic cholecystectomy in 5 swine under animal use committee approval. Procedures were completed in sterile conditions and all animals were survived for one week postoperatively. Standard surgical clips were used for both cystic duct and artery ligation. At sacrifice, both gross and microscopic histology were obtained for assessment of surgical complications.

Results: All 5 procedures were completed successfully with the system. Operative time averaged 39.4 minutes for the procedures (18 to 66 minutes). At sacrifice, no complications were identified.

Conclusion: The TransEnterix system is safe and straightforward for completing single port cholecystectomy. Human trials should be performed.

S064

SINGLE PORT LAPAROSCOPIC CHOLECYSTECTOMY WITH THE TRIPORT: INITIAL EXPERIENCE

Thomas B Roshek MD, Philip A Omotosho MD, David B Earle MD, John R Romanelli MD, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA

Introduction: As surgeons embrace the concept of increasingly less invasive surgery, techniques using only a single incision have begun to gain traction. The TriPort system (Advanced Surgical Concepts, Wicklow, Ireland) is a single port device which allows the surgeon to perform laparoscopic surgery through a single periumbilical incision. We are attempting to ascertain if the TriPort system is a safe and reliable minimally invasive technique for laparoscopic cholecystectomy.

Methods: From March, 2008 to September, 2008, single port laparoscopic cholecystectomy was attempted in six patients and was successful in five. Data collected included demographics, operative time, complications, and reasons for conversion to standard laparoscopic surgery.

Results: The operation was completed successfully on four females and one male average age 36 (27-45). Average BMI was 34.2 (28.8-41.9), including a patient status-post laparoscopic Roux-en-Y gastric





Scientific Session Oral Abstracts

bypass. Average operative time was 70.8 minutes (51-90). There were no complications. One case required conversion to a standard four-port laparoscopic cholecystectomy, because the required traction stitch from a low-lying costal margin to the gallbladder did not provide enough traction. In addition, the distance from the port access site at the umbilicus to the gallbladder was too great to accommodate the roticulating instrument length.

Discussion: Results from our series shows the TriPort system to be a promising technique for single port laparoscopic cholecystectomy. A variety of patient demographics appear to be suited to this approach. There were no adverse outcomes in our series. In one patient, we were unable to adequately retract the gallbladder, and the instruments were not long enough to safely reach the gallbladder. In this case we successfully converted the operation to a standard four-port laparoscopic cholecystectomy. Average operative time in this series compares favorably with that of the standard four-port operation. The feasibility of single-port laparoscopic cholecystectomy is now established. However, routine application of this novel technique requires an evaluation of its safety and cost-effectiveness in larger studies. In addition, its superiority over standard laparoscopic cholecystectomy in terms of post-operative pain, cosmesis, and overall patient satisfaction requires further study. Refinements in instrumentation will further enable this novel minimally invasive approach.

S065

LAPAROSCOPIC SINGLE PORT APPENDECTOMY USING INTRAPERITONEALLY PLACED MAGNETIC CAMERA, Prashanth P Rao MD, Jeff Cadeddu MD, Daniel Scott MD, Mahesh Desai MD, Mamata Hospital, India, UT Southwestern, USA, MPUH, India

Single Port Appendectomy has been described. One of the problems of single port surgery is that there are limited valves for insertion of instruments and that the instruments tend to clash with the camera outside as the point of ingress is the same. Cadeddu and colleagues have been working on a magnetic camera that can be placed intraperitoneally and controlled by a magnet from outside. This would seem ideal for such indications, as not only does it prevent clashing with the instruments, but it also frees up a valve for use with another instrument. We present the first human experience with this camera. A young boy with acute appendicitis was subjected to single port appendectomy using the R port. The camera was placed intraperitoneally and controlled from outside by a magnet placed on the skin. It sticks to the inner parietal wall and can be moved all over the abdomen. The wire of the camera was externalized by the side of the R port. The case was successfully completed and the boy discharged the next day. The short paper describes our experience and talks about limitations of the camera and the innovations needed. Certain limitations include inability to clean the lens and angulate the lens. The cable which needs to come out can be done away with if one has a remote controlled, wireless camera. Magnetic control also means that one may not get adequate control over a thick parietal wall. With certain improvements, we feel this technique may hold a lot of promise for the future.

S066

INSULATION FAILURE IN LAPAROSCOPIC INSTRUMENTS, Paul Montero MD, Thomas N Robinson MD, John Weaver MD, Greg Stiegmann MD, University of Colorado Health Sciences Center

INTRODUCTION: Electrosurgery is used in virtually every laparoscopic operation. In the early days of laparoscopy with hybrid trocars, capacitive coupling was thought to be the major cause of laparoscopic electrosurgery injuries. Modern laparoscopic equipment has reduced capacitive coupling. Currently, insulation failure is thought to be the main cause of electrosurgery complications.

PURPOSE: (1) To determine the incidence of insulation failures. (2) To compare the incidence of insulation failure in reusable and disposable instruments. (3) To determine the location of insulation failures.

METHODS: At four major urban medical centers, reusable laparoscopic instruments were checked for insulation failure. Disposable L-hooks were collected following laparoscopic cholecystectomy and evaluated for insulation failure. Insulation failure was determined using a high voltage porosity detector set at 2.5kV. Statistical analysis was performed using Fisher's exact or chi-squared analysis; * denotes significance set at $p < 0.05$.

RESULTS: 226 laparoscopic instruments were tested (165 reusable). Insulation failure occurred more often in reusable (19%; 31/165) in comparison to disposable instruments (3%; 2/61; $*p < 0.01$). When reusable sets were evaluated, 71% (12/17) were found to have

at least one instrument with insulation failure. Insulation failure incidence in reusable instruments was similar between hospitals that routinely checked for insulation failure (19%; 25/130) and hospitals which do not routinely check for insulation failures (33%; 7/21; $p = 0.16$). The location of the insulation failure was most common in the distal third of the instruments (54%; 25/46) in comparison to the middle or proximal thirds of the instruments ($*p < 0.05$).

CONCLUSIONS: One in five reusable laparoscopic instruments has insulation failure; a finding that is not altered by whether the hospital routinely checks for insulation failure. Disposable instruments have a lower incidence of insulation failure in comparison to reusable instruments. The distal third of laparoscopic instruments is the most common site of insulation failure.

S067

PROSPECTIVE EVALUATION OF PERCUTANEOUS ENDOSCOPIC GASTROSTOMY RELATED PERITONITIS IN THE SURGICAL INTENSIVE CARE UNIT (SICU) -- A PRELIMINARY ANALYSIS, Nazneen R Billimoria MD, Rachit D Shah MD, Nabil Tariq MD, Charles J Shanley MD, James M Robbins MD, Randy J Janczyk MD, William Beaumont Hospital, Royal Oak, Michigan

Introduction: The purpose of this study was to prospectively examine the impact of technical factors during percutaneous endoscopic gastrostomy (PEG) tube placement on the development of subsequent peritonitis. Determination of whether BMI or nutritional status were independent risk factors for the development of this complication were secondary endpoints.

Methods: All patients undergoing PEG tube placement in the SICU at William Beaumont Hospital from August 2006 to January 2008 were included. Patient demographics including age, BMI, and albumin were prospectively collected and evaluated for the development of peritonitis. Technical factors including abdominal wall trans-illumination and indentation of the anterior gastric wall were graded by the surgical endoscopist as Excellent/Good/Fair/Poor. These grades were then converted into continuous numerical scores of 1/2/3/4. Overall technical difficulty of the procedure was quantified as None/Some/A lot (score 1/2/3). These 3 individual scores and the cumulative scores (all 3 combined) were recorded. Data was analyzed with SAS (version 9.1.3).

Results: Over 18 months, 110 patients had PEG tubes placed in SICU by 3 surgical intensivists. The patients' mean age was 68. 61 patients (55%) were male. Four patients (3.6%) had peritonitis from leaking of gastric contents around the PEG tube requiring a laparotomy. There was no difference between the BMI (31 ± 3.2 vs. 28.1 ± 7.6 , $p = 0.15$) and serum albumin (2.5 ± 0.5 vs. 2.7 ± 0.5 , $p = 0.45$) in the peritonitis group and the non-peritonitis group. Cumulative technical score was 6.3 in the peritonitis group and 4.7 in the non-peritonitis group (Wilcoxon's Rank test, p -value 0.043). Of the individual scores, trans-illumination was poor (score of 4) in 2 patients (50%) in the peritonitis group and 8 (7.3%) patients in the non-peritonitis group (Fisher's exact test, p -value 0.041). There was no difference in the indentation of gastric wall and overall technical difficulty score between the 2 groups (p -values 0.20 & 0.58 respectively).

Conclusion: Our prospective observations suggest a relation between certain technical factors and development of peritonitis. Trans-illumination seems to be the most important aspect of PEG tube placement and resultant peritonitis could be secondary to suboptimal approximation of anterior gastric wall to the abdominal wall. Non-significance of the BMI and serum albumin in the development of peritonitis was likely secondary to a smaller study size. A larger study with adequate power is required to validate these preliminary findings.

S068

RECOMMENDED TIMING FOR SURVEILLANCE ULTRASONOGRAPHY TO DIAGNOSE PORTAL VEIN THROMBOSIS AFTER LAPAROSCOPIC SPLENECTOMY, Tung Tran MD, Sebastian Demyttenaere MD, Gerry Polyhronopoulos MD, Chantal Seguin MD, Giovanni Artho MD, Pepa Kaneva MSc, Gerald Fried MD, Liane Feldman MD, Department of Surgery, McGill University, Montreal, Quebec, Canada

Introduction: Symptomatic portal or splenic vein thrombosis (PSVT) is a rare but potentially lethal complication of laparoscopic splenectomy (LS). Routine postoperative duplex ultrasound surveillance of asymptomatic patients can be used for early detection. The optimal timing for surveillance ultrasonography is unknown. The aim of this study was to estimate the incidence and progression of asymptomatic PSVT one week and one month after LS.

Scientific Session Oral Abstracts

Methods: Consecutive patients scheduled for LS for hematologic disease participated in this ethics committee approved study. At baseline, ultrasound or CT scan was performed and demographic and laboratory data were collected. Patients received perioperative DVT prophylaxis and underwent surveillance for PSVT using duplex ultrasonography including spectral and color Doppler B-mode technique 1 week and 1 month postop. Treatment with low molecular weight heparin and warfarin was initiated once the diagnosis was established and continued for 3-6 months. Data are reported as median (IQR) or percent.

Results: 38 of 39 patients undergoing LS in the study period enrolled in the study, with 2 subsequently excluded (one did not undergo LS due to carcinomatosis and one developed extensive lower extremity DVT and did not return for abdominal imaging), leaving 36 patients for analysis. The indications for LS were benign disease in 27 (16 had ITP) and malignant disease in 9. Hand assist technique was used for the 5 spleens >17cm in length. OR time was 120.5 (89.5-185) minutes and postop length of stay was 2 (1-3) days. PSVT was diagnosed in 7/36 patients (19.4%). 6 (16.7%) were diagnosed by 1 week, of whom one was symptomatic (fever and diarrhea). After anticoagulation, subsequent ultrasounds showed resolution or improvement in all 6 patients. 30 patients had a normal ultrasound result at 1 week. Of 27 patients who had follow-up ultrasound at 1 month, only 1/27 (3.7%) revealed a new PSVT. This patient did not return for follow-up until 6 months postop, and ultrasound then showed complete resolution without treatment.

Conclusions: The one-month incidence of PSVT after laparoscopic splenectomy was 19.4%. The high incidence justifies screening on postoperative day 7. If asymptomatic PSVT has not developed at this time, it is unlikely to develop by one month, and a subsequent screening ultrasound is not required.

S069

TREATMENT OF ULTRA-LONG SEGMENT BARRETTS USING FOCAL AND BALLOON-BASED RADIOFREQUENCY ABLATION, Melina C Vassiliou MD, Daniel C Wiener MD, Linda L Fadden RN, Cynthia L Swasey CRC, Richard I Rothstein MD, Dartmouth Hitchcock Medical Center, Lebanon, NH.

INTRODUCTION: Endoscopic radiofrequency ablation (ERFA) is being evaluated as definitive treatment for patients with Barretts esophagus (BE). Guidelines have yet to be developed for the application of this technology to patients with ultra-long segment BE (ULBE, > or = to 8cm). This study reports a single institution's experience with ERFA of ULBE with various degrees of dysplasia.

METHODS: A retrospective review of all patients undergoing ERFA in our institution from Aug. 2005 to Sept. 2008 was conducted. We identified all patients with BE > or = to 8cm. The entire segment of visible intestinal metaplasia (IM) was treated at each session using balloon-based (HALO-360) and/or plate-based (HALO-90) devices (BARRX Medical, Inc., Sunnyvale, CA, USA). Patient characteristics, clinical/pathologic findings, and treatment history were examined. Re-treatments, endoscopic mucosal resection (EMR), dilations and biopsies were performed based on endoscopic findings. Surveillance was conducted at intervals according to standard guidelines.

RESULTS: Twenty-one patients (18 males, 3 females) with a mean age of 66 years (range 50-85) were included. The average length of BE treated was 10.6 cm (± 2.3 ; range 8-14). Intramucosal carcinoma was present in 3 patients, 14 had high grade dysplasia, 3 had low grade dysplasia and one patient had IM without dysplasia. Complications for all 21 patients included mild self-limited hemorrhage (n=1), stricture (n=2), and nausea and vomiting (n=2). Twelve of the 21 patients have already had post ablation biopsies. One patient was lost to follow up and 8 patients are still in the active treatment phase. Of these patients, 75% (9/12) had a complete response (CR; no residual IM) after 3 (median) ERFA sessions. Mean follow-up time for this cohort was 15.7 months (± 9.3). Additional results are summarized in Table 1.

Pt.	BE Length (cm)	Initial path	#ERFA Rx	Current path	Follow up (months)	Other Rx	ERFA comp.
1	8	HG	3	CR	21.4	EMR	
2	12	HG	4	CR	18.4		
3	14	HG	3	CR	30.6		S
4	8	HG	2	CR	4.9		NV
5	8	HG	4	CR	26.2		
6	8	HG	5	CR	16.1	LAR	CP, NV
7	10	IMC	3	CR	25.6	EMR	
8	14	LG	3	CR	16.9		
9	8	IM	3	CR	14.1		
10	8	IMC	2	HG	5.1	EMR	
11	12	HG	2	IM	5.3		
12	12	HG	2	HG	3.8		

Abbreviations: CP = chest pain, CR = complete response, EMR = endoscopic mucosal resection, HG = high grade, IMC = intramucosal carcinoma, LG = low grade, NV = nausea and vomiting, LAR = laparoscopic anti-reflux, S = stricture

Table 1.

CONCLUSION: ERFA is safe and feasible in patients with ULBE and can be applied to the entire length of IM during one session. Eradication of BE (with or without dysplasia) can be achieved with few repeat ablations and continued, vigilant surveillance.

S070

LONG-TERM OUTCOME AFTER ENDOSCOPIC STENT THERAPY FOR COMPLICATIONS AFTER BARIATRIC SURGERY, Atif Iqbal MD, Brent Miedema MD, Steve Eubanks MD, Archana Ramaswamy MD, Nicole Fearing MD, Bruce Ramshaw MD, Stephen Caleb MS, Klaus Thaler MD, Department of General Surgery, University of Missouri Columbia, Columbia, MO

OBJECTIVE: The purpose was to analyze long term outcomes of the largest series to date treating staple line complications after bariatric surgery with endoscopic covered stents.

METHODS: All patients treated with stents for staple line complications after bariatric surgery underwent retrospective evaluation and a telephone questionnaire to assess their symptom scores. Acute postoperative leaks, chronic gastrocutaneous fistulas, and anastomotic strictures refractory to endoscopic dilation after both gastric bypass and sleeve gastrectomy were included.

RESULTS: Twenty six patients (14-leaks, 3-fistulas, 6-strictures and 3-combination of the above) were treated with a total of 55 endoscopic stents (27 polyester, 28 nitinol). Mean age was 47 yrs (19 females). Mean follow up was 15 months. There was no mortality. Mean OR time was 58 minutes. Symptomatic improvement occurred in 92% of patients. Oral feeding was started in 79% of patients within 24 hours of stenting. Healing of leak, fistula or stricture after stent treatment occurred in 22 of 26 patients (85%) at a mean of 46, 56, and 9 days for leak, fistula, and stricture, respectively. Four patients (15%), 1 with leak, 1 with fistula, and 2 with stricture had unsuccessful stent treatment, 2 required surgical intervention (1 leak, 1 fistula). At follow-up, 24/26 (92%) patients were tolerating a regular diet with 8 % recurrence rate (1stricture, 1 fistula). Stent migration was the most common complication (40%) including laparoscopic extraction for migration (2 pts, 8%) and for incorporation (1 pt, 4%). Other stent related complications were stent fracture (1 pt, 4%), stent kinking (1 pt, 4%) and enterotomy from stent removal (1 pt, 4%). Migration rate was 48% for the polyester and 32% for the nitinol stents respectively ($p<0.005$). Migration rate for single nitinol stents was 38% while for two overlapping nitinol stents was 28% ($p<0.005$). Polyester stents <15 cm in length had a migration rate of 54% compared to 41% for stents 15 cm in length. ($p<0.005$). Nitinol stents <12 cm in length had a migration rate of 40% compared to 27% for stents 12 cm in length ($p<0.005$). The migration rate was 64% for the 1st 25 stents placed while it was 20% for the next 30 stents ($p<0.005$).

CONCLUSIONS: Endoscopic stent treatment of staple line complications after bariatric surgery has a high success rate on long term follow up while allowing oral nutrition during the healing process. Stent migration continues to be a problem, but can be decreased with longer and overlapping stents.

S071

TRANSGASTRIC AND TRANSVAGINAL ENDOSCOPIC CHOLECYSTECTOMY IN HUMAN BEINGS, Gustavo Salinas MD, Lil Saavedra MD, Hellen Agurto MD, Jeffrey Marks MD, Edwin Ramirez MD, José Grande MD, Juan Carlos Tamayo MD, Victoria Sánchez MD, Minimally Invasive Surgery, Avendaño Clinic, Lima, Peru, * University Hospitals Case Medical Center

INTRODUCTION: The abdominal procedures have been performed for a long time through the anterior abdominal wall. Since the first reports in the 80's, laparoscopy has become the standard for cholecystectomy with many advantages over open procedures. Now a natural orifice approach to the peritoneal cavity may further reduce the invasiveness of surgery, either by diminishing or avoiding abdominal incisions. Several orifice routes to the abdominal cavity have been described: transgastric, transvaginal, transvesical and transcolonic. Although most experiences in a porcine model showed the possibility of these approaches, few surgeons reported experiences with humans. The authors present their experience with transgastric (TG) and transvaginal (TV) cholecystectomies in human beings.

METHODS AND PROCEDURES: Twenty seven patients (1 male and 26 females) underwent hybrid NOTES procedures from January 2007 to September 2008. The mean age was 47 yr (20-83). The BMI ranged 21-41 and ASA I-II. Transgastric cholecystectomy was performed in 15 patients and 12 patients had a transvaginal cholecystectomy.

RESULTS: The mean operative time was 139 min. Although operative

Scientific Session Oral Abstracts

times were slightly shorter in the TG group, 132 min \pm 35.7 (75-190) when compared to the TV route, 147 min \pm 31.5 (95-220), there were not significant differences between the two groups ($p=0.3$, Mann Whitney U test). This may be not real because in TV procedures we did more endoscopic steps and in TG procedures were more laparoscopic because TG is challenging. Patients were started on liquids within an hour and discharged two hours later. An overall 25 % morbidity rate and no mortality were found. The complication rates for the TG and TV groups were 26 % (4/15) and 25 % (3/12) respectively, which was not statistically significant ($p=0.5$, chi-square test). Sixty six percent of complications occurred the first year and 33 % the 2nd year of our experience. These complications were: biliary leakage, hematoma of greater curvature, abdominal sepsis, colon injury secondary to the vaginal closure, wound infection (2) and laceration of the esophageal mucosa. The hematoma required conversion to open procedure, the colon injury was repaired laparoscopically while the biliary leakage and abdominal sepsis were managed both by relaparoscopy after readmissions. The intraperitoneal fluid in the septic patient was cultured and *Streptococcus faecalis* was found. Three patients (11 %) were readmitted for biliary leakage, abdominal sepsis and pain management.

CONCLUSIONS: Transgastric and transvaginal cholecystectomies are feasible. Although these NOTES procedures were laparoscopically-assisted and current flexible endoscopes were used, it seems possible that major intraabdominal surgeries may one day be performed without skin incisions, but a learning curve is mandatory. These trends toward incisionless surgery demands coordinated research in an interdisciplinary setting, involving both surgeons and device manufacturers.

S072

TELESIMULATION IN AFRICA: AN EFFECTIVE METHOD FOR TEACHING THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY IN DEVELOPING COUNTRIES, *Allan Okrainec MD, Oscar Henao MD, Georges Azize MD, Toronto Western Hospital - University Health Network, Toronto, Canada; Hospital for Sick Children, Toronto, Canada*

Introduction: Several challenges exist with laparoscopic skills training in developing countries including long travel distances required by mentors for onsite teaching. Telesimulation (TS) is a novel concept that uses the internet to link simulators between an instructor and trainee in different locations. The purpose of this study was to determine the effectiveness of telesimulation for teaching the Fundamentals of Laparoscopic Surgery (FLS) to surgeons in Africa. **Methods:** A total of 16 surgeons from 2 centers in Botswana participated in this 10 week study. FLS Telesimulation (TS) was setup using a previously described platform for 8 surgeons in the TS group. A standard FLS simulator was available for the 8 surgeons in the self-practice (SP) group. Pre-test FLS scores were obtained during an initial trip to Botswana. Participants in the TS group had one training session per week with an FLS proctor at the University of Toronto who provided feedback and demonstrated proper technique. Participants in the SP group had access to the FLS DVD and were instructed to train on FLS at least once per week. FLS post-test scores were obtained in Botswana by a trained FLS proctor at the conclusion of the study. **Results:** Pre-test FLS scores were the same in both groups. Participants in the telesimulation group had a significantly higher post-test FLS score than those in the self-practice group (86 \pm 8 vs 52 \pm 15, $p=.001$). 100% of trainees in the telesimulation group achieved an FLS simulator certification passing score, compared to only 25% in the self-practice group ($p=.002$). **Conclusions:** We have shown that remote telesimulation is an effective method for teaching the Fundamentals of Laparoscopic Surgery in Africa, achieving a 100% FLS skills pass rate. This training platform provides a cost-effective method of teaching in developing countries, and could be used to teach laparoscopic skills anywhere in the world with internet access. Further studies are needed to validate whether telesimulation can be used to remotely and accurately score FLS for official certification purposes.

S073

3D NOTES NAVIGATION SYSTEM BY MAGNETIC SCOPE DETECTION AND OSIRIX VIRTUAL LAPAROSCOPY, *Maki Sugimoto MD, Veterans Affairs Palo Alto Health Care System, Stanford University*

Purpose: In NOTES (Natural orifice transluminal endoscopic surgery), the first barrier of the operation in the abdominal cavity is scope orientation. Particularly transgastric NOTES is regarded as

a challenging endoscopic procedure because of the unpredictable nature of scope formation and location in the abdominal cavity. These forced situations may result in an incomplete or lengthy procedure within such upside-down and narrow flexible endoscopic viewing. For overcome this limitations, we developed a novel endoscopic navigation system detecting the scope position and scope movement three-dimensionally in the abdominal cavity.

Methods and results: Survived 13 porcine and canine experiments were included in this study. After a phantom and cadaver experiments, under general anesthesia, we performed NOTES cholecystectomy, gastrojejunostomy, appendectomy, intestinal excision, and hepatectomy in transgastric and transvaginal access. We used a magnetic endoscope observation device, which displayed the shape and position of a flexible endoscope in real time throughout the examination without the use of x-rays. It based on magnetic fields generated by small coils build inside this endoscope and picked up by the built-in antenna of main unit. From this data, the computer reconstructed a schematic picture of endoscope on the display. The utility of this navigation system was evaluated.

Results: Using a low intensity magnetic field, this magnetic 3-D Imager enabled to display a real-time three-dimensional view of the position and orientation of the endoscope within the abdominal cavity, by means of electromagnetic transmission coils built into the endoscope insertion tube. Shorter procedure time was acquired. All procedures were completed without complications.

Discussions: This magnetic endoscope navigation system was useful for physicians to see the location and shape of the scope from the outside during an endoscopic examination without the risk of x-ray exposure. In clinical setting, more accurate information should be needed. We developed a new integrating navigation system that virtual 3D anatomy regenerated from MDCT data in DICOM image viewer OsiriX and 3D scope navigation could be superimposed in a monitor screen by detecting the distance between a scope position and skin surface to reveal accurate relations of the patient anatomy and scope orientation using additional magnetic markers outside the body.

Conclusions: 3D NOTES navigation system by magnetic scope detection is useful in safety and improvement of the certainty and operation time by providing a real-time 3D display of endoscope position and configuration.



S074

A MULTITASKING PLATFORM FOR NOTES; A BENCH TOP COMPARISON OF A NEW DEVICE FOR FLEXIBLE ENDOSCOPIC SURGERY AND STANDARD DUAL CHANNEL ENDOSCOPE *

***SUPPORTED BY A NOSCAR GRANT (2006),** *Georg O Spaun MD, Bin Zheng, Lee L Swanstrom, Legacy Health System, Portland, Oregon*

Background: Complex surgery requires precise, independent coordination of two instruments that can perform multiple tasks such as traction and counter traction, precise dissection, and tissue approximation. All of these are difficult to achieve with standard dual channel scopes, which have been used for most of the human NOTES cases today. The development of a multitasking platform is considered essential for the advancement of NOTES. A new endoscopic platform with two independent end-effectors, each with 5 degrees of freedom, and an ergonomic user interface has been developed to address these needs. We hypothesized that this new platform would improve performance for bimanual coordination compared to a standard dual channel scope.

Methods: Task 1 required 12 individuals to perform an identical bimanual bench top coordination task with 2 different devices: a dual channel endoscope (GIF 2T160) and the EndoSamurai prototype (both Olympus, Tokyo, Japan). Participants were separated into 3 groups: novice endoscopists ($n=2$), surgeons with less than 1000 endoscopies ($n=7$), surgeons with NOTES experience and more than 1000 endoscopies ($n=3$). A complex bimanual coordination task was used (Pin transfer). A total of 12 pins had to be placed in

Scientific Session Oral Abstracts

a predetermined order. Performance was measured by movement speed and accuracy. Comparisons were made between the 2 devices and the 3 groups. Task 2 was to test the feasibility of performing a reliable intracorporeal suture in a NOTES simulation. This task was only feasible with the EndoSamurai. Task performance was contrasted between the 3 groups participants.

Results: Task 1: Overall performance speed was significantly faster using the EndoSamurai (304 \pm 125 sec vs. 867 \pm 312 sec; $P < 0.001$). In detail (time in seconds): (experts: 226 \pm 41 vs. 620 \pm 277; surgeons: 333 \pm 152 vs. 930 \pm 283; students: 318 \pm 83 vs. 1021 \pm 423). Also accuracy (the number of pin drops) was significantly better using EndoSamurai (0.4 vs. 1.8; $P = 0.006$).

Task 2: All 12 participants completed a reliable suture using the EndoSamurai (experts: 275 \pm 35 sec; surgeons: 482 \pm 143 sec; students 558 \pm 384 sec).

Conclusions: The EndoSamurai enhances performance times in complex surgical tasks, compared to the conventional therapeutic endoscope. Independent movement of 2 instruments, each with extra degrees of freedom, seems critical to the design of new surgical operating systems for NOTES.

S075

TISSUE APPPOSITION SYSTEM (TAS) - NEW TECHNOLOGY TO MINIMIZE SURGERY FOR ENDOSCOPICALLY UNRESECTABLE COLONIC POLYPS, C P Delaney MD, B J Champagne MD, J M Marks MD, V Obias MD, L Sanuk MD, B Ermlich RN, Chak A MD, Division of Colorectal Surgery and Department of Gastroenterology*, University Hospitals Case Medical Center, Cleveland, Ohio, USA

Introduction: This study reports the first clinical series using the TAS device in a feasibility study of endoscopic polypectomy as an alternative to laparoscopic colectomy (LC) for endoscopically unresectable polyps. TAS is a novel T-tag system for endoscopic placement of sutures which facilitates closure of larger defects from advanced endoluminal or transluminal endoscopic procedures. Such novel instrumentation may reduce patient risk and accelerate recovery.

Methods: After IRB approval, patients with endoscopically unresectable polyps who would otherwise require LC were enrolled. The polyp site was visualized by colonoscopy and resected with laparoscopic assistance, if necessary taking some muscularis during endoscopic mucosal resection (EMR) or submucosal dissection. After confirming benign disease by frozen section, the polypectomy site was closed by TAS (Ethicon Endo-Surgery) under laparoscopic control to avoid injury to surrounding structures. Check colonoscopy was done at 3 months.

Results: Seven patients were recruited (five male; mean age 66 years). Polyps were from 20 to 50mm in diameter (mean 30mm), six were in the right colon, and three were on the mesenteric border of the bowel. Final pathology was benign in all cases. Mean EMR time was 29 minutes, mean time taken for TAS was 37 minutes, and mean total operative time was 129 minutes. Two TAS procedures required conversion to LC (one unresectable polyp and one device failure). Five TAS procedures were completed, with a mean hospital stay of 1.2 days, and no complications. Follow-up colonoscopy revealed complete healing in all cases, with no recurrence of polyp to the current time. One patient (initial 5cm sigmoid polyp) had a very mild asymptomatic stricture in the sigmoid colon.

Conclusion: This initial human experience demonstrates that TAS can be used safely in the colon under laparoscopic control. TAS permits safe closure of defects after endoscopic polypectomy of selected and otherwise unresectable polyps, thereby avoiding the need for LC, and permitting rapid recovery with short hospital stay.

S076

EVALUATION OF A VISCEROTOMY FORMATION AND CLOSURE DEVICE FOR NATURAL ORIFICE SURGERY IN A SURVIVAL MODEL, Danny A Sherwinter MD, Maimonides Medical Center, Department of Minimally Invasive Surgery, Brooklyn, N.Y.

Introduction: The most challenging of the many hurdles surgeons must overcome to safely perform NOTES is viscerotomy closure. The perfect device must be easy to deploy, can be used on any viscera, and will create a rapid, reliable and durable closure. To date, new devices created for this purpose have fallen well short of these goals. A novel device was used in a survival canine study to confirm adequacy of gastric closure and rapidity of deployment.

Materials and Methods: Five mongrel dogs undergoing a transgastric intraabdominal surgery were used for this study. A Surgassist (PMI, Langhorne, PA) powered circular stapler (EEA) modified with an auger tip and pre-mounted suture was used to

create and then close the gastrotomy through which the procedure was performed. Total time for deployment and closure was calculated. Each animal was survived for 14 days, euthanized and a necropsy carried out. Cultures of a random site within the peritoneal cavity and at the site of the gastrotomy were obtained. In addition a visual inspection of the peritoneal cavity was performed and the site of closure was sectioned for histologic evaluation.

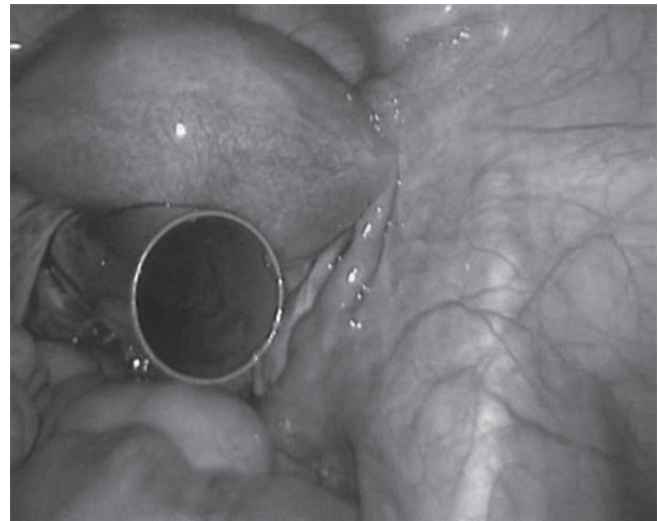
Results: Deployment and closure of the device was successful in all subjects. All animals survived for the two week study period without signs of sepsis. The mean time for deployment and closure was 4.8 minutes. At necropsy the closures were found to be intact and re-epithelialized. No intraabdominal abscesses were found and all cultures had no growth. Adhesions at the gastrotomy site were found in four out of five animals.

Conclusions: The prototype transvisceral purse-string device consistently produced a safe and reliable closure. With minimal practice it can be deployed and cinched closed rapidly. This study provides further evidence that this new device may be a promising option for use in NOTES.

S077

HYBRID NOTES CHOLECYSTECTOMY: PROSPECTIVE HUMAN SERIES, Angel Cuadrado-Garcia, MD PhD, Jose F Noguera, MD PhD, Jose M Olea-Martinez MD, Rafael Morales MD, Carlos Dolz, MD PhD, Luis Lozano MD, Jose-Carlos Vicens MD, Servicios De Cirugia Y Ap. Digestivo, Hospital Son Llatzer (Palma De Mallorca, Spain)

Introduction. Natural orifice transluminal endoscopic surgery (NOTES) makes it possible to perform intraperitoneal surgical procedures with a minimal number of access points in the abdominal wall. It is not yet possible at the present time to perform these interventions without the help of abdominal wall entryways, so these procedures are hybrids, a fusion of minilaparoscopy and transluminal endoscopic surgery. In this paper we present a prospective clinical series of 25 patients who underwent transvaginal hybrid cholecystectomy for cholelithiasis.



Methods. This was a prospective clinical series of 25 consecutive female patients, non-randomly chosen and without a control group, who underwent a fusion transvaginal NOTES and minilaparoscopy procedure with two trocars for cholelithiasis. One was umbilical and measured 5 mm, and the other was in the right upper quadrant and measured 3 mm. Results. The scheduled surgical intervention was performed on the 25 patients in whom it had been indicated. There were no intraoperative complications. One patient had mild hematuria that resolved in less than 12 hours; there were no other complications after an average follow-up period of 140 days. 20 patients were discharged in 24 hours, and 5 were discharged less than 12 hours after the procedure. Discussion. Hybrid transvaginal cholecystectomy is a good surgical model for minimally invasive surgery, a combination of NOTES and minilaparoscopy. It can be performed in surgical settings where laparoscopy is practiced regularly, using the instruments normally used for endoscopy and laparoscopic surgery. Owing to the reproducibility of the intervention and the ease of vaginal closure, hybrid transvaginal cholecystectomy will permit further development of NOTES in the future.



Scientific Session Oral Abstracts

S078

GYNECOLOGIC STATUS AFTER NOTES TRANSVAGINAL CHOLECYSTECTOMY, Alberto R Ferreres PhD, Santiago Horgan MD, Julieta Paleari MD, Anibal J Rondán MD, Oscar Laudanno MD, Mark Talamini MD, Department of Surgery, University of Buenos Aires and Department of Minimal Invasive Surgery, University of California, San Diego

Background: the development of NOTES procedures and its clinical application raise issues regarding the ways of access to the abdominal cavity. The transvaginal access through posterior colpotomy has been widely used by gynecologists for the treatment of several conditions and eliminates the disadvantages associated with other NOTES approaches (transgastric, transrectal and transvesical).

Objective: assessment of the gynecological impact, both anatomical and functional, of the transvaginal NOTES access.

Methods and material: within a research protocol agreement between the Department of Surgery of the University of California, San Diego and the Department of Surgery of the University of Buenos Aires (Bocalandro Hospital) with IRB and approval of the Ethics Committee, 22 female patients were operated at this last institution between August 2007 and September 2008. The patients fulfilled the following requirements: a) symptomatic gallbladder stones, b) absence of common bile duct obstruction, c) previous pregnancy, d) negative pregnancy tests, e) mini- mental state evaluation of 14 or higher. The gynecologic screening included: a) thorough interrogation, b) examination including colposcopy, c) pelvic and transvaginal ultrasound.

A transvaginal NOTES cholecystectomy was attempted in the 22 patients with a hybrid technique: with laparoscopic control via a 5 mm umbilical trocar a 2 way trocar was inserted through the right posterior vaginal cul de sac and endoscope, forceps and diverse instruments were inserted. Dissection of the cystic elements (duct and artery) and the Calot's triangle was performed with electrocautery, scissors and Maryland forceps through the umbilical port, in a laparoscopic fashion. A 5 mm ligacip instrument was introduced for placing titanium clips in the biliary and arterial structures. Once the gallbladder was divided from its attachments it was removed through the vagina. The access was closed with a running suture of absorbable vycril 2/0.

The postoperative follow up included gynecologic assessment at postoperative days 7, 30 and 60. The first 8 patients could resume normal sexual activity after 15 days and the remaining 14 have to wait 30 days. The evaluation included: guided questionnaire (patients' satisfaction with the procedure, restart of sexual activity, spontaneous pain, dyspareunia), physical examination and colposcopy to assess healing, presence of anatomical injuries, vaginal secretion and other alterations.

Results: the operation with the NOTES hybrid technique could be completed in 21 of the 22 patients (95 %). In the remaining case the operation had to be performed laparoscopically due to pelvic adhesions (5 previous cesarean sections). One case (# 6) required a minilaparotomy through a previous Pfannestiel incision for checking hemostasis of the vaginal cul de sac.

The systematic assessment prove adequate healing of the vaginal access with no local complications as well as absence of granulomas, hematomas, adhesions or retractions

Two patients restarted sexual relations before the 15 days prescribed, and the rest followed compliance with the indications. None of the patients refer or mention dyspareunia. Two patients got pregnant after the procedure and one underwent a normal birth delivery without complications.

Conclusions: the transvaginal NOTES access proves to be safe, with excellent outcomes, no complications and void of negative impact in the gynecologic and sexual aspects.

S079

USING EXTERNAL MAGNET GUIDANCE AND ENDOSCOPICALLY PLACED MAGNETS TO CREATE SUTURE-FREE GASTRO-ENTERAL ANASTOMOSES, Christopher J Myers MD, Benjamin Yellen PhD, John A Evans MD, Eric J DeMaria MD, Aurora D Pryor MD, Duke University Medical Center, Durham, North Carolina

PURPOSE: To facilitate endolumenal and natural orifice procedures, we evaluated a novel technique using external and endoscopically placed magnets in forming suture-free gastro-enteral anastomoses.

METHODS: Seven anesthetized adult swine underwent endoscopic placement of differently sized magnets into the small bowel and stomach. Using external magnets, the endoscopically placed internal

magnets were brought into opposition under endoscopic view. After 1 to 2 weeks, the pigs were sacrificed and analyzed. At laparotomy and under sterile conditions, peritoneal cultures were taken. The anastomoses were evaluated endoscopically and tested using the air insufflation test. Finally, the anastomoses were resected and evaluated microscopically.

RESULTS: Average operative time for endoscopic placement of magnets in small bowel and stomach in 7 swine was 34.3 +/- 14.8 minutes. Within the initial set of pigs, one pig did not form an anastomosis due to the magnets being too large to pass through the pylorus at the time of attempted magnet placement. Another pig's post-operative course involved constipation for several days requiring additional fluids and fiber supplementation. Despite normal physical exam and activity, radiologically, the pig was determined to experience an ileus without evidence of obstruction.

Upon laparotomy, the anastomosis between stomach and small bowel involved the colon without adhesions, obstruction, leak, infection or abscess. The peritoneal culture was negative. Due to these complications, our magnet size was decreased and our technique altered to include 2 external magnets, first, attracting the small bowel and stomach to the anterior abdominal wall and then bringing the 2 endolumenally placed magnets into opposition, avoiding other intra-abdominal organs. Using these alterations, 5 of 7 swine experienced uncomplicated post-operative courses forming patent, leak free (via air insufflation test), anastomoses between stomach and small bowel. All cultures were negative except one with scant growth of staphylococcus aureus and one with scant growth of coagulase negative staphylococcus, presumably both contaminants.

CONCLUSIONS: Endoscopically placed magnets with external magnet guidance are feasible and novel to forming patent gastro-enteral anastomoses without abdominal incisions or sutures. External magnetic guidance is essential for avoiding inadvertent trapping of other intra-abdominal structures.

S080

ESOPHAGEAL MUCOSAL RESECTION DIAGNOSTICS, Matthew G. Cusick MD, J Kuhn MD, J C Campbell RN, M Arnold RN, R Meyer MD, J S Burdick MD, Baylor University Medical Center

INTRODUCTION: Endoscopic four-quadrant forceps biopsy of esophageal dysplasia can be inaccurate due to sampling of <1% of the esophageal mucosa. Esophageal mucosal resection (EMR) may be a more accurate diagnostic tool due to larger and deeper sample sizes.

METHODS: IRB approved review of a Barrett's registry database of esophageal neoplasia. The patients were seen from Jan. 2003 to Sept. 2008 although care may predate this time period.

RESULTS: 125 patients were referred for endoscopic therapy of esophageal dysplasia or cancer. 86 patients had follow-up biopsies or surgery after their first EMR with a median follow-up of 10.5 months (range 1-86). The final diagnosis is adjudicated by follow-up with EMR, forceps biopsies, or surgery.

Outside Diagnosis	First EMR	Final diagnosis with more severe pathology
13 LGD	4 no dysplasia	0
	3 LGD	0
	6 HGD	0
56 HGD	8 no dysplasia	1 - HGD
	11 LGD	4 - HGD
	26 HGD	2 - Cancer
	11 Cancer	N/A
17 Cancer	1 HGD	0
	16 Cancer	N/A

7 patient's initial EMR had a more severely dysplastic pathology on follow-up. 5 of these were inadequate resections; 3 due to patient intolerance requiring early termination, 1 due to bleeding not allowing further biopsy, and 1 due to mucosa not suctioning normally. Despite these 5 inadequate resections, EMR has an accuracy of 92%. EMR with adequate biopsy has 98% accuracy. 7 patients went to surgery and surgical pathology had equally or less severe dysplasia than the EMR diagnoses. **CONCLUSIONS:** EMR is a powerful diagnostic tool for esophageal dysplasia and has 98% accuracy but needs to be repeated in 6% of cases for various reasons.

S081

PER ORAL STAPLED FUNDOPPLICATION WITH THE MEDIGUS SRS DEVICE, Aviel Roy-Shapira MD, Amol Bapaye MD, Menash Sonnenschein MSc, Ben Gurion University, Beer Sheva, Israel; Deenanath Maneshkar Hospital and Research Center, Pune, India; Medigus Ltd, Omer, Israel

Scientific Session Oral Abstracts

We are presenting a one year follow up of the initial experience with a transoral method for creating an anterior fundoplication (Dor-Thal) using the MediGus endoscopic stapling system (SRS)

The device is a stand alone single use flexible endoscope, which incorporates an ultrasonic range finder and a surgical stapler. The stapler fires a quintuplet of standard B shaped 4.8mm titanium staples. Using the device, a single operator can staple the fundus of the stomach to the esophagus, in 2-3 locations, 2-4 cm above the GE junction covering 90-210 degrees of the esophageal circumference. The result is an anterior partial fundoplication virtually identical to a Dor-Thal operation, with restoration of the gastroesophageal flap valve to normal.

Methods: In this prospective single arm study, 13 subjects with GERD were treated with the SRS device. Subjects were followed for up to 18 months. The main success criterion was reduction by at least 50% in GERD-HRQL scores. Secondary criteria included reduction of PPI usage, and reduction of acid exposure (% time pH < 4).

Results: There were 11 men and 2 women with a mean age of 43.3 years (23-64), all were on daily PPI, and the median duration of GERD symptoms was 2.5 years. The procedure was done under general anesthesia. PEEP was used to reduce the hiatal hernia, if present. Four subjects had two staplings, covering 90-100 degrees of the esophageal circumference. 9 subjects had 3 staplings (100-210 degrees). Median procedure times were 12 min (10-51) for the 1st stapling, 15 min (8-42) for the 2nd stapling, and 17 min (10-35) for the 3rd stapling. There was one procedure related adverse event - benign pneumoperitoneum - which resolved spontaneously within 48h.

12/13 (92%) reduced their GERD-HRQL scores by 50% or more. One improved from 29 to 15 The median GERD-HRQL scores dropped from 24 (10-38) to 5 (1-15). Median time pH<4 was reduced from 11% (5-49) to 5.8% (1-27) (p < 0.002 signed rank test). At 12 months, 11/13 subjects were off daily PPI, and 8/13 were off all anti-secretory drugs. There was no dysphagia or gas bloating

Discussion: These results are far superior to any other published results with endoluminal methods and are on par with the results of laparoscopic anterior fundoplication. This single operator method has the potential to provide a viable endoluminal, incision-less, solution for GERD.

S082

REDUCING THE UNEXPECTEDLY HIGH RATE OF INJURIES CAUSED BY NOTES GASTROTOMY CREATION. Dae Kyung Sohn MD, Denise W Gee MD, Brian G Turner MD, Field F Willingham MD, Patricia Sylla MD, Sevdnur Cizginer MD, Yusuf Konuk MD, William R Brugge MD, David W Rattner MD, Massachusetts General Hospital, Boston, MA.

INTRODUCTION: This study was conducted to identify the incidence and types of complications related to gastrotomy creation with the needle knife puncture and balloon dilatation technique for NOTES access to the peritoneal cavity.

METHODS AND PROCEDURES: Between May 2007 and August 2008, 113 NOTES experiments were performed at a single institution with transgastric endoscopic access achieved in 76 animals. A total of 58 gastrotomies were created using the needle knife puncture and balloon dilatation technique without laparoscopic observation and 18 gastrotomies were created under laparoscopic visualization after CO2 insufflations through a laparoscopic port. In all cases, a needle knife (Cook Medical Inc., Winston-Salem, NC) with an electrosurgical current of 25W coagulation and/or 25W cut and a CRE balloon (Boston Scientific, Natick, MA) dilated to 20mm were used to create the gastrotomy. All complications were collected prospectively and reviewed from laboratory medical records, operative reports and necropsy findings.

RESULTS: NOTES gastrotomy-related complications occurred in 10/76 (13.2%) animals. Major complications occurred in 6 animals (7.9%), including 4 splenic lacerations, a mesenteric tear and a fatal diaphragmatic injury. Minor complications occurred in 4 animals (5.3%), including three abdominal wall injuries and minor gastrotomy site bleeding. When pre-gastrotomy laparoscopic guidance was used only one injury occurred in 18 animals (5.5%), but 9/58 (15.5%) gastrotomies performed without laparoscopic visualization caused some types of injury. The difference although seemingly meaningful did not achieve statistical significance. No learning curve affect could be identified.

CONCLUSION: Injuries to adjacent viscera occur more often than is reported with the traditional transgastric needle knife NOTES access technique. Gastric punctures should be made either with laparoscopic visualization or by other techniques such as the PEG approach or non-cutting devices to reduce the incidence of visceral injury associated with transgastric peritoneal entry.

S083

DIAGNOSTIC TRANSGASTRIC ENDOSCOPIC PERITONEOSCOPY: EXTENSION OF INITIAL HUMAN TRIAL FOR STAGING OF PANCREATIC HEAD MASSES, Peter N Nau MD, Benjamin Yuh

BA, Peter Muscarella Jr. MD, E. Christopher Ellison MD, Joel Anderson MD, Lynn Happel MD, W. Scott Melvin MD, Jeffrey W Hazey MD, Division of Minimally Invasive Surgery - Department of General Surgery, The Ohio State University School of Medicine, Columbus, OH USA

OBJECTIVE(S): We validated Natural Orifice Translumenal Endoscopic Surgery (NOTES) in a human trial of ten patients undergoing diagnostic transgastric endoscopic peritoneoscopy (DTEP) for staging of pancreatic head masses. Reported herein is an update with 10 additional patients.

METHODS: Patients in this IRB approved human trial were scheduled to undergo diagnostic laparoscopy for abdominal staging of a pancreatic mass. Findings of traditional laparoscopic exploration were compared to that of transgastric endoscopic peritoneoscopy (TEP). A second surgeon, blinded to the laparoscopic findings, performed TEP using a therapeutic gastroscope. Diagnostic findings, operative times and clinical course were recorded in 20 patients and compared to findings at staging laparoscopy. Definitive care was rendered based on the findings at laparoscopy.

RESULTS: Twenty patients underwent diagnostic laparoscopy followed by successful DTEP under laparoscopic guidance. The average time for completion of diagnostic laparoscopy was 10 minutes compared to 21 for the transgastric route. Experience acquired during the initial 10 procedures equated to a 7.4 minute decrease in TEP time in the second 10 cases. DTEP corroborated laparoscopic findings for surgical decision making in 19 of 20 patients (95%). Peritoneal or liver biopsies were obtained in three patients by traditional laparoscopy, and one by transgastric endoscopy. Eighteen patients underwent a pancreaticoduodenectomy. Two palliative gastrojejunostomies were performed. There were no significant complications related to either the endoscopic or laparoscopic approach.

CONCLUSIONS: This study supports our previous conclusions that the transgastric approach to diagnostic peritoneoscopy is feasible, safe and accurate. Technical issues, including visualization, intra abdominal manipulation and gastric closure require further development. Investigation as multicenter trial without laparoscopic visualization with comparison to a historical cohort of staging laparoscopy is essential to validate this use of NOTES.

S084

CLINICAL EXPERIENCE WITH A MULTIFUNCTIONAL FLEXIBLE SURGERY SYSTEM FOR ENDOLUMINAL, SINGLE PORT AND

NOTES PROCEDURES, Santiago Horgan MD, Georg Spaun MD, Mark Talamini MD, Alberto Ferreres MD, Garth Jacobsen MD, Kari Thompson MD, John Cullen MD, Lee Swanstrom MD, UCSD, San Diego CA, Legacy Health System, Portland OR, Hospital de Clinicas, Buenos Aires, Argentina

Introduction: Single port and incisionless surgical approaches hold the promise of fewer complications, reduced pain, faster recovery and improved cosmesis compared to traditional open or laparoscopic ones. The ability to select an access approach (i.e., endoluminal, single port, trans-vaginal or trans-gastric) with one platform may be important to optimizing individual patient results.

We report our results utilizing these 4 separate surgical approaches tailored to 3 different therapeutic procedures, all with use of a single flexible platform (EndoSurgical Operating System™ (EOS)).

Methods: Following IRB approval, the EOS was used to perform 9 cholecystectomies (trans-vaginal (TV) access, n=4; trans-gastric (TG) access, n=4; single port trans-umbilical (TU) access, n=1); 2 appendectomies (TG access, n=2); and 18 gastric pouch and stoma reductions in post-Roux-En-Y gastric bypass (RYGB) patients (endolumenal (E) access). TG and TV procedures included use of 1-3 trocars. Recorded data included safety, procedural success, operative time, patient pain assessment at discharge (0-10 scale), and length of hospitalization.

Results: Procedural success was achieved for 16/18 endolumenal, 1/1 single port and 10/10 NOTES procedures. 5/10 NOTES procedures only required use of 1 small trocar. Mean operative times were 79 mins. for pouch + stoma reduction, 171 mins. for cholecystectomy and 274 mins. for appendectomy. 27/29 patients were discharged in < 24 hours. Average pain scores were .44 (pouch + stoma reduction), 1.3 (cholecystectomy) and 2.5 (appendectomy). There were no significant complications. The EOS ergonomics allowed the surgeon to interface



Scientific Session Oral Abstracts

with the system using an endoscopic and/or laparoscopic orientation.
Conclusions: Availability of a multifunctional, flexible surgery platform provides a choice of single port or incisionless surgical approaches with the potential to reduce complications, pain, and recovery time while improving cosmesis.

S085

SURVIVAL STUDY OF NOTES RECTOSIGMOID RESECTION USING TRANSANAL ENDOSCOPIC MICROSURGERY (TEM) WITH OR WITHOUT TRANSGASTRIC ENDOSCOPIC ASSISTANCE IN A SWINE MODEL. Patricia Sylla MD, Dae K Sohn MD, Sevdnur Cizginer MD, Yusuf Konuk MD, Brian Turner MD, Denise W Gee MD, Field W Willingham MD, Christopher Hoffman BA, Mayle Hsu MD, Mari Mino-Kenudson MD, William R Brugge MD, David W Rattner MD, Massachusetts General Hospital, Boston, MA

INTRODUCTION: Our group has previously demonstrated the feasibility of NOTES rectosigmoid resection in a swine cadaver model using TEM alone or in combination with transgastric endoscopic assistance to extend the length of colon mobilization. **METHODS:** A survival study of transanal endoscopic rectosigmoid resection with stapled coloanal anastomosis was conducted in swine using TEM (n=8) and TEM combined with transgastric endoscopic assistance (TEM+TG, n=8). Gastrotomies were created using a needle knife and balloon dilatation technique, and closed using T-tags. Operative outcomes were evaluated and compared between the groups using Student's t test. All animals were survived for 2 weeks and necropsy findings were recorded. **RESULTS:** The mean preoperative weight was 42.4kg (range 39-48). In the TEM group, the mean operative time was 100.6 minutes (range, 80-120) which included 59.4 minutes to complete endoscopic rectosigmoid mobilization (range, 40-75). The mean length of colon mobilized transanally was 10.4cm (range, 8-13) and the specimen length was 6.2cm (range, 4-8). In the TEM+TG group, the mean operative time was 254.4 minutes (range, 205-355, p<0.05 relative to the TEM group) including 64.4 minutes for transanal dissection using TEM (range, 40-95, p=NS), and 173.1 minutes for transgastric endoscopic dissection including access and gastrotomy closure (range, 120-295). The mean length of colon mobilized was 15.1cm (range, 14-18, p<0.05) including 9.6cm mobilized using TEM (range, 8-13, p=NS), and an additional 5.5 cm (range, 4-7) mobilized using transgastric endoscopic assistance. The mean specimen length was 9.1cm (range, 7-12, p<0.05). There was no intraoperative organ injury or significant bleeding in either group. Small anastomotic defects were noted along the posterior staple line in one TEM and two TEM+TG animals which were repaired with sutures. There were no postoperative complications or mortality. At necropsy, the animals had gained an average 2.6kg (range, -2 to +6). A minimal amount of clear ascites was noted in all animals with no evidence of abscess, hematoma or organ injury. All staple lines were healed and located an average 3.6cm from the anal verge (range, 3-4.5). Gastrotomy closure sites were all intact with adhesions noted in 3 animals. Histopathology analysis showed healthy granulation tissue at all anastomoses and gastrotomy closure sites. **CONCLUSIONS:** NOTES rectosigmoid resection using transanal endoscopic approach with or without transgastric endoscopic assistance is feasible and safe in a porcine survival model. Transgastric endoscopic assistance significantly prolongs the operative time but extends the length of rectosigmoid that can be mobilized transanally without incurring additional morbidity.

S086

POSTERIOR RETROPERITONEOSCOPIC ADRENALECTOMY IN LARGE ADRENAL TUMORS: A COMPARISON TO THE STANDARD ANTERIOR LAPAROSCOPIC TECHNIQUE. ANDREAS KIRIAKOPOULOS MD, DIMITRIOS TSAKAYANNIS MD, DIMITRIOS LINOS MD, 1st Surgical Clinic, Department of Surgery, ??Hygeia?? Hospital, Athens, Greece

Background: Posterior retroperitoneoscopic adrenalectomy comprises an alternative option in minimally invasive adrenal surgery. Since the main contraindication to the retroperitoneal access seems to be the presence of a large tumor mass, we prospectively compared the posterior endoscopic technique to the laparoscopic in a case-controlled setting.

Patients: From May 2008 to September 2008 eleven patients with large adrenal tumors (mean size: 5.5 cm, range 4.0-7.0) underwent posterior retroperitoneoscopic adrenalectomy by the same group of surgeons. Operative time, intraoperative blood loss, complications, hospital stay, time to oral intake, postoperative pain and cost were compared to eleven laparoscopic patient controls with similar demographic and histopathological characteristics. Statistical analysis

was based on [chi] 2 test and Wilcoxon rank sum test.

Results: Mean \pm SD operative time was reduced in the retroperitoneoscopic compared to the laparoscopic group (128.1 \pm 37.5min vs 145.6 \pm 47.5min, P> 0.05) but not in a statistically significant manner. The mean intraoperative blood loss was less for the retroperitoneoscopic group (30 \pm 4.9ml vs 120 \pm 7.7 ml, P<0.05). Pain assessed by the frequency of postoperative analgesic use was significantly lower for the retroperitoneoscopic group. Mean hospital stay was better than the laparoscopic group (2.1 \pm 0.35 days vs 3.2 \pm 0.22days).

Clear liquid diet was instituted on the same afternoon for the retroperitoneoscopic group in contrast to the next morning for the laparoscopic group. A specific complication attributed to the posterior approach was a lateral abdominal swelling that persisted for several days postop but without any other untoward clinical effect.

The cost of the posterior approach was significantly less than that of the laparoscopic technique.

Conclusions: Posterior retroperitoneoscopic approach for large adrenal tumors seems to be as safe as well as marginally faster compared to the laparoscopic technique. However, it was clearly better in terms of postoperative pain and hospital stay in our small series. In association with the significantly reduced operative cost, the retroperitoneal approach has found a steady place in the management of patients with large adrenal tumors in our Institution.

S087

LAPAROSCOPIC ADRENALECTOMY - INDICATIONS AND RESULTS. Maciej Otto PhD, Jacek Dzwonkowski, Tomasz Ciążka, Hamid Feiz Allah Poor, Department of General, Vascular and Transplant Surgery. Medical University of Warsaw

Laparoscopic adrenalectomy (LA) as a method of treatment of adrenal pathology confirmed its efficiency and safety. The aim of the study is to present our possibility and results in adrenal surgery.

Material and method: From 29.10.1997 to 31.07.2008 we performed 440 LA in 428 patients. The mean size of tumor was 41,3 mm (from 7 to 130 mm). Lateral transperitoneal approach was used. The indication for LA were 205 (47,9%) non-functioning incidentalomas with the diameter <8 cm without malignancy signs. 10 (2,3%) metachronic metastases from other origin. In 223 (52,1%) cases the functioning tumors were indicated. 70/223 (31,4%) patients with hypercortisolemia (Cushing's syndrome -32, Cushing disease - 3 and PreCushing syndrome \pm V 35), 64 (28,7%) with Conn's syndrome, 88 (39,5%) with pheochromocytoma (1-extra-adrenal) and 1 (0,4%) with adrenogenital syndrome. These patients were prepared before laparoscopy with inhibitors of steroidogenesis, alpha and beta blockers and other drugs to normalize the potassium level and blood pressure. Despite qualifying upper limit size of 8 cm for incidentalomas, in 19/205 (9,3%) patients the real size of the tumor found out to be \geq 8cm. We performed 416 (97,2%) unilateral LA, 12 (2,8%) bilateral LA (simultaneous \pm V 10, two-staged \pm V 2), 2 (0,5%) \pm V sparing LA.

Results: The mean operating time of the unilateral LA was 138,6 minutes (60-390), simultaneous bilateral LA was 266,5 minutes. Conversion was necessary in 12 (2,8 %) cases, 2 on the left side and 10 on the right. LA. Complications were noted in 15 (3,5%) patients (3 intraoperative, 12 postoperative). The time of the LA was significantly longer when the diameter of the tumor exceeded 55 mm. There were no significant differences in the operating times, conversions and complications between the different types of diagnosis

Conclusion: LA via lateral transperitoneal approach should be recognize as the referential method in the treatment of adrenal lesions.

S088

LAPAROSCOPIC RADIOFREQUENCY ABLATION OF ADRENAL TUMORS. Gurkan Tellioglu MD, Allan E Siperstein MD, Eren Berber MD, Cleveland Clinic Endocrine and Metabolism Institute

Background: Despite reports of percutaneous radiofrequency ablation (RFA), laparoscopic ablative techniques have not been described to treat adrenal tumors. The aim of this study is to describe patient selection criteria and the technique for laparoscopic adrenal RFA.

Methods: Four patients underwent laparoscopic RFA of adrenal tumors under general anesthesia for adrenal tumors. Procedures were performed under the guidance of laparoscopic ultrasound. Ablations were performed using Angiodynamics Model 30 (n=1) 3cm

Scientific Session Oral Abstracts

and Model 90 (n=3) 5cm ablation catheters. Medical records of these patients were reviewed retrospectively.

Results: Pathology included lung metastasis in 2 patients, and renal cell cancer metastasis and cortical adenoma in 1 patient each. Metastatic lesions were not resectable due to concomitant liver metastasis in 2 patients and due to local invasion in the third patient. The first 2 patients also underwent concomitant laparoscopic liver RFA. In the fourth patient with adrenocortical adenoma, ablation was performed due to the cardiopulmonary instability of the patient during attempted laparoscopic adrenalectomy. Two patients had right and 2 patients had left sided lesions. Despite normal catecholamine levels preoperatively, 2 patients had a transient hypertensive period during the ablation, possibly due to release of catecholamines from the normal adrenal medulla. The procedures were performed using a supine (n=2), lateral transabdominal (n=1) or posterior (n=1) approach. There were no perioperative complications or mortality. The ablated lesions demonstrated a non enhancing hypodense appearance in postoperative CT scans. Patients were followed up for a mean 19 months. One patient died at three months from cardiac causes and 1 other patient died at 51 months.

Conclusions: To our knowledge, this is the first report of laparoscopic adrenal RFA. Laparoscopic RFA is an option for patients with unresectable adrenal tumors due to extent of disease or comorbidities. The procedure can be performed safely using any standard laparoscopic adrenalectomy approaches.

S089

HAND ASSISTED LAPAROSCOPIC SPLENECTOMY IS THE SUPERIOR APPROACH IN SPLEENS OVER 20CM IN LENGTH, T W Swanson MD, S Sampath MD, A T Meneghetti MD, J M Connors, O M Pantan, University of British Columbia

Introduction We report our experience with the Hand Assisted Laparoscopic Splenectomy (HALS) technique and attempt to answer the question of which spleens benefit from HALS. Initial problems with complication rates in laparoscopic splenectomy for splenomegaly have now been refuted. Critics are still concerned with the longer operative times and conversion rates of HALS compared to open procedure. Questions remain regarding which spleen sizes would benefit from HALS. Our high single center volume of HALS in Spleens over 17cm allowed us to address these questions and concerns.

Method 217 Splenectomies (1988 - 2007) at five Vancouver hospitals were reviewed. Splenectomies without greatest dimension on whole pathologic specimen or preoperative imaging were excluded from analysis. Student t-test and chi squared statistical analysis was performed.

Results 156 splenectomies were performed laparoscopically. 22 spleens over 20cm were removed laparoscopically (20 HALS) and 18 spleens 17-20cm (7 HALS). Conversion rates using the HALS technique in spleens over 20cm was no different than conversion rates in laparoscopic splenectomies (LS) under 17cm (6 vs. 5%, p=.917). Estimated blood loss (375cc vs. 935cc, p=0.08) and transfusion rates (0 +/- 0 vs. 0 +/- 1.7 units, p=0.06) were less in HALS than open splenectomy (OS) in spleens over 20cm, hospital Stay (4.2 vs. 8.9 days, p=0.001) was significantly less. Operative time for HALS in spleens over 20cm was longer than OS (162 vs. 114 min, p=0.003) and slightly greater than 27 minute difference seen between LS and OS in under 17cm spleens. Complication rates with spleens over 20 cm were equal between techniques (6/20 HALS vs. 6/18 open). In spleens 17-20cm, HALS had more complications compared to LS (5/7 vs. 1/10, p=.035) but had no significant difference in terms of length of OR, hospital stay or blood loss.

Discussion With equal complication rates, shorter hospital stay and evidence that HALS can be performed without open conversion; patients should be offered HALS in spleens over 20cm.

S090

USE OF FLEXIBLE RETRACTOR TO FACILITATE VASCULAR LENGTH IN LIVING RELATED TOTAL LAPAROSCOPIC DONOR NEPHRECTOMIES, Prakash R Paragi MD, Harry Sun MD, Matthew Tichauer BS, Zachary Klaassen BS, Stephen H Fletcher MD, Stuart R Geffner MD, Saint Barnabas Medical Center

Background Minimally invasive Laparoscopic Donor Nephrectomy (LDN) is the gold standard procedure for donor nephrectomy. Various techniques of donor nephrectomy have been described and the utility of any one technique depends upon the skill of the surgeon. Donor vascular length facilitates adequate recipient anastomosis and prevents technical difficulties associated with short vessels. Our preference has been Total laparoscopic Trans peritoneal donor

kidney mobilization and disconnection of the vascular pedicle using the flexible retractor to facilitate the vascular length.

Aim: We present our technique for retracting the kidney using a flexible triangular endoscopic retractor to gain maximum donor vascular length.

Methods: Patient position and port sites as depicted in figure 1. The kidney is mobilized laparoscopically and prior to vascular disconnection, the diamond snake angled retractor (Snowden pincer, Tucker GA) is introduced through a second 12 mm port and passed behind the kidney and the retractor is locked around the kidney. The kidney is then retracted using the angled retractor as a handle. The renal vascular pedicle is then transected using the endovascular GIA stapler (Ethicon Endo Surgery, Cincinnati, Ohio) the artery first followed by the vein (picture 1). The kidney is extracted through a 3-4 cm oblique incision incorporating the third port similar to a Macburneys incision. Outcomes of 877 patients who underwent LDN at Saint Barnabas health care system were analyzed retrospectively and compared to the outcomes with other regional centers in the United States. Outcome variables evaluated include: patient demographics, length of hospital stay, operative time, preoperative and postoperative creatinine levels, estimated surgical blood loss, and postoperative complications.

Results: Data of 727 LDN procedures analyzed and compared to the data from a high volume center- University of Maryland (UM) and John Hopkins Bayview Medical (JHBMC) center will be presented. All procedures were performed at a large tertiary community hospital. The results of the demographics, operative statistics, post operative complications and recipient graft survival will be discussed. The table depicts some of our results in comparison:

LDN Comparative Results			
Parameter	SBHCS	UM	JHBMC
No of patients	727	738	381
Blood Loss	55 ± 58 mL	128 ± 179 mL	334±690.3 mL
Operative Time	121± 41 minutes	180± 55 minutes	253±55.7 minute
Hospital Stay	3.12±1.2 days	2.68±1.6 days	3.3±4.5 days

UM: Uni of Maryland, JHBMC: John Hopkins Med Ctr

Conclusions: Outcomes of LDN at our center have been comparable to other institutions in the world. Total Trans peritoneal laparoscopic surgery with the use of flexible retractor adds to the ease of the procedure, stabilizes and prevents vascular avulsion and facilitates vascular length thereby reducing the overall operative time significantly. This technique is effective to both left and right LDN.

S091

ENDOSCOPIC THYROIDECTOMY FOR MULTINODULAR GOITER, Titus D Duncan MD, Qammar N Rashid MD, Ravi Rao MD, Atlanta Medical Center

Introduction: Surgery for multinodular goiter disease typically requires a modest cervical incision to access and extract the diseased thyroid gland. Endoscopic thyroid surgery has become increasingly popular as a result of improved visualization of critical anatomy as well as improved overall cosmetic outcome by avoiding the typical cervical neck incision. In an effort to maximize cosmesis most endoscopic thyroid procedures limit the size of the gland to be removed by limiting the size of the extraction site scar. We recently performed total and near total thyroidectomy for multinodular goiter disease using a combined transaxillary and periareolar endoscopic approach with excellent clinical and cosmetic results.

Methods: There were 22 patients who presented for surgical treatment of benign multinodular goiter disease. There were 19 females and 3 males in this series. Seventeen patients presented clinically with an enlarging thyroid mass resulting in compressive neck symptoms. Five patients complained of cosmetic deformity. All patients underwent surgical thyroidectomy using a combined transaxillary/periareolar endoscopic approach to the thyroid. Sixteen patients underwent total thyroidectomy while the remaining 6 patients had near total thyroid resection.

Results: Endoscopic total or near total thyroidectomy was successfully completed in all patients. No patient required conversion to an open technique. The average weight of the excised gland in this series was 222 grams (range 84 grams - 420 grams). The recurrent laryngeal nerve was identified bilaterally in all patients. There was no recurrent laryngeal nerve injury in any patient. Two patients suffered transient hypocalcemia. Both patients had complete resolution of their hypocalcemic state within a one week time period. All patients reported high satisfaction with their cosmetic results.

Conclusion: Endoscopic thyroidectomy has gradually gained



Scientific Session Oral Abstracts

acceptance as an effective tool for the treatment of benign thyroid diseases. Many series report successful outcome using this technique in unilateral disease. However, many diseases of the thyroid require total or near total thyroid resection for adequate treatment. Unilateral techniques such as transaxillary thyroidectomy, may prove challenging in safely approaching the contralateral lobe as a result of inadequate visualization. Combined transaxillary/periareolar endoscopic thyroidectomy allows excellent visualization of ipsilateral as well as contralateral anatomy. Excellent visualization of structures through endoscopic magnification and focused lighting of the anatomic field may result in improved safety for this surgical procedure. Combined transaxillary/periareolar endoscopic thyroidectomy is a safe and effective approach for the surgical treatment of benign multinodular goiter.

S092

PROSPECTIVE RANDOMIZED DOUBLE BLIND PLACEBO CONTROLLED TRIAL OF POSTOPERATIVE ELASTOMERIC PAIN PUMP DEVICES FOLLOWING LAPAROSCOPIC VENTRAL HERNIA REPAIR., Michael J Rosen MD, Trieve Duperier MD, Jeffrey Marks MD, Raymond Onders MD, Bridget Ermlich RN, Michelle Laughinghouse RN, Case Western Reserve University.

Introduction: The laparoscopic repair of ventral hernias can result in significant postoperative pain resulting in prolonged length of hospital stay, increased narcotic utilization, and patient dissatisfaction. Elastomeric pain pump devices with local analgesics may result in a significant reduction in postoperative discomfort after laparoscopic ventral hernia repair. We evaluated the effect of continuous infusion of local anesthetic with an elastomeric pain pump device to reduce postoperative pain in a prospective randomized double blind placebo controlled study.

Methods: After IRB approval, all patients undergoing laparoscopic ventral hernia repair were consented to participate in the study. Standardized technique included routine transfascial fixation sutures and titanium spiral tacks. Elastomeric pain pumps were placed percutaneously just above the mesh, in the hernia sac. 100cc's of continuous 0.5% marcaine or normal saline at 2 ml/hr were utilized for 48 hours postoperatively. Postoperatively, patients were evaluated every 8 hours for the first 72 hours, then 2 weeks, 6 weeks, and 3 months for pain scores, narcotic usage (both PO and IV), return of flatus, length of hospital stay, and postoperative complications.

Results: 73 patients were enrolled in the study, 37 received 0.5% marcaine and 36 received placebo. Despite randomization, the control group had significantly more obese patients (mean BMI 39 v 33 kg/m²; p=0.005), more recurrent hernias (40% v 19%; p=0.05), and tended to have more prior hernia repairs (0.8 v 0.3; p=0.06). There were no significant differences between the two groups based on operative times (p=0.7), hernia size (p=0.9), mesh size (p=0.6), number of transfascial fixation sutures (p=0.4), or spiral tacks (p=0.13). Postoperative visual analog pain scores, usage of oral or intravenous narcotics, and morphine equivalents were similar between the two groups at all study points (p>0.05). There were no significant differences between the two groups based on return of bowel function, tolerating a regular diet, or length of stay. No postoperative complications occurred directly related to the catheter.

Conclusions: This prospective randomized double blind placebo controlled trial shows no advantage of an elastomeric pain pump device to provide a measurable reduction in postoperative pain scores, narcotic utilization, return of bowel function, or hospital stay after laparoscopic ventral hernia repair. Further studies are warranted to determine other alternatives for reducing postoperative pain after laparoscopic ventral hernia repair.

S093

CLINICAL PREDICTORS OF OPERATIVE COMPLEXITY IN LAPAROSCOPIC VENTRAL HERNIA REPAIR: A PROSPECTIVE STUDY., Eric D Jenkins MD, Victoria H Yom BA, Lora Melman MD, Richard D Schuessler PhD, Richard A Pierce MD, Margaret M Frisella RN, J Christopher Eagon MD, L Michael Brunt MD, Brent D Matthews MD, Department of Surgery Washington University in St. Louis, Missouri

Introduction: Due to uncertainties about the complexity of laparoscopic ventral hernia repair in varying patient populations, surgeons may be reluctant to perform this procedure. The aim of this study is to delineate risk factors that can be identified in the preoperative setting that predict longer operative times and complexity in laparoscopic ventral hernia repair.

Methods: Patient demographics including BMI, co-morbidities, previous laparoscopic and open surgical procedures, ventral hernia

repair(s) (VHR), and hernia characteristics (defect size/location, adhesions, incarceration), were recorded prospectively. Data are given as means \pm SEM. Times (min) required for abdominal access, adhesiolysis, and mesh placement as well as total operative time were recorded during each case as outcome measures of operative difficulty. Univariate analyses were performed using a T-Test or Mann-Whitney U and multivariate analyses using the Stepwise analysis of covariance model to determine demographic and/or clinical variables influencing operative times.

Results: One hundred eighty-one patients (78:103, M:F) with a mean age of 54.8 \pm 0.9 years and mean BMI 34.1 \pm 0.6 kg/m² were enrolled. Multivariate analysis demonstrates significantly longer (p<0.05) adhesiolysis and total operative times in patients with prior VHR, bowel adhesion to the abdominal wall/hernia sac, and larger hernia defect size. Total operative time was also increased (p<0.05) with incarcerated hernia contents and hernias requiring larger mesh size for repair. Mesh placement time was increased (p<0.05) with female gender, incarcerated hernia contents, increased defect size and decreased postgraduate year of the surgical assistant. Time to obtain abdominal access was longer (p<0.05) with advanced patient age, higher BMI, and higher ASA. Operative times were not increased with a history of peritonitis, diabetes, immunosuppression, cancer, suprapubic hernia location or higher numbers of previous open or laparoscopic surgeries.

Conclusions: At least 13 preoperatively identifiable patient variables, either alone or in combination, are predictive of prolonged operative times during laparoscopic ventral hernia repair and may be utilized as surrogates to determine the complexity of a minimally invasive approach.

S094

SINGLE PORT ACCESS (SPA) VENTRAL HERNIA REPAIR: INITIAL REPORT OF 15 CASES., Angela Moulhas MD, Erica R Podolsky MD, Paul G Curcillo, II MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

Laparoscopic ventral hernia repair has been demonstrated to be an acceptable and successful technique. Aside from similar, albeit decreased complications compared to open hernia repair, the laparoscopic technique adds the additional complication of port site hernia to its follow up criteria. We originally described a two port repair technique in 2002. Now, we have applied the recently developed Single Port Access Technique to Ventral Hernia Repair. The charts of 15 patients undergoing primary and recurrent ventral hernias employing the Single Port Access technique were reviewed. The SPA technique was applied by making a 1.0 cm incision remote to the hernia location in the abdominal wall. After entry with a clear 5mm trocar into the abdomen was safely ensured, skin and soft tissue flaps were raised off the fascia laterally from the central trocar. One or two 5mm low profile trocars were inserted through the same skin incision. Adhesiolysis was then performed with one or two instruments per the severity of the adhesions. Once completed, the mesh (allowing a 3 to 5 cm overlap) was inserted through one of the trocar sites in the skin incision. If the fascial defect needed to be enlarged, then a 10mm trocar was placed to fill the enlarged defect and prevent gas leak. The mesh had a centrally placed suture for securing its position to the abdominal wall. This suture was grasped with a suture grasping device inserted through the center of the abdominal wall defect(s). The mesh was then tacked to the abdominal wall. The fascial defects were closed as well as the skin incision.

All procedures were completed via the Single Port Access technique. Operative time was comparable to prior two port ventral hernia repairs done by the same surgeon (PGC). EBL and LOS were similar. Mesh size placed ranged from 81 to 252 cm². Several types of polypropylene based mesh were used. There have been no wound infections or port site hernias in follow-up of 2 - 17 months. There have been no recurrent hernias of the primary site. We have successfully demonstrated the applicability of Single Port Access (SPA) surgery to ventral hernia repair. In our initial series, we performed this procedure on smaller hernias but have now begun applying it to larger repairs. The results have been comparable to standard multiport laparoscopic ventral hernia repairs.

S095

LAPAROSCOPIC INGUINAL HERNIA REPAIR FOR OCCULT (NON-PALPABLE) GROIN HERNIAS IN WOMEN WITH CHRONIC PELVIC PAIN., Brendan G O'Connell MD, Bruce Bernstein PhD, Ibrahim M Daoud MD, The University of Connecticut, Saint Francis Hospital and Medical Center, Hartford, CT

Scientific Session Oral Abstracts

Objective: For many women with chronic pelvic pain (CPP), non-palpable groin hernias represent a common potentially treatable cause. Despite history and physical exam findings which are suggestive of hernia, the lack of a palpable impulse may cause the diagnosis to be missed. Laparoscopic techniques provide a minimally invasive means for evaluating and treating occult hernias in these patients. We present intraoperative findings and short-term follow up results of a series of patients diagnosed with chronic pelvic pain and suspected of having occult hernias.

Methods: Records were reviewed from 325 patients (age range 17-52 years) who underwent laparoscopic exploration for suspected occult hernia at our institution between 1995 and 2007. All patients were treated by a single surgeon. Indications for surgery were 1.) inguinal pain radiating to the labia or thigh 2.) reproduction of pain by internal palpation of the inguinal/femoral ring on bimanual exam by a gynecologist 3.) point tenderness of the deep or superficial inguinal rings on external physical exam. Complaints of inguinal pain ranged from 6 months to 20 years. All patients were treated with transabdominal preperitoneal (TAPP) hernia repair with prosthetic mesh. Follow up was from 3 to 16 months and patients were asked to grade their relief of symptoms as complete, significant, or no change.

Results: In 7 patients (2%) no abnormality was found. An obvious visible indirect hernia was seen prior to preperitoneal dissection in 12% of patients. After preperitoneal dissection, a variety of defects were identified: indirect hernias (77%), large internal ring with incarcerated fat (65%), direct hernia (20%), femoral hernia (40%), obturator hernia (2%), and bilateral hernias (40%). Many patients had multiple abnormalities. 100 patients were repaired with a Gortex mesh fixed with tacks, 125 patients were repaired with an Atrium mesh fixed with tacks, and 100 patients repaired with a 3D Max mesh and no tacks. Overall, 74.69% of patients reported "complete relief" of symptoms, 17.83% had "significant improvement" in symptoms, and 7.48% had "no change" in symptoms.

Conclusions: A variety of abnormalities were found and repaired with the majority of patients reporting complete or significant relief of symptoms. Occult hernias are a common cause of CPP and effective pain relief can be obtained by a diagnostic laparoscopy and laparoscopic repair in carefully selected patients.

S096

LONG-TERM FOLLOW-UP OF LAPAROSCOPIC REPAIR OF PARASTOMAL HERNIA USING A BI-LAYER MESH WITH A SLIT,
Paul Wara MSc, Lars Maagaard MD, Surgical Department P, Aarhus University Hospital, Denmark

Introduction: Open surgery for parastomal hernia has been associated with high morbidity and high recurrence rates exceeding 40-50%, in particular after suture closure of the fascial defect or stomal re-siting. Laparoscopic mesh repair, however, has shown promising results, but published series have been relatively small with a short follow-up.

Methods and procedures: Since 1997 laparoscopic repair using a bi-layer mesh placed intraperitoneally has been performed in 72 consecutive patients with 48 colostomies and 24 ileostomies. The mesh, consisting of an outer layer of polypropylene and an inner non-adhering layer of extended PTFE towards the viscera, had a slit with a central keyhole modified after Hofstetter. After covering the fascial defect the slit was closed laterally. Data were prospectively recorded in a database (www.itsoosimple.net). The median age of the patients was 62 years (range 34-84). 36 of the 72 patients had a history of previous stomal hernia repair, 19 of them had two or more previous repairs. Follow-up ranged from 9 months to 10 years (median 30 months).

Results: Adherences to anterior abdominal wall was observed 65 patients (90%). Adhesiolysis was time-consuming (median 60 min) and the apparent cause of inadvertent enterotomy in 8 of 10 patients with bowel injury. The median size of the parastomal fascial defect was 4x3 cm, the median size of the mesh 14x14 cm with a median overlap of 4 cm. Conversion to open surgery was necessary in three patients. Postoperative complications were: Bleeding (2), infection (3), stomal complications (4), seroma (7), and other complications (5) in a total of 16 patients (22%), nine of which required re-operation (13%). Two patients (3%) died postoperatively (missed bowel injury initially misinterpreted as myocardial infarction and bleeding in one patient with portal hypertension not recognized preoperatively). The median hospital stay was 3 days. Mesh-related complications were observed in six patients (8%): Infection occurred in four patients, requiring mesh removal in three patients, and in two patients the mesh was removed due to small bowel obstruction and stomal stenosis, respectively. Stomal hernia recurred in one

patient one month after surgery (recurrence rate 1,4% - 95% confidence interval 0-7).

Conclusion: Laparoscopic mesh repair of parastomal hernia can be technically challenging. It is associated with a substantial postoperative morbidity including late mesh-related complications, but a recurrence rate of less than 7%.

S097

LAPAROSCOPIC VERSUS OPEN LIVER RESECTION FOR HEPATOCELLULAR CARCINOMA: A COMPARATIVE STUDY,
Ibrahim DAGHER PhD, Giuseppe DI GIURO MD, Panagiotis LAINAS MD, Helene AGOSTINI, Alessio CARLONI MD, Dominique FRANCO PhD, Department of General Surgery, Antoine Bécélère Hospital, AP-HP, Clamart, F-92140, France; Univ Paris-Sud, Orsay, F-91405, France.

Objective of the study: Laparoscopic liver resection for hepatocarcinoma, especially in cirrhotic patients, has recently been developed and could reduce morbidity. However, it is limited to centers with experience in both laparoscopic liver surgery and the management of cirrhotic patients. Very few series were therefore reported. The aim of this study was to compare the postoperative results and the 3-year patient outcomes between laparoscopic (LLR) and open liver resection (OLR) for hepatocellular carcinoma (HCC).

Methods and procedures: From 1999 to 2007, we performed 36 laparoscopic resections for HCC in selected patients. They were compared in a retrospective analysis with 36 patients who underwent open surgery for HCC selected from our liver resection database. The two groups were well matched for age, gender, ASA class, tumor size, type of liver resection and severity of liver disease. Child-Pugh class C and ASA class 3 were considered as non inclusion criteria. Chi-square or t-test were used to compare the 2 groups (respectively Fisher exact test and Mann-Whitney U test when the validity conditions were not verified).

Results: The mean operative duration was similar in both groups (LLR, 237 min; OLR, 227 min; $p = 0.85$). Blood loss was significantly lower in laparoscopic resections (LLR, 387 ml; OLR, 737 ml; $p = 0.0006$). However, the difference in transfusion rates was not statistically significant (LLR, 11.1%; OLR, 19.4%; $p = 0.51$). There was no statistically significant difference in specific (LLR, 13.9%; OLR, 13.9%; $p = 1.00$) and general (LLR, 8.3%; OLR, 11.1%; $p = 1.00$) postoperative complications. Mean hospital stay was significantly shorter for patients undergoing laparoscopy (6.7 vs. 9.5 days; $p = 0.0009$). The 1- and 3-year survival rates were not different for LLR and OLR.

Conclusions based on the results: This study shows that laparoscopic resection for HCC results in decreased blood loss and shorter hospital stay. The 1- and 3-year survival rates were not different for LLR and OLR.

S098

LAPAROSCOPIC HEPATECTOMY RESULTS IN DECREASED VEGF EXPRESSION IN RESIDUAL HEPATOMA CELLS WHEN COMPARED TO OPEN RESECTION, Kyle A Perry MD, C K Enestvedt MD, Luke W Hosack MS, Swee Teh MD, Thai H Pham MD, John G Hunter MD, Brett C Sheppard MD, Oregon Health & Science University

INTRODUCTION: Vascular endothelial growth factor (VEGF) is upregulated in hepatocellular carcinoma (HCC), and its level of expression in these tumors has been shown to impact tumor growth. We hypothesized that when compared to open liver resection, laparoscopic hepatectomy would result in decreased local angiogenic response in residual tumor cells.

MATERIALS AND METHODS: Right and left lobe hepatomas were induced in Buffalo rats via laparoscopic guided subcapsular injection of Morris hepatoma cells. One week later, animals were randomized to laparoscopic (LR=15) or open (OR=15) left medial hepatic lobectomy. Fourteen days after resection, the rats were sacrificed, the residual right lobe tumors were measured, and tissue was procured for RNA extraction. VEGF mRNA transcript levels were quantified with RT-PCR. VEGF serum levels were measured by ELISA prior to resection and at the time of tissue harvest.

RESULTS: None of the animals developed satellite liver lesions or distant metastases in the abdomen or thorax. Median residual tumor volume was 320mm³ in the open group, compared to 180mm³ in the laparoscopic group ($p = 0.164$). Animals that underwent open resection had a 1.3 fold increase in VEGF mRNA transcript levels compared to the laparoscopic resection group ($p = 0.008$). Serum VEGF levels were not significantly different between the laparoscopic and open groups at baseline (OR 23.7±12.0 pg/ml, LR 30.7±15.5 pg/ml, $p = 0.334$) nor at the time of tissue harvest (OR 19.9±19.6, LR 26.9±34.5, $p = 0.549$).



SAGES
2009

Scientific Session Oral Abstracts

CONCLUSIONS: Laparoscopic hepatic resection resulted in decreased VEGF mRNA expression in residual hepatoma cells compared to open resection. Through inhibition of angiogenesis promoters in the tumor microenvironment, minimally invasive liver resection may contribute to a lower residual disease burden and ultimately lead to a lower recurrence rate.

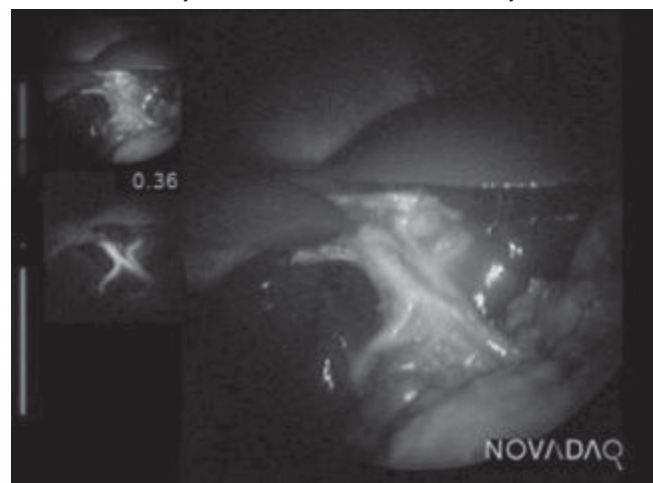
S099

LAPAROSCOPIC NEAR INFRARED FLUORESCENCE IMAGING OF BILIARY TREE ANATOMY, Dragan J Golijanin MD, Daniela Molena MD, Jonah S Marshall MD, Allison L Cardin MD, Eric A Singer MD, Ronald W Wood MD, Luke O Schoeniger MD, University of Rochester Medical Center. Departments of Urology and Surgery

Objective of the study: The primary goal of this study was the successful intraoperative near infrared fluorescence (NIRF) imaging of extra and intra hepatic bile ducts using the SPY and laparoscopic SPY2 scope systems (Novadaq Technologies Inc.) after parenteral administration of Indocyanine Green (ICG). Optimal NIRF imaging of biliary anatomy occurs when sufficient amount of Indocyanine Green (ICG) is excreted into the bile ducts to cause adequate fluorescence of the bile ducts, while at the same time sufficient ICG has cleared from the liver to minimize background fluorescence. Dosage, timing, and routes of administration of ICG and the safety of NIRF were secondary goals.

Methods and procedures: Thirty rats and six adult dogs under general anesthesia were used for intraoperative imaging of the biliary tree after parenteral administration of ICG. In rats, an open SPY system was used, and in dogs the SPY2 scope system was used for laparoscopic and open imaging of biliary structures. All animals were euthanized at the end of the surgery.

Results: In all animals studied, administration of either SQ or IV ICG resulted in specific and reproducible imaging of the intrahepatic biliary tree, common hepatic duct, common bile duct, and cystic duct as well as the pancreatic duct. The imaging quality allowed precise identification of all structures in both rat and dog models, from 5 minutes after IV injections and 15 minutes after SQ injection.



Excretion of ICG could be followed down to the ampulla and into the duodenum. Intentional biliary tree injury resulted in easily recognizable bile duct leak while clamping of the bile duct resulted in fluorescence cut-off as a sign of obstruction. No adverse events were encountered. **Conclusions:** IV and SQ administration of ICG resulted in the effective and rapid near infrared fluorescence intraoperative imaging of intra and extra hepatic bile ducts in rat and dog models without the need for placement of a cholangiography catheter. This modality could prove superior to intraoperative cholangiography, and reduce or eliminate bile duct injuries during laparoscopic cholecystectomy.

S100

THE IMMEDIATE RE- RESECTION OF T1B INCIDENTAL GALLBLADDER CARCINOMA- INDICATION OR OVERTREATMENT, Vittorio Paolucci PhD, Thorsten O Goetze PhD, Ketteler- Clinic Department of Surgery

Introduction: The indication for an immediate re-resection (IRR) in T1b incidental gallbladder carcinoma (IGBC) is debated in the literature, and different recommendations are often drawn based on

data collected from only small groups. But the management of IGBC is difficult, because there are no established guidelines.

A IRR is recommended in cases of T2 tumours and more advanced stages according to many authors and the effective guidelines in of Germany. For a T1 tumour a simple cholecystectomy is enough. Some authors show a 5 year survival of only 37.5- 68% in T1b- carcinomas after simple Cholecystectomy. Therefore some authors recommend a reoperation in T1b- stage and improve the 5 year survival from 60 to 100%, because the rate of positive lymph nodes is up to 16% and the lymphatic, venous and perineural infiltration is up to 50% according to the literature.

Material and method: To obtain data we use the German- Registry of incidental gallbladder carcinoma, which is institution of the German Society of Surgery. Within a period of 3 months we are actualizing the data.

Results: 606 cases of incidental gallbladder carcinomas are registered. In 21 patients with T1a- tumour there was no IRR, in 6 patients there was an IRR. In 50 patients with T1b- tumour there was no IRR. In 26 patients with T1- tumour there was an IRR. The survival curve according to Kaplan- Meier shows a significant prognostic advantage for re- resected T1b- tumours. In cases of T1a there is no prognostic benefit for patients with an IRR. The IRR includes a lymph- node dissection of hepatoduodenal ligament. The liverresection technique was 12 x wedge- resection, 5 x a resection of Segment IVb/V and in 8 cases other techniques have been performed. There is a trend for a better survival for the wedge- resection technique compared with the other types of resection in cases of T1b- tumours.

Discussion: There is a significant survival benefit for the T1b tumours after an IRR (log- rank < 0,05). The analysis shows no advantage for T1a carcinomas after IRR. An IRR should be highly recommended for patients with IGBC in the T1b stage. There is a trend for a better survival for the wedge- resection technique compared with the other types of resection in cases of T1b- tumours. An extended resection is also necessary in order to exactly determine the nodal status.

S101

PREDICTING THAT OCCULT METASTATIC (STAGE IV) DISEASE WILL BE DISCOVERED WITH DIAGNOSTIC LAPAROSCOPY AND PERITONEAL LAVAGE CYTOLOGY IN LOCALLY-ADVANCED PANCREATIC CANCER, Clancy J Clark MD, Fru Bahiraei MD, Vincent Picozzi MD, L W Traverso MD, Virginia Mason Medical Center

Background: In a group of 74 patients where computed tomography (CT) showed locally extending but not metastatic pancreatic cancer, we have demonstrated (Surg Endosc 2005;19:638-42) that 1/3 will have occult metastatic disease using diagnostic laparoscopy and peritoneal lavage for cytology (DL-PLC). Using a larger cohort, we asked if there are predictive factors that increase the likelihood that occult metastatic disease would be discovered by DL-PLC.

Methods: Between 2000 and 2008, 202 consecutive patients underwent DL-PLC when thin-cut, contrast-enhanced pancreas protocol CT showed locally-advanced pancreatic cancer without evidence of metastatic disease. Univariate and logistic regression analyses were used to identify factors that predicted which patients would have occult metastatic disease discovered by DL-PLC.

Results: DL-PLC upstaged 55 of 202 patients (27.2%) to Stage IV. Of these, 40 (19.2%) patients had positive peritoneal lavage cytology; 25 (12.4%) patients had hepatic metastases, and only 4 (2%) had metastatic peritoneal deposits. Univariate analysis demonstrated that increasing tumor size by CT and CA 19-9 > 500 U/mL predicted positive DL-PLC. Not predictive were location of tumor (head vs non-head of pancreas), involvement of multiple mesenteric vessels, weight loss, elevated bilirubin, back pain, or low serum albumin. Multivariate logistic regression analysis demonstrated that increasing tumor size was the only predictive factor of positive DL-PLC. In our cohort, when tumor size was greater than 4.5 cm, DL-PLC was positive in 45% of patients.

Conclusion: Despite advancements in the sensitivity of high-resolution CT, the use of diagnostic laparoscopy and peritoneal lavage cytology in selected patients provides for additional accuracy by upstaging 27% of patients to Stage IV. Compared with previous staging studies, modern pancreas protocol CT may have reduced the incidence of unanticipated peritoneal deposits to only 2% of patients. Only tumor size was able to predict the results of DL-PLC justifying its use in patients with locally-advanced pancreatic cancer that have no evidence of metastatic disease by CT.

Scientific Session Oral Abstracts

S102

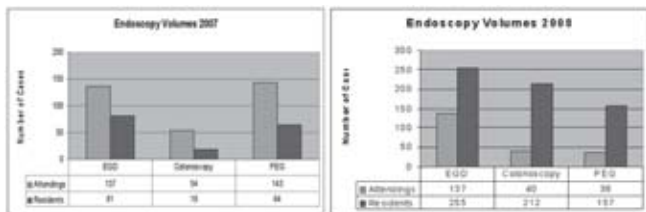
PROSPECTIVE MONITORING OF SURGICAL TRAINEE ENDOSCOPY VOLUMES, Erica Sutton BA, Stephen Kavic BA, Ralph Lloyd BA, J. Scott Roth MD, Adrian Park MD, Department of Surgery, University of Maryland School of Medicine

Introduction: Despite a recent increase in endoscopic surgery requirements for graduate surgical trainees by the Residency Review Committee for Surgery (RRC-S), there is still a question of competence: is the endoscopic volume achieved by surgical trainees sufficient for the procedural competence needed by practicing surgeons in academic centers and community hospitals? Prospective monitoring of trainee endoscopy volume has been identified as an important next step toward standardizing endoscopic training in order to better reflect the practice patterns of general surgeons and achieve the goals for endoscopic competency set forth by the RRC-S. This investigation prospectively monitors trainee endoscopy volume to review changes in volume in response to changes in the surgical curriculum and endoscopic surgery requirement and to characterize the endoscopic experience obtained by surgical trainees at a large urban academic medical center.

Methods: Surgical endoscopy volumes were prospectively collected over an eight-year period (2001-2008) for surgical residents at the University of Maryland Medical Center (UMMC). From February 2005 until June 2006, the surgical curriculum ceased to include a rotation in surgical endoscopy. In July 2006, the rotation was re-implemented in response to the new endoscopic surgery requirements of the RRC-S. Endoscopic experience was obtained through one-on-one instruction with surgeons, gastroenterologists, and an experienced physician assistant. Residents participated in procedures in four hospital settings- a large academic medical center, an acute care trauma hospital, a veterans administration hospital, and an urban community hospital. Clinical practice patterns were inferred from annual billing data of credentialed surgeons at UMMC for fiscal years 2004-2008.

Results: The endoscopy experience of 38 surgical trainees was prospectively collected over an eight year period, totaling 2,714 cases. On average, each resident performed 72 endoscopic cases over the course of residency training. Esophagogastroduodenoscopy (EGD) and percutaneous endoscopic gastrostomy (PEG) comprised the majority of cases. Residents who participated in a surgical endoscopy rotation (n=31, mean number of cases=78) did significantly more cases than those who did not (n=7, mean number of cases=44, p=0.002). In the absence of a dedicated rotation in surgical endoscopy, the endoscopic volume of surgeons at UMMC in one year, a surrogate of clinical practice pattern, exceeded the five year residency experience of surgical trainees (Figure 1). Since implementation of the new rotation and requirements, trainee experience has increased 233% and more appropriately resembles the clinical practice pattern of surgical endoscopists (Figure 2).

Conclusions: Backed by increased endoscopic surgery requirements, a dedicated endoscopic surgery rotation produced higher surgical trainee endoscopy volumes, bringing trainees closer to the annual endoscopy volumes of practicing surgeons.



S103

INPATIENT MORTALITY AND LENGTH OF STAY COMPARISON OF PERCUTANEOUS ENDOSCOPIC GASTROSTOMY AND PERCUTANEOUS ENDOSCOPIC GASTROJEJUNOSTOMY, Stephen J Poteet MD, Willie V Melvin MD, Michael D Holzman MD, Kenneth W Sharp MD, Benjamin K Poulouse MD, Vanderbilt University Medical Center

Introduction: Percutaneous endoscopic gastrostomy (PEG) and percutaneous endoscopic gastrojejunostomy (PEGJ) are endoscopic procedures often performed by surgeons. No recent population based study has compared inpatient mortality or length of stay between patients who undergo PEG or PEGJ placement during their hospitalization.

Methods: Patients undergoing inpatient PEG or PEGJ placement >=18 year old were identified from the 2006 Nationwide Inpatient Sample (NIS) database. Baseline characteristics of each group were compared and outcomes of risk adjusted inpatient mortality and length of stay were determined. Means were compared using a complex sample t-test and proportions compared using a complex sample chi square test with an alpha level of 0.05 for significance. Bivariate logistic regression was used to evaluate PEG or PEGJ placement as a risk factor for mortality.

Results: In the 2006 NIS, 187,597 discharges were identified during which a PEG or PEGJ was placed. Ninety-six percent (179,587) of patients underwent PEG placement and 4% (8,010) had PEGJ tubes placed. Fifty-one percent were men with mean age for PEG and PEGJ placement 71.3±0.3 years (mean±standard error) and 64.8±0.8 years, respectively (p<0.05). In the PEG group, 86% of admissions were non-elective compared to 79% in the PEGJ group (p<0.05). The primary discharge diagnoses for both groups of patients included acute cerebrovascular disease, aspiration pneumonia, septicemia, respiratory failure, and intracranial injury. PEGJ patients had a higher cumulative incidence of congestive heart failure, chronic lung disease, and diabetes. Crude in-hospital mortality for death was 11% for both PEG and PEGJ patients. No difference in mortality was observed in risk adjusted analyses accounting for patient severity. Mean length of stay was similar for both groups (PEG 20.9±0.4 days, PEGJ 22.5±1.1 days). Neither PEG nor PEGJ was identified as a risk factor for inpatient mortality.

Conclusion: Comparative analyses of patients undergoing PEG versus PEGJ revealed no detectable difference between inpatient mortality and hospital length of stay in this large observational study. Both procedures can be performed safely in high risk populations with no increased mortality or length of stay incurred by jejunal feeding access. However, further analysis is required to compare more specific short-term outcomes between these populations as well as their respective cost-effectiveness.

S104

TRANSGASTRIC ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY A CASE SERIES AND DESCRIPTION OF TECHNIQUE, Peter M Bertin DO, Kirpal Singh, Maurice E Arregui, St. Vincent Indianapolis Indiana

Transgastric Endoscopic Cholangiopancreatography: a Case Series and Description of Technique. Peter M. Bertin DO, Kirpal Singh MD, Maurice E. Arregui MD FACS. St Vincent Indianapolis, IN

Purpose: Roux-en-Y gastric bypass excludes the biliary and pancreatic tree from traditional endoscopic evaluation and treatment. As the number of former bypass patients accrues, the need to assess and treat this subset of patients for biliary and pancreatic disease will increase. We describe our technique, indications and outcomes in this group of patients.

Description and Methods: Data was collected by retrospective chart review of the experience of two surgeons in transgastric ERCP from July 2004 to October 2008 at a single institution. It involves 24 procedures in 18 patients. The operating surgeon performed the entire procedure. The indications were suspected sphincter of Oddi dysfunction in sixteen and recurrent pancreatitis in two. The patient was placed in the supine position. Laparoscopy was most often used to gain access to the remnant stomach. Adhesions were lysed and a purse string suture was placed on the anterior portion of the stomach. A gastrotomy was made with monopolar electrocautery and a 12mm trocar was inserted. It was secured with the purse string. A side viewing duodenoscope was inserted through this port. An intestinal clamp was placed on the biliopancreatic limb. Intended interventions were sphincter of Oddi manometry, sphincterotomy, injection of botulinum toxin and placement of pancreatic duct stents.

Results: Laparoscopic access to the remnant stomach was attempted in all procedures except one that began open and those with preexisting gastrostomy tubes. This was successfully performed laparoscopically in 14; two required conversion to an open procedure. Preexisting gastrostomy tubes were present in seven. In the four patients who had prior open gastric surgery two of the four were converted to open. One retroperitoneal perforation was noted after sphincterotomy and attempted cannulation of the minor duodenal papilla without clinical repercussions. There were nineteen total attempts at manometry. Failure to cannulate the pancreatic duct occurred four times and on two occasions for the bile duct. Of 14 sphincterotomies one was felt to be incomplete. There was minor mucosal bleeding on dilation of 2 of the seven prior gastrostomy sites.

Conclusions: This demonstrates that bariatric patients with biliary pain can be successfully evaluated and treated for sphincter of Oddi



Scientific Session Oral Abstracts

dysfunction. The rate of success and complications does not appear to be deviate significantly from the standard procedure.

S105

DOES PREOPERATIVE ENDOSCOPY IN BARIATRIC SURGERY ALTER THE MEDICAL OR SURGICAL STRATEGY?, Afshin Eslami

MD, Carlos G Martinez MD, Shahzeer Karmali MD, Jonathan Gerber, Vadim Sherman MD, Baylor College of Medicine, Michael E. DeBaKey Department of Surgery, Houston, TX

Introduction: Controversy exists as to the need for preoperative esophago-gastro-duodenoscopy (EGD) for patients undergoing bariatric surgery. Specifically, do findings alter the medical and surgical management. The purpose of this study is to evaluate the role of preoperative EGD in the therapeutic strategy of bariatric surgery.

Methods: We conducted a retrospective analysis of consecutive patients undergoing bariatric surgery over an 18 month period (2006-2008). A total of 69 patients were reviewed and all patients underwent preoperative EGD prior to surgery.

Results: 14/69 patients underwent primary procedures (laparoscopic sleeve gastrectomy (LSG) or roux-en-y gastric bypass (LRYGB)) and 55/69 underwent a revision of a previous bariatric surgery to LSG or LRYGB. The findings included biopsy-proven H Pylori presence in 4 (2.7%), gastritis in 18 (12.4%), esophagitis in 14 (9.6%), hiatal hernias in 12 (8.2%), gastric polyps in 7 (4.8%), duodenal polyp in 2 (1.3%), and a duodenal leiomyoma in one patient (0.69%). 25 patients (17.2%) had no clinico-pathological findings. 11/55 (20.0%) of the patients that had previous bariatric procedures were found to have eroded bands on preoperative EGD. 8/11 bands were removed endoscopically and 3/11 were removed surgically. Preoperative endoscopy resulted in change in management in 16/69 patients (23.1%); 7/16 patients were from the primary bariatric group and 9/16 from the revisional group. Of the 7 primary group patients, 4 required H pylori treatment preoperatively, 2 required concurrent hiatal hernia repair, and 1 patient with duodenal leiomyoma underwent LSG instead of the planned LRYGB to allow surveillance. In the revision group, the operative strategy was changed from LRYGB to LSG following preoperative endoscopy in 6/9 patients. The operative strategy was changed to trans-gastric/laparoscopic in the 3 patients that required surgical removal of eroded bands.

Conclusion: Surgical strategies are significantly more affected by preoperative EGD in revisional bariatric cases as compared to primary bariatric procedures. Regardless, preoperative EGD is essential in both primary and revisional bariatric surgery since the management is altered in a large proportion of cases.

S106

ENDOSCOPIC AND MANOMETRIC CHARACTERISTICS OF THE GASTROESOPHAGEAL VALVE IN LATERAL DECUBITUS AND UPRIGHT POSITIONS IN CLINICALLY NORMAL PATIENTS, Gordon Buduhan MD, Brian Louie MD, Eric Vallieres MD, Jeraldine Orlina MD, Ralph Aye MD, Swedish Medical Center Division of Thoracic Surgery, Seattle Washington

Background: The relationship between body position and the gastroesophageal junction (GEJ) has been subject to intense interest in its role in gastroesophageal reflux disease (GERD). Few studies have looked at the position related changes of the gastroesophageal valve (GEV) in asymptomatic individuals.

Purpose: To define the normal physiology of the GEJ in left lateral decubitus (LLD) and upright position in asymptomatic individuals.

Methods: Ten healthy asymptomatic volunteers with no previous history of GERD confirmed by 2 validated GERD questionnaires were studied. Subjects underwent high resolution manometry in both LLD and upright positions. Following this, upper endoscopy was performed in the same two positions with detailed observation and grading of the GEV according to Hill (Grade 1-4; 1=normal closed valve, 4=open valve, associated hiatus hernia). A Medtronic 48 hour pH probe was placed 6 cm above the endoscopic GEV at the completion of the endoscopy.

Results: All volunteers completed the three investigations in two positions. Mean age 27 years. Four out of 10 patients were noted to have abnormal 48 hour pH studies (DeMeester score >15). No hiatus hernias were noted in any patients. Endoscopically, there was an overall increase in mean Hill Grade when patients were moved from LLD to upright position (1.6, 2.3, p=0.001, respectively), with no significant differences between normal and abnormal pH patients. In the abnormal pH group, on endoscopy 75% were found to have prolonged transient opening of the GEV on passive retroflexed observation in LLD position, compared with 16.7% of normal pts

(p=0.1). This was not observed in upright position. Manometrically, this was correlated with a non significant trend toward lower mean LES resting pressure and shorter intra-abdominal LES length for the abnormal pH patients in all positions compared to normals.

Conclusions: In general, the endoscopic Hill grade of the GEV does not correlate with the manometric findings in either LLD or upright positions. However, endoscopic observation of transient GEV opening in LLD position may be due to shortening of the intra-abdominal LES and may predict early stages of GERD. High resolution manometric findings are better predictors of early GERD, with a shorter and weaker LES in abnormal pH patients compared to normals. Further research of the baseline anatomic and physiologic changes of the LES related to position may help to better the earliest changes in the development of GERD.

S107

THE EFFECTIVENESS OF GASTRIC BAND: A RETROSPECTIVE SEVEN-YEAR U.S. FOLLOW-UP STUDY, Christine Ren MD, Marina Kurian MD, Heekoung Allison Youn, RN, CCRC, MA, George Fielding MD, New York University Medical Center

Objectives: To assess the efficacy of gastric band during 7 years of follow-up.

Methods: A retrospective database analysis was conducted using longitudinal data from gastric band patients between Jan 1, 2000 and Feb 29, 2008. Patients were included for the efficacy analysis if they were at least 18 years of age at surgery date and had at least 1 visit with a recorded weight post-surgery. Percent excess weight loss (%EWL) was assessed at one-year intervals post-surgery and missing values were interpolated using a cubic spline function. Linear regression models were used to assess the characteristics that affected last available %EWL. Death and re-operation for weight gain (defined as two separate weight loss surgeries) were reported for all patients undergoing surgery.

Results: We identified 2,909 gastric band patients who met inclusion criteria for the efficacy analysis. The majority of patients were white (83.3%) females (68.4%). The mean age was 44.6 years and the mean baseline BMI was 45.3. %EWL was 50.9% at 2 years and 52.9% at 3 years post-surgery and was sustained thereafter (Table). In multivariate models, increased number of office visits, younger age, female gender, and Caucasian race were significantly associated with higher final %EWL. Of all surgical patients (N=2,965), there was one surgical death (0.03%). Nine (0.1%) patients died from unrelated causes during follow-up and 11 (0.4%) underwent re-operation for weight gain.

Conclusions: Gastric band patients achieved substantial and sustainable weight loss of approximately 50% EWL two years post-surgery, which was sustained at seven years post-surgery.

Years Post-Surgery	Gastric Band %EWL		
	N	Mean	Median
Baseline	2,909	0	0
<1	2,909	37.6	36.0
<2	1,819	50.9	51.0
<3	1,136	53.0	52.0
<4	508	51.5	51.0
<5	281	47.5	44.0
<6	100	47.0	45.0
<7	12	46.7	43.0

S108

HIGH FAILURE RATE AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB): FIVE YEAR FOLLOW UP., Camilo Boza MD, Cristian Gamboa MD, José Salinas MD, Alex Escalona MD, Gustavo Perez MD, Fernando Pimentel MD, Fernando Crovari MD, Alejandro Raddatz MD, Luis Ibañez MD, Pontificia Universidad Católica de Chile

Introduction: LAGB is a technique increasingly used in USA. The aim of this study was to analyze the 5 year outcome in terms of weight loss and complications.

Methods and patients: We reviewed our prospective electronic database for all patients undergoing LAGB between 2002 and 2007. We assessed weight progression, complication and reoperation.

Results: We performed 199 cases during this period, (70.4%, females). Mean age was 37.8±12.4. Preoperative body mass index (BMI) was 36.0±4.3 kg/m². Preoperative comorbidities were dyslipidemia 46%, insuline resistance 21%, arterial hipertensión 20% and type 2 diabetes 8%. There were no conversion to open

Scientific Session Oral Abstracts

technique. Early complications were observed in 2 patients (1%), one hemoperitoneum and one ileitis. Mortality was 0%. Late complication rate was 36.7%, (19.6% related to the band). Reoperations were required in 40 patients patients (20.1%). Laparoscopic repositioning was done in 6 patients and port/reservoir revision was done in 4 patients. Band removal was required in 30 patients due to inadequate weight loss (10), slippage (6), gastric erosion (1) or band intolerance (13). Twenty of these patients underwent revisional surgery: sleeve gastrectomy 12, laparoscopic Roux-Y-Gastric bypass 7 and rebanding 1. Unrelated band complication was seen in 17,1%, mainly due to anemia 7,5%, alopecia 4%, coelitis 3,5%, incisional hernia 1% and bowel obstruction 0,5%. With a median follow up of 36 months (6-72), 75,4%, 60,4%, 94,6% of the patients were available for follow up at 1, 3 and 5 years, respectively. Mean percent excess weight loss (%EWL) at 1, 3 and 5 years was 55.9%±37.7, 57.1%±34.6 and 58.5%±47.4 respectively. However, failure rate (%EWL<50%) at 1, 3 and 5 years was 39.3%, 40,9% and 43,3%, respectively.

Conclusions: LAGB has a low perioperative morbidity. However, its late complications are significant and inadequate weight loss can be as high as 43% after 5 years.

S109

LAPAROSCOPIC SLEEVE GASTRECTOMY: A RETROSPECTIVE REVIEW OF 1 AND 2 YEAR RESULTS

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Introduction: Laparoscopic Gastric Bypass, Gastric Banding, and Biliopancreatic/Duodenal Switch are three proven surgical methods for treating morbid obesity. Recently, Laparoscopic Sleeve Gastrectomy (LSG) has been added as a surgical treatment for obesity. We report our one and two year results with LSG.

Methods: All procedures were performed by two surgeons experienced in bypass, banding, and LSG. All patients included in the study chose LSG over bypass or banding. From September, 2005, we have performed 247 LSGs. We retrospectively reviewed our 1 and 2 year data to assess weight loss, BMI, percentage of excess weight loss (%EWL), length of stay (LOS), complications, and resolution of diabetes. Early in our study, a 46 French Bougie and 7cm antral pouch was used. We then began to use a 40 Fr Bougie. Currently, we are using a 36 Fr Bougie and a 4cm antral pouch.

Results: A total of 41 patients were eligible for follow-up at 2 years, and 158 patients were eligible for follow-up at 1 year. Data was available on 34/41 pts for 2 years and 132/158 pts for 1 year. Initial mean age (years), mean weight (lbs), and mean BMI for 1 year data was 43.2, 270.8, and 44.3, respectively. Initial mean age (years), mean weight (lbs), and mean BMI for 2 year data was 41.4, 273.3, and 45.1, respectively. Mean weight loss (lbs), BMI, and %EWL, for pts at 1 year and 2 years was 89.3, 29.6, 78% and 87.5, 30.0, and 75%, respectively. There was no significant difference in the 46 Fr, 40 Fr, or 36 Fr Bougie with respect to weight loss, BMI, or %EWL. Likewise, there was no difference seen between the 7cm vs. 4cm antral pouch. Mean LOS for both groups was 1.1 days. A total of 12 complications occurred, including 1 (0.6%) death and 2 (1.3%) leaks. A total of 39 patients were diabetic. Of these 39 pts, 32 (82%) were cured of diabetes. The remaining 7 pts had their medications decreased.

Conclusion: Our results show LSG is a safe and effective weight loss procedure with results similar to those of gastric bypass. Additional long-term studies are still needed to accurately compare Laparoscopic Sleeve Gastrectomy to Gastric Bypass and/or Gastric Banding.

S110

COMPARISON OF RESOLUTION AND IMPROVEMENT OF CO-MORBIDITIES BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC ADJUSTABLE GASTRIC BAND.

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Introduction: The aim of this study was to compare the rate resolution and improvement of common co-morbidities: type 2 diabetes mellitus (DM), hypertension (HTN), degenerative joint disease (DJD), obstructive sleep apnea (OSA), gastroesophageal reflux disease (GERD), dyslipidemias (LPD) and asthma after Laparoscopic Sleeve Gastrectomy (LSG) or Laparoscopic Adjustable Gastric Band (LAGB).

Methods: Retrospective chart review of patients who underwent LSG or LAGB at our institution from May 2003 to July 2007. The

resolution of co-morbidities was determined via patient-completed questionnaires. The Fisher test was used to calculate the p value **Results:** A total of 123 patients (males = 29, females = 94) were reviewed, 49 underwent LSG and 74 had LAGB. For the LSG and LAGB patients, mean pre-operative BMI was 41 and 37 kg/m², the overall percentage Estimated Weight Loss (%EWL) was 39 and 28% (p=0.0026, CI 0.0393 to 0.1807), mean follow up was 12 and 15 months, respectively. The table below summarizes the results.

Resolution or improvement of co-morbidities after LSG vs. LAGB			
Co-morbidity	LSG	LAGB	p-value
DM n=29	100% (14/14)	33% (5/15)	0.0002
HTN n=56	70% (16/23)	39% (13/33)	0.0328
LPD n=46	87% (13/15)	45% (14/31)	0.0104
OSA n=32	50% (10/20)	33% (4/12)	0.4709
DJD n=51	68% (15/22)	69% (20/29)	1.0000
GERD n=19	22% (2/9)	30% (3/10)	1.0000
Asthma n=26	63% (10/16)	67% (8/12)	1.0000

Conclusions: Although both LSG and LAGB resulted in post-operative improvement or resolution of co-morbidities associated with obesity, when compared to LAGB, LSG showed a statistically significant higher rate of resolution or improvement of DM, HTN, and LPD. There was no significant difference between groups for DJD, GERD, OSA and asthma.

S111

GAGES: A VALID MEASUREMENT TOOL FOR TECHNICAL SKILLS IN FLEXIBLE ENDOSCOPY

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Introduction: GAGES (Global Assessment of Gastrointestinal Endoscopic Skills) was created to provide an objective measure of endoscopic skills to better assess training curricula. Pilot data have shown GAGES to meet high standards of reliability and validity. The aim of this multicenter study was to demonstrate the practicality and external validity of this instrument, while providing further evidence for reliability and validity. **Methods:** GAGES upper endoscopy (UE) and colonoscopy (C) are 5-point Likert rating scales developed by expert endoscopists. For UE, domains assessed were esophageal intubation, scope navigation, maintenance of a clear field, instrumentation (when biopsy, injection or polypectomy were performed), and overall quality of the examination; for C, these were scope navigation, strategies for scope advancement, clear field, instrumentation (when performed), and overall quality. GAGES was completed by the attending (A), a trained observer (O, in some cases), and in self-assessment (S) during clinical procedures to establish reliability (intraclass correlation coefficient, ICC) and internal consistency (Cronbach's alpha). Instrumentation was evaluated when possible and correlated with total scores. Construct and external validity were examined by comparing scores between novice (NOV) and experienced (EXP) endoscopists in 9 internationally dispersed academic institutions (Student's t-test). Correlations were calculated to compare GAGES-UE and C assessments in participants who had performed both. **Results:** 114 evaluations (68 NOV, 46 EXP) were completed (65 UE, 49 C); 36 participants performed both. Interrater reliability was excellent (A vs O) with an ICC of 0.92 (95% CI 0.82-0.97) for UE and 0.97 (0.92-0.99) for C. Interrater reliability between S and A assessments was also very good for UE (0.76; 0.64-0.85) and C (0.93; 0.88-0.96). Internal consistency of rating items was 0.89 for UE, and 0.95 for C. There were significant differences (mean (SD), maximum score=20) between NOV and EXP endoscopists for UE 15.8 (±3.7) vs 18.8 (±1.5) (p<0.0001) and C 12.7 (±4.5) vs 19.1 (±1.1) (p<0.0001). There was good correlation between scores on UE and C (r=0.77, n=36). Instrumentation, when performed, demonstrated correlations with total GAGES scores of 0.85(n=56) and 0.88(n=37) for UE and C respectively.

Conclusions: GAGES-UE and GAGES-C are easy to administer, consistent, and meet high standards of reliability and validity. They can be used to measure the effectiveness of simulator training or skills curricula and may also provide trainees with specific feedback. GAGES results can be generalized to trainees in North America and Europe and may contribute to the definition of technical proficiency in basic gastrointestinal endoscopy.



Scientific Session Oral Abstracts

S112

HOW DO NURSES AND PHYSICIANS LEARN GASTROINTESTINAL ENDOSCOPY: ASSESSMENT OF LEARNING CURVES USING A HIGH-FIDELITY VIRTUAL REALITY SIMULATOR, Irina Kruglikova MD, Teodor P Grantcharov PhD, Asbjorn M Drewes, DScs MD, Peter Funch-Jensen, DSc MD, Department of Surgical Gastroenterology L, Aarhus University Hospital, Aarhus, Denmark; University of Toronto, St. Michael's Hospital, Toronto, Canada; Department of Gastroenterology, SMI, Aalborg University Hospital, Aalborg, Denmark;

Background: Recently, it has been suggested that nurses can perform diagnostic endoscopic procedures, which traditionally have been a physician's responsibility. The existing studies concerning quality of sigmoidoscopy performed by nurses are small, used assessment tools with insufficient validation and to date there is very little knowledge of the learning curve patterns for physicians and nurses. The aim of a present study was to assess learning curves on a virtual reality colonoscopy simulator of untrained residents as compared to that of nurses with and without endoscopy assistance experience.

Materials and methods: 30 subjects were included in the study: 10 female residents (median age 30.5 years) without colonoscopy experience, 10 female nurses (median age 27.5 years) without endoscopy assistance experience and 10 female nurses (median age 42 years) with endoscopy assistance experience. All participants performed ten repetitions of task 6 from the Introduction colonoscopy module of the Accu Touch Endoscopy simulator.

Results: All subjects completed the virtual colonoscopy without complications. Significant differences existed between residents and nurses with respect to time to complete the procedure. Residents and nurses showed similar learning curve patterns. There were not significant differences between the groups in the volume of the insufflated air, % of time without discomfort and % of mucosa seen.

Conclusions: Nurses performed virtual colonoscopy as accurately and safely as residents. Although the residents performed significantly faster, time differences showed tendency towards decreasing and appraisal of the numeric time differences seemed of minor practical importance. Nurses can achieve competency with the endoscopic technique after appropriate training.

S113

VALIDITY OF USING THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY (FLS) PROGRAM TO ASSESS LAPAROSCOPIC COMPETENCE AMONG GYNECOLOGISTS, Bin Zheng MD, Hye-Chun Hur MD, Susan Johnson MD, Lee L Swanstrom MD, Legacy Health System, BIDMC, CESEI of UBC

Introduction: The Fundamentals of Laparoscopic Surgery (FLS) program has been accepted as a valid tool for assessment of basic laparoscopic skills among general surgeons. This study is designed to investigate the validity of using the FLS program for assessing cognitive and psychomotor laparoscopic skills among gynecologists.

Methods: A total of 45 gynecologists with variable surgical training and laparoscopic experience were enrolled for FLS testing. Each test included a cognitive computer-based exam to assess one's knowledge and a psychomotor portion to assess one's manual skills. A pre-test survey was used to document each participant's surgical training level and extent of surgical experience specific to laparoscopic procedures. Participants were asked to self-rate their confidence for performing laparoscopic procedures. Upon completion of the test, feedback on the FLS program was obtained from all participants.

Results: 38 individuals completed the FLS test. Gynecologists with more advanced levels of surgical training achieved higher FLS manual skills scores than those who had lower levels of surgical training (Attending: 528; Fellow: 491, senior resident: 491, junior resident: 336. $P = 0.007$). In contrast, the FLS cognitive scores did not correlate to one's level of surgical training (Attending: 333; Fellow: 391, senior resident: 413, junior resident: 362. $P = 0.468$). Self-rated confidence scores correlated well with FLS manual skills test scores ($r = 0.53$), but only moderately with the cognitive scores ($r = 0.16$). Regression analyses support that FLS manual skill scores better reflect one's experience specifically in laparoscopic surgery (years in practice and number of laparoscopic cases performed) rather than one's general surgical experiences in gynecology. In contrast, the FLS cognitive score does not correlate with one's laparoscopic experience or level of surgical training.

Conclusion: The FLS program is a valuable and promising assessment tool for gynecologists. The manual skills component

of the FLS test appropriately measures the level of a gynecologic surgeon's psychomotor skills. The FLS cognitive test portion however poses challenges to gynecologists, and does not discriminate between advanced and novice surgeons. Modifications of the FLS cognitive test may allow better adaptability of the FLS program to be applied to gynecologic laparoscopists.

S114

EVALUATION OF A VIDEO-BASED CURRICULUM FOR LAPAROSCOPIC BILIARY SURGERY: A PILOT STUDY FROM THE SAGES MIS WEB LEARNING CENTER, Nicole Fearing MD, Michael Holzman MD, Daniel Scott MD, Michael Brunt MD, Departments of Surgery, University of Missouri, Columbia MO, Vanderbilt University, Nashville, TN, University of Texas-Southwestern, Dallas, TX, Washington University-St Louis, MO.

The SAGES Continuing Medical Education and Resident Education committees have, in conjunction with Cine-Med, developed a web based learning module for surgical education utilizing various SAGES videos and educational materials. The aim of this project was to assess resident utilization of the pilot module in laparoscopic biliary surgery and to evaluate improvement in standardized test scores.

Methods: Videos from Top 14 Series, SAGES Grand Rounds (SGR), SGR Case Studies, supplementary videos, and the SAGES Manual were organized into basic and advanced modules in a biliary curriculum. Assessment questions were written based on content material. The module was piloted in four general surgery residency programs from September 2007 to September 2008. Residents participated in an introductory session and were encouraged to use the web based curriculum in independent study. Residents at all levels were encouraged to take and complete the basic curriculum and its pre and post tests. Third, fourth and fifth year residents were encouraged to complete the advanced modes and its pre and post tests. Data was collected prospectively on resident participation, pre and post test scores and use of the various educational modalities. Data was analyzed to obtain descriptive data, and means were compared with paired T-tests.

Results: 322 residents were registered into the SAGES Web Learning Center. Of these, 118 completed pre and post tests for the basic module for a 37% participation rate. The mean score for the biliary basic module pretest was 55.98 (SD-15.51) and increased significantly for the post test to 74.65 (SD-6.15) ($p < 0.0001$). Forty-seven residents participated in the advanced module with an average score of 58.79 (SD-10.54). Only 31 residents completed the post test with an average score of 74.39 (SD-5.37). The improvement was again statistically significant ($p < 0.0001$). The most commonly viewed portions of the modules, all from the basic modules, were SAGES Grand Rounds, Top 14 videos and SGR Case Studies. Out of the residents who completed the learning center module 49% were PGY 1.

Conclusions: This study indicates that the SAGES MIS Web Learning Center biliary curriculum is a potentially valid tool for learning. Although compliance in participation was variable, this may be because the topic would have been of less interest to senior level trainees. However, the significant improvement in results suggests it can be an effective foundation for learning, especially in the early years of surgical training. The development of additional modules may increase the value to both surgical trainees and practicing surgeons.

S115

MENTORING AND TELEMENTORING LEADS TO EFFECTIVE INCORPORATION OF LAPAROSCOPIC COLON SURGERY,

Christopher M Schlachta MD, Kevin L Lefebvre MD, A Kent Sorsdahl MD, Shiva Jayaraman MD, CSTAR (Canadian Surgical Technologies & Advanced Robotics), Lawson Health Research Institute, University of Western Ontario, London, and Stratford General Hospital, Stratford, Ontario, Canada

OBJECTIVE: To perform a one-year review of a community surgery group following completion of a laparoscopic colon surgery mentoring program.

METHODS: A formal mentoring protocol has been previously reported between a university centre and two surgeons at a community hospital. Over 18 months concluding August 2007, surgeons were mentored and telementored through 20 laparoscopic colon resections in their local setting. Surgeons tracked their cases for a further 12 months following mentoring.

RESULTS: From Sept. 2007 to Aug. 2008, 30 colon resections were performed. Three of these were mentored / telementored as advanced procedures (laparoscopic sigmoid colectomy for fistula, 2 laparoscopic subtotal colectomies). Of the remaining 27, 15 (56%)

Scientific Session Oral Abstracts

were laparoscopic. These comprised 9 right, 5 sigmoid colectomies and a subtotal colectomy, for cancer (6), polyps (5), diverticular disease (2), Crohn's (1) and colonic inertia (1). Five were converted to open surgery (33%) due to adhesions (3), unclear anatomy (1) and equipment failure (1). Mean lymph nodes in cancer cases was 15.3 ± 3.8 . Minor postoperative complications occurred in 7 (47%) of which 3 were conversions. These included ileus (4), wound abscess (2), cardiac arrhythmia (1), and anastomotic bleed (1) and abscess (1). Patients selected for open surgery consisted of 7 right, 3 sigmoid colectomies, a splenic flexure resection and a dual resection, the rationale for which were transverse colon cancer (4), medical comorbidity (3), colovesicle fistulae (2), rectal lesion (2) and carcinoid tumor (1). Comparing groups, laparoscopic patients were younger (58.2 ± 13.2 vs. 73.8 ± 10.6 yrs, $p=0.003$), had longer operating time (124 ± 28 vs. 94 ± 38 min, $p=0.026$) and shorter median hospital stay (3.0 vs. 7.0 d, $p=0.006$). Laparoscopic operating time improved in this series compared with the mentoring experience (124 ± 28 vs. 150 ± 43 , $p=0.046$).

CONCLUSIONS: One year follow-up after a longitudinal mentoring demonstrates excellent incorporation of laparoscopic colon surgery into a community practice with appropriate case selection, quality cancer surgery and a moderate conversion rate.

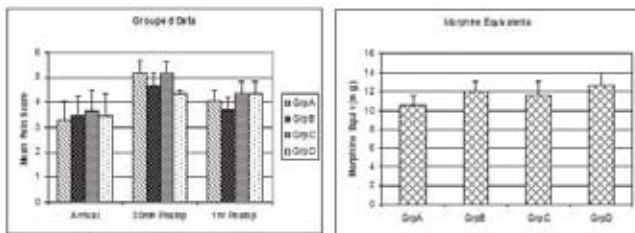
S116

PORT SITE LOCAL ANESTHETIC INJECTION DOES NOT DECREASE POSTOPERATIVE PAIN LEVEL OR NARCOTIC USE: A RANDOMIZED BLINDED STUDY, Yewching Teh MD, Noam Belkind MD, Rodrigo Arrangoiz MD, Keith Apelgren MD, Michigan State University, East Lansing, MI

Introduction: Trocar-site pain is a common complaint following laparoscopic cholecystectomy (LC). The purpose of this study was to determine whether local anesthetic use at trocar sites during LC decreases post-operative pain; and whether the timing of anesthetic injection influences this outcome.

Methods and Procedures: After IRB approval, patients were randomized in a blinded fashion into four groups; Group A ($n=33$): normal saline (NS) injected at trocar sites before incision+NS before skin closure, Group B ($n=30$): Local anesthetic (LA, 0.25% Bupivacaine) injected before incision+NS before closure, Group C ($n=33$): NS before incision+LA before closure, Group D ($n=27$): no injection. Pain level upon post-anesthesia care unit (PACU) arrival, 30 and 60 minutes post-op were collected by PACU nurses using a Likert scale (1-10). Total dose of narcotic administered in the PACU was recorded. Data were analyzed using one way analysis of variance.

Results: There was no difference in pain scores measured at arrival, thirty or sixty minutes post-op ($p=0.99$, 0.62 and 0.77 respectively). Additionally, there was no difference in narcotic dosage used among groups while in the PACU ($p=0.70$).



Conclusion: Local anesthetic use did not decrease post-operative pain or narcotic use after LC. This was true whether local anesthesia was administered prior to skin incision or prior to skin closure.

S117

LAPAROSCOPIC SURGERY SIGNIFICANTLY REDUCES SURGICAL SITE INFECTIONS COMPARED TO OPEN SURGERY, Esteban Varela MD, Ninh Nguyen MD, Samuel Wilson MD, Veterans Affairs North Texas Healthcare System and University of California Irvine Medical Center

Background: Surgical Site Infections (SSI) are known but infrequent hospital acquired infectious complications that are associated with significant morbidity, mortality and hospital costs. Recently, the U.S. Department of Human Health Services and Congress have questioned the preventive measures aimed towards hospital acquired infections. We determined and compared the incidence of SSI after laparoscopic and open surgical procedures at US academic medical centers.

Methods: Using ICD9-CM diagnosis and procedure codes of patients who underwent laparoscopic or open appendectomy,

cholecystectomy, anti-reflux surgery, and gastric bypass between October 1st 2004 and June 30th 2008 were obtained from the University HealthSystem Consortium Clinical Database. The main outcome measure was in-hospital SSI after laparoscopic and open surgery.

Results: During the 45-month study period, a total of 131,630 patients underwent 1 of 4 procedures (these procedures were selected because they have specific laparoscopic and open ICD9-CM procedure codes). Overall, the incidence of SSI was significantly lower in laparoscopic (483 of 94,665; 0.5%) compared to open surgery (669 of 36,965; 1.8%; $p < 0.01$). Laparoscopic techniques offered a protective effect against SSI (OR = 0.28 95% CI [0.25 - 0.31]) even when stratified for severity of illness (minor: OR = 0.19; 95% CI [0.14 - 0.26]; moderate: OR = 0.30; 95% CI [0.25 - 0.35]; and major/extreme: OR = 0.65; 95% CI [0.54 - 0.79]) and admission status (elective, OR = 0.25; 95% CI [0.20 - 0.31]; urgent, OR = 0.38; 95% CI [0.28 - 0.53], and emergent, OR = 0.29; 95% CI [0.25 - 0.34]). Surgical technique was significantly associated with SSI ($X^2 = 517.6$; $p < 0.01$).

Conclusions: In the context of U.S. academic medical centers, laparoscopic surgery significantly reduces SSI. Overall and for the cases analyzed, patients who had laparoscopic procedures were significantly less likely to develop a SSI. After stratifying for severity of illness and admission status, laparoscopic surgery conferred a protective effect against SSI. The use of laparoscopic techniques should be considered by federal and health agencies as a reasonable health policy to decrease and prevent hospital acquired SSI.

S118

ADVANCED LAPAROSCOPIC TECHNIQUES SIGNIFICANTLY IMPROVE FUNCTION OF PERITONEAL DIALYSIS CATHETERS, Vikram Attaluri MD, Chris Lebeis BS, Marty Schreiber MD, Steve Rosenblatt MD, Cleveland Clinic

Background: Continuous Ambulatory Peritoneal Dialysis (CAPD) catheters provide an alternative to hemodialysis in an increasing population of patients with chronic kidney disease. However, CAPD catheters have traditionally been associated with high rates of non-function using both the open and laparoscopic approaches. New advanced laparoscopic techniques utilizing rectus sheath tunneling and selective omentopexy have been reported to improve catheter function.

Methods: This study retrospectively reports the Cleveland Clinic experience during the transition from basic to advanced laparoscopic techniques between June 2002 and July 2008. A total of 201 patients were identified, of which 68 patients underwent insertion with basic techniques and 133 patients received catheters utilizing advanced techniques. Primary non-function, procedural complications, and overall non-function rates were analyzed using the most recent follow-up through June 2008.

Results: Primary catheter non-function occurred in 25 of 68 (36.7%) patients in the basic group, whereas this occurred in only 6 of 133 patients (4.5%) in the advanced group ($p < 0.0001$). Furthermore, 4 of these 6 pts had their catheters successfully revised with salvage laparoscopy, thereby further decreasing the rate of primary catheter losses to 1.5%. The overall rate of complications including non-function from primary and secondary sources, peritoneal leak, peritonitis, port-site hernia and bleeding occurred in 31 of 68 (45.6%) patients in the basic group and 21 of 133 (15.79%) patients in the advanced group ($p < 0.0001$).

Conclusion: This data clearly shows a significant improvement in CAPD catheter function utilizing selective omentopexy and rectus sheath tunneling. These advanced laparoscopic techniques should be considered the preferred method of CAPD catheter insertion.

S119

MALPRACTICE CARRIER UNDERWRITES FLS TRAINING AND TESTING - A BENCHMARK FOR PATIENT SAFETY, Alexandre Y. Derevianko MD, Steven D Schwartzberg MD, Shawn Tsuda MD, David C Brooks MD, Mark P Callery MD, Limaris Barrios MD, David Fobert BS, Noel Irias, David W Rattner MD, Daniel B Jones MD, Beth Israel Deaconess Medical Center, Cambridge Health Alliance, Brigham and Women's Hospital, Massachusetts General Hospital, Boston, MA

Background: Fundamentals of Laparoscopic Surgery (FLS) is a validated program developed by the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) to educate and assess competency in Minimally Invasive Surgery (MIS). This study reports the first malpractice carrier sponsored FLS course for surgeons-in-practice underwritten by the Controlled Risk Insurance Company of Harvard's Risk Management Foundation (CRICO/RMF). We investigated the participating surgeons' pattern of



Scientific Session Oral Abstracts

MIS skills acquisition, subjective laparoscopic comfort level, operative activity and their perception of the FLS role in surgical education, credentialing and patient safety.

Study design: A full-day post-graduate CME course comprised the didactic presentations of the leading MIS faculty, proctored FLS hands-on training, psychomotor testing and cognitive computer-based examination. Voluntary anonymous pre- and post-course surveys were handed out to the participants upon registration and upon completion of both the didactic and the skills modules of the program.

Results: 37 practicing surgeons in the Harvard system attended the course. 86% of survey forms were returned. The major driving forces to attend the course were directive from chief/chairman (50%), improvement in the MIS didactic knowledge (56%), and the belief that FLS will become a standard such as ATLS, ACLS, etc. (53%). Surgeons reported that the FLS exam content is appropriate (4.41 \pm 0.91 Likert) and also that mastery of the course material will improve safety (4.13 \pm 0.79) and technical knowledge of MIS (4.03 \pm 1.00).

Conclusions: This unique cooperative effort between liability carrier, a professional surgical society, and proactive surgeons should be considered as a model for advancing competency and patient safety. Survey results indicate a positive view on FLS in surgical training, safety, and MIS education.

S120

SAGES GRANT IMPACT ON RECIPIENT ACADEMIC CAREER,
Aurora D Pryor MD, Alfonso Torquati MD, SAGES Research and Career Development Committee

Introduction: Surgical societies, including SAGES, frequently distribute grant funds to support research in their field as well as to promote the careers of the grant recipients. No objective data

supporting the positive impact of grants from a surgical society has been available. We completed a survey of SAGES grant recipients to track academic success and further research initiatives.

Methods: All SAGES grant Principal Investigators (PI) and Co-PIs funded from 1993-2008 were surveyed using Survey Monkey. Questions included year of funding, resultant presentations and publications and related funding. Recipients were queried on academic promotions, unrelated research and subjective impact from the grant.

Results: 48 of 108 surveys were answered (44.4%). 81% of respondents were listed as the PI. 72% of funded projects were actually completed. Most incomplete studies were still in progress at the time of the survey. 73% of projects were presented at scientific meetings, with 88.5% presented at SAGES (as required). Other popular forums for presentation included the American College of Surgeons or Digestive Diseases Week at 3.8% each. Presentation dates ranged from 1997 - 2008. 8.6% of respondents received awards for these presentations. 63.9% have published the results from their funded projects, with the majority (68.2%) published in Surgical Endoscopy. Publication dates ranged from 1996-2008. 67.6% have had additional publications since completing their SAGES grant project. The average number of publications since receiving a SAGES grant was 20 (2-150). 42.9% received further research funding that they felt was impacted by the SAGES grant. Of those with additional funding, 33% received over \$200,000, and 66% over \$50,000. Only 7.1% of additional funding was from the NIH, 42.9% was from a professional organization. The average grant recipient had attended 3.8 of the last 5 SAGES meetings.

Conclusion: SAGES grants have a strong impact on the academic careers of their recipients and lead to future funding as well as publication. These and similar grant should be continued as an important tool for academic growth and development.

Residents/Fellows Scientific Abstracts

S121

PERITONEAL INFLAMMATORY RESPONSE OF NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) VERSUS LAPAROSCOPY WITH CARBON DIOXIDE AND AIR PNEUMOPERITONEUM

Joseph A Trunzo MD, Michael F McGee MD, Leandro T Cavazzola MD, Steve J Schomisch MD, Mehrdad Nikfarjam MD, Jessica Bailey BS, Tripurari Mishra, Benjamin K Poulouse MD, Young-Joon Lee MD, Jeffrey L Ponsky MD, Jeffrey M Marks, University Hospitals Case Medical Center

Background: The immunologic and physiologic effects of NOTES are poorly understood when compared to traditional surgical approaches. Previous experimental models have shown NOTES and laparoscopy share similar acute-phase systemic inflammatory cytokine profiles, except for a possible late phase TNF- α depression in NOTES. The local immunologic peritoneal reaction and immunomodulatory influence of pneumoperitoneum agents are also not known in NOTES and may play an important role in altering the physiologic insult induced by NOTES.

Methods: Fifty-one animals were divided into 4 study groups which underwent abdominal exploration via transgastric NOTES with air or carbon dioxide (CO₂) or laparoscopy (LP) with air or CO₂. Laparotomy and sham surgeries were additionally performed as controls. TNF- α , IL-1b, and IL-6 were measured in peritoneal fluid collected at times 0, 2, 4, and 6 hours and on post-operative days (POD) 1, 2, and 7.

Results: 45 animals were assessed, with 6 excluded due to technical operative complications. LP (CO₂) generated the most pronounced response with all 3 inflammatory markers. However, there were no significant differences detected between LP (CO₂) and either NOTES group at these peak points. No differences were encountered between NOTES (CO₂) and NOTES (air). Subgroup comparisons showed significantly higher levels of TNF- α and IL-6 for NOTES (CO₂) compared to LP (air) on POD 1 ($p=0.022$) and POD 2 ($p=0.002$), respectively. LP (CO₂) had significantly higher levels of TNF- α compared to LP (air) at 4 hours ($p=0.013$) and POD 1 ($p=0.021$). There was no late-phase TNF- α depression in NOTES animals.

Conclusion: The local peritoneal inflammatory cytokine reaction to NOTES is similar to traditional laparoscopy, and previously described late-phase systemic TNF- α depression could not be reproduced at the peritoneal level. Regardless of which gas, the role of the pneumoperitoneum agent used in NOTES did not affect the cytokine profile when compared to the gold standard of CO₂ laparoscopy. At the peritoneal level, NOTES is no more physiologically stressful locally than laparoscopy. From an immunologic perspective, CO₂ pneumoperitoneum does not convey immunomodulatory effects in NOTES, and air pneumoperitoneum is adequate for NOTES procedures.

S122

A RANDOMIZED CLINICAL TRIAL COMPARING COST AND EFFECTIVENESS OF BIPOLAR VESSEL SEALERS TO CLIPS AND VASCULAR STAPLERS IN STRAIGHT LAPAROSCOPIC COLECTOMY

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Introduction: This study compares the costs and effectiveness of two standard techniques for vascular control in straight laparoscopic colectomy.

Methods: Patients scheduled for laparoscopic colectomy were randomized to bipolar vessel sealer (BVS; Ligasure Atlas, Covidien) or laparoscopic clips and vascular staplers (LCS). Time and ability to control the main vascular pedicles were recorded. Costs of disposable instruments were evaluated. Diagnosis, type and duration of procedure, body mass index (BMI), presence of adhesions, abscess or phlegmon, as well as estimated blood loss (EBL) were used to adjust multivariate regression models and evaluate effectiveness and costs.

Results: Of 59 randomized patients, there were 32 BVS and 27 LCS cases. Diagnosis, occurrence and severity of adhesions and abscess, median BMI (27kg/m²), operative time (170min), EBL (50ml), and length of stay (3 days) were similar between groups. Twenty right colectomies, 31 left colectomies and 8 total colectomies were performed for diverticulitis (16), neoplasia (33), and colitis (10). There were no conversions. Both diagnosis and procedure were significant predictors of the duration of surgery, while randomization to either group was not. An average of 2.4 laparoscopic clips and 1.6 vascular staplers were used per procedure in the LCS group. Overall, there was no significant difference in costs of disposable instruments. Two instruments failures occurred in the LCS arm, while one BVS had to be replaced ($p=ns$). BVS decreased operative time by 106 minutes ($p=0.04$)

for total colectomies and by 33 minutes ($p=0.04$) for right colectomies. Moreover, the BVS reduced instrument costs by \$446.9 in total colectomies and by \$85.9 ($p=0.07$) in right colectomies. There were no significant differences in operative time and cost for left colectomies.

Conclusion: Bipolar vessel sealers do not change operative time or instrument cost for laparoscopic colectomy. BVS does significantly reduce the operative time and instrument cost for total and right colectomies and presents a better cost-effectiveness profile than laparoscopic clips and vascular staplers.

S123

VOLUME-OUTCOME RELATIONSHIPS AND OTHER INFLUENCES OF OUTCOME IN BARIATRIC SURGERY - JUSTIFICATION OF THE CURRENT PARADIGM

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Introduction: With the incidence of morbid obesity in the United States increasing at a rapid rate, bariatric surgical practices have continued to flourish. Recent years have seen the establishment by various professional organizations of credentialing processes, centers-of-excellence programs and fellowship training positions. Many of these processes grant privileges to bariatric surgeons based on case volume, with the expectation that higher case volume results in improved outcomes. The effect of center-of-excellence status and of a fellowship training program has not previously been examined. This study examines volume-outcome relationships and other influences of outcome of bariatric surgery in the United States over a nine year period.

Methods and Procedures: Data were obtained from the Nationwide Inpatient Sample, the largest all-payer discharge database in the United States, from 1998 to 2006. Quantification of patients' comorbidities was made using the Charlson Index. Using logistic regression modeling, annual case volumes were correlated with institutions' center-of-excellence status and fellowship training program status. Risk-adjusted outcome measures were calculated for these hospital-level parameters.

Results: A total of 496,267 bariatric operations were recorded for the study period. Adjusting for comorbidities, greater bariatric case volume was seen to result in statistically significant improvements in the incidence of in-hospital mortality. Strong beneficial trends in rates of pulmonary embolism, cardiac complications, intra-abdominal collections and requirement for laparotomy were noted to be associated with increasing case volume. Hospitals with a fellowship training program had a risk-adjusted significant improvement in rates of venous thromboembolism and rates of splenectomy. Center-of-excellence status, whether affiliated with the American College of Surgeons or with the Surgical Review Corporation / American Society for Metabolic and Bariatric Surgery, did not have any independent effect on outcome.

Conclusions: For the first time, the hypothesized positive volume-outcome relationship of bariatric surgery has been shown without artificially categorizing hospitals to case-volume groups. Institutions with a fellowship training program have also been shown, in part, to have improved outcomes. The concept of volume-dependent center-of-excellence programs been validated, though no independent effect of the credentialing process is noted. The current paradigm of assuming improved outcomes as a result of the above parameters has now been justified.

S124

SMALL BOWEL RESECTION AND ANASTOMOSIS USING "NOTES": LESSONS LEARNED IN A SURVIVAL MODEL

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INTRODUCTION: Natural orifice transluminal endoscopic surgery (NOTES) has been used for a number of technically straightforward surgical procedures. However, to date, no one has reported using NOTES technique for small bowel resection and anastomosis in a survival model.

METHODS AND PROCEDURES: All studies were conducted in accordance with Institutional Animal Care and Use Committee (IACUC) protocols. Five female swine (20-40 kg) under general anesthesia underwent resection of 10 cm of small bowel with stapled side-to-side anastomosis using a dual-endoscopic approach. Only commercially available staplers and instruments were used. Visualization and manipulation were achieved via a trans-gastric endoscope, while transvaginal access into the rectovesical recess



Residents/Fellows Scientific Abstracts

permitted introduction of staplers and endoscopic instruments into the peritoneal cavity. Resected specimens were retrieved through the transvaginal port. Recovery was achieved up to 5 days postoperatively.

RESULTS: Using standard endoscopic equipment and commercially available bowel stapling devices, the procedure was extraordinarily challenging. Resection of a segment of small bowel was achieved in each case. However, two out of five attempts (40%) completely failed to achieve re-anastomosis of the divided ends of bowel (after prolonged attempts using all available equipment to achieve the result via the NOTES method), requiring premature sacrifice of those two animals. The remaining three studies resulted in bowel obstruction at the anastomosis (two cases), and peritonitis on the third postoperative day (one case, possibly due to an anastomotic leak).

CONCLUSION: Although complex surgical procedures such as bowel anastomosis can be achieved via NOTES, the technical failure rate using current instrumentation is unacceptably high. Clearly bowel resection and anastomosis reaches a greater level of difficulty than other procedures previously achieved successfully with NOTES. Bowel resection and anastomosis should not be attempted in human patients via NOTES until it has been clearly demonstrated to be not only feasible, but also safe and reproducible, in a relevant survival animal model, in which post-operative complications may be discovered. Use of the survival model also unmasks potential issues which may not be discovered in non-survival models. Potential areas for improvement in technology have been identified, and include the need for greater intraperitoneal mobility and manipulation of tissue.

S125

AUDITORY STRESS VERSUS MENTAL LOADING: THE EFFECTS ON LAPAROSCOPIC MOTOR SKILL PERFORMANCE, Claudius Conrad MD PhD, Yusuf Konuk MD, Caroline Cao PhD, Andrew

Warshaw MD, David Rattner MD, Daniel Jones MD, Denise Gee MD, 1 Massachusetts General Hospital, Department of Surgery, Boston, MA; 2 Tufts University, Department of Mechanical Engineering, Medford, MA; 3 Beth Israel Deaconess Medical Center, Department of Surgery, Boston, MA

(1) OBJECTIVE External auditory stress and internal mental stress may affect clinical practice. Our aim was to assess the specific impact of dichotic music versus mental loading on novices performing laparoscopic tasks. **(2) METHODS AND PROCEDURES** Thirty naïve volunteers were recruited with no hearing or motor handicap. Volunteers were randomized to three simple tasks to be performed on a laparoscopic simulator: SurgicalSIM VR. Tasks were equal in difficulty and performed under three variable conditions: silence, auditory stress (dichotic music) and mental loading (mental arithmetic tasks). Permutations of the conditions were created in order to account for a learning effect. Tasks were performed twice with a 10 minute break in between to test for memory consolidation and to accommodate baseline variability. Time until task completion and tip trajectory (path of tip through space) were recorded. **(3) RESULTS** Auditory stress and mental loading led to an increase in time to task completion when compared to silence (2.3 fold and 2.4 fold, respectively). Each led to a 1.8 and 2.0 fold increase in trajectory. Inter-person variability regarding task performance of the volunteers in response to auditory stress was greater compared to mental loading. In addition mental loading specifically affected recall of the procedure with an improvement accountable to memory consolidation of only 4% versus 32% in silence ($p=0.021$). **(4) CONCLUSION** Auditory stress and mental loading lead to prolonged operating time with diminished accuracy. More specifically, mental loading has a negative impact on memory consolidation resulting in lack of recall of learned skills. While our data does not allow any conclusions on music in the operating room, stressful distractions should be limited. Further research is necessary to understand the effects of stress on experts and the mechanisms that can be developed to counteract its negative effects on laparoscopic performance.

S126

NOVEL SYSTEM IMPROVES ACCURACY OF NEEDLE PLACEMENT FOR ABLATION PROCEDURES, Stephen M Smeaton MD, John B

Martinie MD, Michael C Meadows MD, Phuong H Nguyen MD, Jessica J Heath BS, Sharif Razzaque PhD, Caroline Green, H. James Norton PhD, David A Iannitti MD, Srikanth Padma MD, Carolinas Medical Center, Charlotte, NC; InnerOptic Technology Inc, Chapel Hill, NC. This study demonstrates improved accuracy in needle placement for ablation procedures using a novel 3D ultrasound trajectory system.

Ultrasound guidance can be difficult and require years of experience to master. In addition it does not provide a real time trajectory to the target. This system creates an advanced, real-time stereoscopic image when added to standard ultrasound creating a 3D guided approach to placement. Users with experience ranging from novice to expert made microwave needle antenna placements into a target both with and without advanced guidance. We hypothesized increased accuracy with the guidance system for needle placement at all angles of approach regardless of experience.

Methods. 180 targets of 6-8mm size were created 3cm deep to the surface in agar gel. An InVision guidance system (InnerOptic, Chapel Hill, NC) was attached to the ultrasound probe and microwave needle antenna of a B-K Pro Focus 2202 (B-K Medical, Denmark) with surgical T probe (#8659). The 3D display for advanced targeting guidance was viewed through passive stereo glasses on a 42 inch plasma stereoscopic monitor. A 13 gauge 22cm surgical microwave needle antenna (Valley Lab, Boulder, CO) was used for all procedures. A novice, amateur, and expert made placements which were randomized between use of enhanced image guidance versus standard ultrasound and three angles of approach relative to the ultrasound plane: 0, 45 and 90 degrees. Users could not alter the needle course once an angle of approach was chosen. Accuracy data was collected by ultrasound confirmation in two planes. Descriptive statistics comparing guided versus non-guided were calculated using chi-square test.

Results. Users made 10 placements each for the three angles with and without advanced image guidance. For all users at all angles the accuracy improved significantly when using the guidance system: 40% to 90% ($p<0.0001$) at 0 degrees, 40% to 97% ($p<0.0001$) at 45 degrees, and 27% to 77% ($p=0.0001$) at 90 degrees. At 0 degrees the novice had no successful placements without guidance but improved to 60% accuracy with guidance. In addition, the accuracy of the novice and amateur using the system was better than that of the expert not using the system.

Conclusions. This advanced needle guidance system significantly improved accuracy of microwave needle placement regardless of the surgeon's level of experience. Clinical trials are needed to evaluate whether this translates to more complete treatments and better outcomes in patients requiring procedures with needle placement. In addition, the level of expertise required to perform these procedures might be reduced.

Picture 1. Microwave needle placement using 3D targeting system.



S127

RIVES-STOPPA INCISIONAL HERNIA REPAIR COMBINED WITH LAPAROSCOPIC SEPARATION OF ABDOMINAL WALL COMPONENTS: A NOVEL APPROACH TO COMPLEX ABDOMINAL WALL CLOSURE, Tiffany C Cox MD, Jonathan P Pearl MD, Alexander

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Introduction: The Rives-Stoppa hernia repair is the gold standard for mesh repair of complex incisional hernias. The rate of wound infection can be reduced if fascial closure is achievable between the skin and the prosthetic mesh. For larger defects, fascial closure is not often possible without raising large skin flaps for separation of

Residents/Fellows Scientific Abstracts

the abdominal wall components. This can lead to devascularization of the overlying skin and denervation of the abdominal wall musculature. Laparoscopic components separation minimizes these risks while facilitating anterior fascial closure. This combined technique has not previously been reported.

Methods: A retrospective review of patients who underwent Rives-Stoppa incisional hernia repair augmented by laparoscopic components separation was performed.

Results: Five patients were identified. Three patients developed hernias following laparotomy from severe injuries sustained in the Global War on Terror. The other two patients included hernia after esophagectomy and after retroperitoneal liposarcoma resection. Average defect size was 310 cm². Fascial closure anterior to the mesh was achieved in all but one patient. The residual defect in this patient was reduced from 375 cm² to 96 cm². Early post operative complications included a superficial skin infection not involving mesh and a recurrent enterocutaneous fistula. No mortalities occurred and at short term follow-up no incisional hernia recurrences have developed.

Conclusion: Rives-Stoppa repair augmented by laparoscopic components separation is an innovative method for reconstruction of complex abdominal wall defects. Laparoscopic components separation allows fascial closure to be achieved anterior to the mesh in large incisional hernias, which may reduce wound infection rates.

S128

ERGONOMIC USER INTERFACES FOR NOTES; A COMPARISON OF LEARNING CURVES FOR OPEN, LAPAROSCOPIC AND ENDOSCOPIC DEVICES IN COMPLEX BIMANUAL COORDINATION,

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Background: NOTES adds a novel paradigm to surgical techniques. In the NOTES paradigm, it may require long periods of training to overcome difficulties in interpreting unstable images and controlling flexible instruments in order to master basic surgical skills. This study takes an initial step into understanding the learning process of NOTES. Bimanual coordination learning curves were contrasted between three different surgical paradigms. We hypothesized that the use of an open or laparoscopic paradigm will have a better performance and a shorter learning process (reaching a learning plateau earlier) than an endoscopic paradigm.

Methods: Our model required 7 subjects to perform identical bimanual coordination tasks with 3 different tools (a dual channel endoscope with graspers, a laparoscopic Maryland grasper and straight artery forceps for open surgery). The task required subjects to press a trigger to start, grab a rubber ring from a cone with right instrument, pass it to left instrument, place it with left instrument on a different cone, press trigger again, grab the same ring with left grasper, pass it to right grasper, place it on a cone, and press the trigger to establish performance time. Performance was measured by movement speed and accuracy. The learning curves of 4 novices for 30 tasks with each device were compared to the performance of 2 experienced participants and 1 endoscopy and laparoscopy expert. The first 6 trials of the expert were averaged and created a baseline for reference.

Results: Overall performance speed was significantly faster using open or laparoscopic tools than endoscopy for all groups (seconds: open 13+/-1; lap 28+/-3; endo 202+/-82; P<0.001). The difference between open and laparoscopy was not significant (P=0.149). There was no significant difference (P=0.434) in accuracy (drop of ring) between the devices.

Novices reached the baseline after 9 trials with the open device and after 15 trials using both laparoscopy and endoscopy. To compare the performance time of the 3 different devices without learning curve we averaged task 28-30 for all groups: (seconds: open 11+/-2; lap 25+/-4; endo 152+/-75; P<0.001).

Conclusions: Learning curves for complex endoscopy is similar to that seen for laparoscopy. Training models and curricula may benefit from adopting those used and validated for laparoscopic surgery. An improvement in ergonomic design of current NOTES endoscopes may also shorten the time to achieve competence.

S129

FOLLOW-UP AND DISTANCE FROM CENTRE ARE IMPORTANT DETERMINANTS IN WEIGHT LOSS POST LAPAROSCOPIC

ADJUSTABLE GASTRIC BANDING., P Sivagnanam BS, M Rhodes MD, Norfolk and Norwich University Hospital NHS Trust, Norfolk, UK and Spire Hospital, Norwich, Norfolk, UK

Introduction: In this study, we examine the importance of regular post-operative follow-up and the effect of geographical distance from the centre of follow-up on long term weight loss post laparoscopic adjustable gastric banding (LAGB).

Method: Over 11 years (1997- 2008), 140 patients underwent LAGB. Post-operatively patients were invited to attend a monthly nurse-led follow-up clinic, to assess weight loss and make necessary band adjustments. The demographic data, comorbidities, operation time, length of hospital stay and weight loss at each follow-up appointment were prospectively entered into a database for all patients using Microsoft EXCEL ©. %EWL was measured at each follow-up and records kept of the number of follow-ups per patient and the distance each patient had to travel to the surgical centre.

Results: 128 females and 12 males, with a median age of 45 years (range 18-67), median start weight of 119 kg (range 88-220kg) and median BMI of 43.6 (range 35- 83) have had surgery to date. 78% of patients had at least one comorbidity associated with obesity. Median operative time was 35 minutes (range 22 - 90 minutes) and median length of hospital stay was 1 night (range 1-5 nights). Two patients did not attend follow-up post surgery.

Median % EWL at 1, 3, 6, 9, 12, 24 and 36 months post-operatively was 10%, 17%, 30%, 37%, 51%, 66% and 84% respectively. Median %EWL at 12 months post LAGB grouped by 0-3, 4-6, 7-9 and >10 follow-up attendances was 21 %, 44%, 52% and 56% respectively. At a median of 22 months post-operatively, at the following distances from the centre of follow-up: 0-10, 10-20, 20-30 and >30 miles, median %EWL was 61%, 65%, 59% and 48% respectively and median number of follow-up attendances were 10, 10, 9 and 5 respectively.

Conclusion: With good local follow-up, weight loss from LAGB can rival that achieved with more invasive procedures. Follow-up is the single most important determinant for weight loss after LAGB. With increasing distance from the centre of follow-up, patients appear to attend fewer follow-up clinics, with consequently less weight loss.

S130

SINGLE PORT ACCESS (SPA) COLON RESECTION: A COMPARISON TO MULTI-PORT LAPAROSCOPIC (MPL) COLECTOMY, Alex Poor MD, Erica R Podolsky MD, Andrew S Wu MD, Paul G Curcillo, II MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

The Single Port Access (SPA) technique was developed as an alternative to standard multiport laparoscopic (MPL) procedures. The initial advantage SPA surgery offers is the ability to perform standard laparoscopic dissection techniques through a single incision, thus offering improved cosmesis. It is important to compare this novel technique to the proven MPL technique in terms of outcomes and safety. We compare our initial experience with SPA colon resection to MPL colon resection.

Ten colectomies were performed using the SPA access technique. Through a 2.0 cm initial incision, a clear 5mm trocar is centrally placed and two low profile 5mm trocars are then placed laterally by raising skin and soft tissue flaps. A fourth small fascial defect is made inferiorly to accommodate a rigid grasping instrument for retraction. These ten SPA colectomies were reviewed in a retrospective fashion compared to ten standard MPL colon resections using three to four separate port sites. In both groups, all anastomoses were performed extracorporeally by extending the primary incision and delivering the colon. All procedures were performed by a single surgeon (PGC). Both groups included right colon and sigmoid colon resections, as well as total proctocolectomy with J-Pouch. The MPL group included one left colon resection and the SPA group included one transverse colon resection. Diagnosis included colon mass (benign and malignant), ulcerative colitis, and sigmoid diverticulitis. Operative time was 30% longer in the SPA group, but times decreased with experience. EBL and LOS were comparable for both groups. Each group had one wound infection at the primary incision site. Nodes retrieved were comparable (12-21) in both groups in those patients with cancer. Each group has had one hernia at the primary incision site. Incision length at the primary site was comparable in both groups.

SPA colectomy is an acceptable alternative to standard multiport colectomy. Outcomes and operative technique are similar to MPL colon resection while offering the benefit of elimination of incisions beyond the primary site of entry. Further studies will have to be performed to determine benefits such as decreased pain and improved recovery.





Scientific Session Video Abstracts

V001

LAPAROSCOPIC ULTRALOW ANTERIOR RESECTION WITH INTERSPHINCTERIC DISSECTION FOR LOW RECTAL CANCER.

Nicolás Rotholtz MD, Maximiliano Bun MD, Mariano Laporte MD, Alejandro Canelas MD, Sandra Lencinas MD, Carlos Peczan MD, Colorectal Surgery Section, General Surgery Department, Hospital Alemán de Buenos Aires

Title: Laparoscopic ultralow anterior resection with intersphincteric dissection for low rectal cancer.

Objective: The aim of this video is to show a laparoscopic total mesorectal excision combined with intersphincteric dissection for the treatment of low rectal cancer.

Methods: This is a 58-year-old male with diagnosis of a high grade rectal adenocarcinoma located 4 cm. from the anal verge. After preoperative workup with endoscopic ultrasonography and abdominopelvic CT scan and MRI the tumor was staged as T2N0M0. The operation was performed in Lloyd-Davies position after standard bowel preparation and antibiotic prophylaxis. Four 12 mm. trocars are inserted in the supraumbilical middle line, right lower and right upper quadrant and left lower quadrant. Using a medial to lateral dissection the left colon with the splenic flexure is mobilized. Dissection of the rectum, including circumference of the mesorectum, is performed until the exposition of the levator ani muscle.

Thereafter the perineal part of the operation begins. A self-holding retractor is used to expose the anal canal. After submucosal injection of physiological solution, a circumferential incision of the mucosa and internal anal sphincter is performed 1 cm. above the dentate line. The rectum is mobilized proximally on the intersphincteric plane until the level of the laparoscopic pelvic dissection is reached. The rectum and the distal sigmoid colon are pulled through the anal canal and resected. Transanal reconstruction consisted in a hand-sewn end-to-end coloanal anastomosis with a transverse coloplasty. Finally, a diverting loop ileostomy is created.

Results: Postoperative evolution was uneventful and the patient was discharge on the fourth day after surgery. Specimen analysis evidenced a high grade adenocarcinoma T2N0 with free circumferential and longitudinal margins. After the stoma was closed the patient only presented occasional soiling. No recurrence was detected after an 11 month follow-up period.

Conclusion: This video shows the technical feasibility of laparoscopic total mesorectal excision for low rectal cancer combined with the preservation of the sphincter function using the intersphincteric dissection.

V002

MEDIAL TO LATERAL SPLENIC FLEXURE MOBILIZATION FOR SIGMOID COLECTOMY, Alessio Pigazzi MD, City of Hope National Medical Center, Duarte, CA, USA

In this video we show our technique for splenic flexure mobilization via a medial to lateral approach

This is a 64 year old gentleman with two synchronous lesion in the sigmoid colon, one proximally and one distally as shown by the two tattooed areas.

The key landmark for this approach is the inferior mesenteric vein (IMV) which is found next to the ligament of treitz.

The pancreatic tail is identified under the mesocolon.

The right wall of the aorta is shown and the inferior mesenteric vein is followed caudally where it travels together with the left colic artery down to the origin of the inferior mesenteric artery. Next to the pancreatic tail the IMV is azygous, travelling with out a paired artery.

The left colic artery in fact can be seen traveling toward the colon in the mesocolic fat.

The IMV is elevated and the peritoneum covering it is scored

A medial to lat dissection is carried out separating the mesocolon from Toldt's fascia and the retroperitoneal structures

The vein is divided using the ligasure device

Now the mesocolon is gently elevated and the plane between it and the anterior surface of the pancreas is developed.

There are loose attachments between these two structures which can be taken down with gentle blunt or with bipolar dissection.

Although this is an avascular plane, care must be taken not to injure the pancreas

The lesser sac is therefore entered from the medial side and the stomach comes into view.

After the tail of the pancreas is freed from the mesocolon the dissection continues along the gastrocolic ligament which is divided.

The lesser sac is entered again exposing the medial dissection above the pancreas.

The splenicocolic ligament is divided and complete mobilization of the flexure is carried out.

Next we turn out attention to the inferior mesenteric artery and continue the dissection along the right pararectal sulcus next the the right iliac artery incising the peritoneum with monopolar cautery

The medial to lateral plane is developed here too separating the mesocolon and mesorectum from the retroperitoneum

The dissection continues rostrally meeting the previously completed dissection under the IMV/left colic artery complex

Thus the origin of the IMA is isolated and a characteristic T shaped structure is identified comprising the origin of the IMA, the left colic/IMV complex and the superior rectal artery

The sigmoid mobilization is completed along the white line of Toldt.

The mesorectum is divided at the level of the rectosigmoid junction and the distal bowel transected with an ENDOGIA stapler

A minilaparotomy created and the specimen exteriorized, the mesocolon divided and an anvil secured into the descending colon.

After reinsufflation an EEA anastomosis is created and inspected colonoscopically.

This patient had an uncomplicated three day hospital stay.

V003

LAPAROSCOPIC TOTAL MESORECTAL EXCISION AND COLOANAL ANASTOMOSIS FOR CARPETING VILLOUS POLYP OF THE RECTUM, Philippe Bouchard MD, Jacques Heppell MD, Jonathan Efron MD, Tonia Young-Fadok MD, Mayo Clinic Arizona

INTRODUCTION: This video demonstrates a step-by-step approach to laparoscopic total mesorectal excision and coloanal anastomosis. Emphasis is placed on the features that respect the same oncologic principles as open surgery.

PROCEDURE: This case features a 38 year old man with a carpeting tubulovillous adenoma of the rectum extending from the dentate line to 20 cm from the anal verge. The procedure commences with lateral-to-medial mobilization of the sigmoid and descending colon, taking care to identify the left ureter. The splenic flexure is mobilized with a combination of lateral dissection off the retroperitoneum and medial division of the lesser sac alongside the distal transverse colon. In the pelvis, the left pararectal peritoneum is scored to enter the presacral space. A total mesorectal dissection is performed down to the level of the pelvic floor, identifying and protecting the hypogastric nerves. Transection of the rectum is performed at the level of the pelvic floor, incorporating the entire polyp within the specimen. The inferior mesenteric artery is transected at its base, and the specimen is exteriorized via a 4cm periumbilical incision. After placing an EEA anvil extracorporeally, the pneumoperitoneum is re-established and the anastomosis is created under laparoscopic visualization, and an ileostomy is created. Pathologic examination confirmed an intact TME specimen and resection of the entire carpeting polyp.

V004

TRANSANAL ENDOSCOPIC MICROSURGERY (TEM): RESECTION OF A 3CM POLYPOID MASS ABOVE THE 2ND VALVE OF THE RECTUM, John H Marks MD, Benyamine Mizrahi MD, Scott S Dalane

BA, Lankenau Hospital and Institute for Medical Research: Section of Colorectal Surgery

Endoluminal surgery has enjoyed renewed interest in the age of NOTES. Transanal endoscopic microsurgery (TEM) represents the only established experience to date of endoluminal surgery. Demonstrated is a TEM submucosal, partial full thickness local excision of a 3cm polyp based on the 2nd valve. The resultant defect is closed primarily.

V005

INCISIONLESS WEIGHT LOSS SURGERY. A NOVEL GASTRIC RESTRICTIVE PROCEDURE USING THE TRANSORAL GASTROPLASTY TECHNIQUE, Gregg K Nishi MD, Simon Lo MD,

Edward H Phillips MD, Cedars-Sinai Medical Center

The standard operations for weight loss surgery in this country are the Roux-en-y gastric bypass and the adjustable gastric band. Both of these operations are performed laparoscopically. Although the incisions used in minimally invasive surgery are small compared to open surgery, they still require cutting of the anterior abdominal wall. We present one of the first cases of an incisionless weight loss procedure performed in the United States. This novel procedure involves performing a gastroplasty via a transoral approach and

Scientific Session Video Abstracts

eliminates the need for abdominal incisions. The gastropasty results in the creation of a gastric pouch through the use of a sleeve stapler. Following creation of the gastric pouch, a second device is used to create narrowing of the distal aspect of the pouch to generate a restricted outlet. The net result is a restrictive gastric pouch that results in early satiety and weight loss. This procedure is currently being performed under FDA protocol in a multicenter randomized and blinded trial. This procedure has been performed on 93 patients outside of the United States during the past two years in phase 1 and phase 2 trials. There have been no major complications (esophageal or gastric perforation) in these patients. Excess weight loss in this group is approximately 40%. The procedure requires general anesthesia via nasotracheal intubation, and two operating physicians. One physician operates the endoscope, while the other physician operates the sleeve stapler. Average procedure time is 2 hours. The patients are admitted for 23 hours, and undergo an upper GI series on post operative day one prior to discharge. The patient presented in this video did not encounter any post operative complications, and has lost 26% of her excess weight at one month.

V006

LAPAROSCOPIC TREATMENT FOR BOWEL OBSTRUCTION

AFTER GASTRIC BY-PASS, Michel VIX MD, Monica GUALTIEROTTI MD, Cynthia SOLANO MD, Cosimo CALLARI MD, Didier MUTTER PhD, Jacques MARESCAUX MD, IRCAD-EITS, University Louis Pasteur, Strasbourg, France

Introduction: Internal hernias are a common and often misdiagnosed complication that may occur after Roux-en-Y anastomosis. It may be at the origin of small bowel ischemia and necrosis. This video shows a typical example of such a complication.

Method: A 23-year-old woman who had undergone a gastric bypass procedure for morbid obesity 2 years ago presented to the emergencies complaining of postprandial abdominal pain. She was not vomiting and her bowel movements were preserved. Her BMI was 29, with a weight loss of 45 Kg over 23 months (initial BMI 44). Clinical exam and biological findings were unremarkable: normal white cell count, and no inflammatory reaction. The CT-scan did not show any bowel dilatation or indirect signs of obstruction. Although the patient felt better during the first twelve hours of nothing per os, the decision was made to perform a laparoscopic exploration in order to explore the bowel and the Petersen's space. This exploration showed an internal Petersen's hernia with a venous congestion of the alimentary limb. All of the distal bowel had gone through the Petersen's defect.

During the first operation, the Petersen's space was closed with a monofilament non-absorbable suture: a residual suture was found on the margin of the internal hernia defect. The bowel was fully explored and there was no sign of trauma that would induce pain. The Petersen's space was re-approximated, using a non-absorbable braided running suture. The postoperative course was uneventful.

Conclusion: This case demonstrates the benefit of a systematic surgical exploration after gastric bypass in the case of postprandial abdominal pain. Indeed, with or without vomiting, and even with a normal CT-scan, this procedure should be performed. It also demonstrates that the closure of the Petersen's defect with monofilament non-absorbable suture does not systematically prevent internal hernias.

V007

LAPAROSCOPIC MANAGEMENT OF SPIGELIAN HERNIAS, Matthew Coates, MD, Chris Solis MD, Ahmed Mahmoud MD, San Joaquin General Hospital, French Camp California

Spigelian Hernias were first described by Josef Klinkosch in 1764 and named after Adriaan von Spiegel the Flemish anatomist who was the first to describe the linea semilunaris. Spigelian Hernias are the most common of the lateral ventral hernias but only account for 1%-2% of all hernias. These hernias most commonly present between the 4th and 7th decade with most patients having previous abdominal operations or chronic conditions which lead to increased intra-abdominal pressure.

Our patient is a 61-year-old male with a history of Graves' disease, which was treated by radioactive iodine and a primary repair of an umbilical hernia in 2002. He presented to the ED with 4 days of abdominal pain, bloating, nausea, vomiting, and abdominal distention. All of his laboratory studies and vital signs were normal. Physical Exam demonstrated pain in the left lower quadrant with an associated mass, no abdominal rebound, guarding, or peritoneal signs. CT scans confirmed the presence of an incarcerated Spigelian Hernia. The patient was taken to the operating room where he underwent laparoscopic primary repair of his incarcerated Spigelian Hernia.

Laparoscopic management of incarcerated Spigelian hernia is presented. This minimally invasive approach has less postoperative pain and earlier recovery. Additionally, compared to the open repair, the external oblique aponeurosis is preserved which maintains the abdominal wall strength and potentially avoids subsequent development of incisional hernia.

V008

LAPAROSCOPIC REPAIR OF A RIGHT PARADUODENAL HERNIA, Sebastian V Demyttenaere MD, Scott Melvin MD, The Ohio State University

This video will discuss an interesting case of a 43 year old female with intermittent crampy abdominal pain. She underwent diagnostic laparoscopy which revealed a somewhat unexpected finding of a right paraduodenal hernia. The video will further discuss the relevant anatomic boundaries of this kind of hernia, as well as the etiology and clinical presentation. We will also discuss the the fossa of Waldeyer and demonstrate the anatomy. The video concludes by demonstrating the laparoscopic repair of this hernia and discussing the postoperative course for this patient.

V009

LAPAROSCOPIC GRYNFELT HERNIA REPAIR, Karem Harth MD, Michael J Rosen MD, University Hospital at Case Medical Center

BACKGROUND: Lumbar hernias are rare. Laparoscopic lumbar hernia repair was first described in 1996 by Burick and Parascandola. In 2005, the first publication comparing open versus laparoscopic lumbar hernia repair was published by Moreno-Egea of Spain. Various techniques have been described during this time period. Given their posterior nature and relationship to critical vascular, neurological and urological structures, repair of these hernias can be challenging. This video demonstrates a case of laparoscopic Grynfeltt hernia repair.

TECHNIQUE: Our right lateral abdominal wall dissection extended from the right triangular ligament near the diaphragm down to the cecum following the line ofoldt (cephalad to caudal orientation). The right kidney was dissected out the retroperitoneal space. The right colon, hepatic flexure and right kidney were rotated medially. A large 15x15 cm mesh was placed over a 5x3cm defect. This was secured in place by use of gore-tex sutures, titanium tacks and tissue (fibrin glue).

RESULTS: Operative time was 1.5 hour with an estimated blood loss of 25cc. The operative course was uncomplicated.

DISCUSSION: Our video demonstrates the technical feasibility of a laparoscopic Grynfeltt hernia repair.

V010

LAPAROSCOPIC TREATMENT OF BILATERAL ESOPHAGEAL EPIPHRENIC DIVERTICULA, Emanuele Lo Menzo MD, Alberto Iglesias MD, Seth A Spector MD, Jose M Martinez MD, Diya Aladeen MD, Atul K Madan MD, Gustavo Placencia MD, Miami VA Healthcare System, University of Miami. Miami, FL USA

Introduction: Epiphrenic diverticula are rare and usually incidentally found. When symptomatic they tend to present with chest pain, regurgitation and dysphagia.

We report a case of large bilateral epiphrenic diverticula presented with upper gastrointestinal bleeding treated laparoscopically.

Methods: A 67 year-old woman with a known history of systemic lupus erythematosus steroid dependent and mild dysphagia, presented to the emergency room with 'hemoptysis'. The bronchoscopy was negative, but an esophagogastroduodenoscopy revealed 2 large epiphrenic diverticula with signs of recent bleeding in one of them. Further work up included a barium swallow that confirmed the presence of 2 epiphrenic diverticula of 4 to 5 cm and proximal esophageal dilatation. No manometric evaluation was performed. The patient underwent elective laparoscopic resection. Because of the proximal extension of the diverticula, the esophageal dissection was carried out well up into the mediastinum. The diverticulectomy was performed using bovine pericardium staple line reinforcement under endoscopic view. During the myotomy a tight circular muscle was found at the gastro-esophageal junction. The myotomy was extended into the stomach in standard fashion. An anterior Dor partial fundoplication was also utilized.

Results: There were no intraoperative complications. The postoperative barium swallow showed adequate myotomy and no evidence of leak. A liquid diet was resumed on postoperative day 4. Ten days postoperatively, she was re-admitted for chest pain, right lower lobe pneumonia and pleural effusion, but no evidence



Scientific Session Video Abstracts

of staple line leak. She underwent percutaneous drainage with resolution of her symptoms.

Conclusions: Bilateral epiphrenic esophageal diverticula are exceedingly rare. Besides the common symptoms, they can present with hematemesis. Because of the superior visualization and the avoidance of thoracotomy, a trans-abdominal laparoscopic approach should be considered for their treatment.

V011

LAPAROENDOSCOPIC SINGLE SITE HELLER MYOTOMY AND ANTERIOR FUNDOPLICATION, Sharona B Ross MD, Connor A Morton BS, Emily Kramer BS, John E Mullinax MD, Alexander S Rosemurgy MD, University of South Florida

Laparoendoscopic Single Site (LESS) surgery continues the evolutionary arc from 'open' to laparoscopic to 'minimal scar' surgery, facilitating improved patient recovery and improved cosmesis. Promises of patient acceptance of LESS surgery are high and will drive investment of resources to promptly develop safe and effective LESS surgery procedures for clinical application. This video demonstrates LESS Heller myotomy and anterior fundoplication with intraoperative endoscopy in the treatment of achalasia. First, esophagogastroscopy documents the presence of a dilated distal esophagus and a snug gastroesophageal junction. Then, a single 10mm incision is utilized to place three 5mm trocars at the umbilicus: one trocar is utilized for liver retraction, another for an articulating laparoscope, and the third as an operating port. Sutures are placed in the fundus to facilitate exposure. Dissection frees the esophagus from the hiatus laterally and along its ventral surface. Longitudinal muscle fibers are divided with hook electrocautery to provide exposure for division of transverse muscle fibers. Repeat esophagogastroscopy is undertaken to document an adequate myotomy: the scope must pass easily through the gastroesophageal junction, the myotomy must be visualized to cross the squamocolumnar junction (i.e., the z-line), and no esophagotomy / gastrotomy or submucosal burn should be noted. Anterior fundoplication, covering most of the myotomized esophagus, is constructed to provide optimal control of postoperative gastroesophageal reflux.

Laparoendoscopic Single Site Heller myotomy and anterior fundoplication will be embraced by patients, and laparoscopic surgeons will need to meet patient demands.

V012

THORACOLAPAROSCOPIC IVOR LEWIS ESOPHAGOGASTRECTOMY WITH A HANDSEWN ANASTOMOSIS IN PRONE POSITION, Giovanni Dapri MD, Jacques Himpens MD, Guy Bernard Cadere PhD, European School of Laparoscopic Surgery, Saint-Pierre University Hospital, Brussels, Belgium

Background: With increasing enthusiasm for minimally invasive esophagectomy, a laparoscopic and thoracoscopic Ivor Lewis esophagogastrrectomy with intrathoracic anastomosis is performed when at all possible. Circular stapler is usually used in order to create the intrathoracic anastomosis. We report a completely thoracoscopic handsewn double-layer esophagogastrrectomy, realized with the patient in prone position, during a thoracolaparoscopic Ivor Lewis esophagogastrrectomy.

Method: A 51 years-old man consulted for complete dysphagia associated to weight loss. A barium swallow evidenced a sliding hiatal hernia and a lumen defect of the lower third of the esophagus. Gastroscopy showed the presence of a suspect lesion at 30 cm. Endoscopic ultrasound evidenced a 35 x 16 mm lesion, with irregular margins, and the absence of mediastinal lymph nodes (stage: T2N0). Biopsy showed characteristics of adenocarcinoma. CT-scan confirmed both the presence of the esophageal mass and the absence of lymph nodes. General anaesthesia and double-lumen endotracheal tube intubation were used. First the patient was placed in supine position, and 5 abdominal trocars were placed. Celiac lymphadenectomy started with skeletonization of the hepatic artery until the root of left gastric artery was reached. The left gastric artery and vein were sectioned. A wide Kocher maneuver as well as pyloroplasty were performed. The distal esophagus was dissected up until the level of the inferior pulmonary vein. Polar gastrectomy was performed by multiple applications of a linear stapler blue load, from the crow's foot medially to the greater curve laterally. The upper part of the gastric remnant was anchored to a penrose and advanced through the hiatus into the right chest. Subsequently the patient was placed in prone position. Three trocars (two 5-mm and one 10-mm) were placed on the posterior axillary line in the 5th, 7th, and 9th right intercostal space. The middle and lower esophagus

were dissected. Mediastinal lymphadenectomy with en-bloc resection of the left inferior mediastinal pleura was performed. The azygos vein was ligated and sectioned. The mid-esophagus was transected by scissors just at the level of the azygos vein, and the stomach was well placed into the chest. A completely thoracoscopic handsewn double-layer anastomosis was performed using PDS 2/0 (external layer) and Maxon 3/0 (internal layer) running sutures. A chest tube was left in the pleural cavity. Finally the patient was re-placed in supine position in order to retrieve the specimen in a plastic bag through a suprapubic incision. The intraabdominal stomach was fixed to the hiatus, and a drain was left through the latter. Results: Total operative time was 340 minutes and blood loss was 150 ml for laparoscopy and 20 ml for thoracoscopy. The patient had an uneventful recovery; the gastrograftin swallow on the 4th postoperative day showed a good passage through the anastomosis and absence of leak. The patient was discharged on the 6th postoperative day. Pathologic report confirmed the adenocarcinoma of the esophagus (stage: pT2bN1Mx).

Conclusions: Thoracoscopy in prone position permits to surgeon to operate in an ergonomic position, and to perform a completely thoracoscopic handsewn anastomosis, without selective lung desufflation. Thanks to this anastomosis the risk of postoperative leak can be reduced, and the hospital stay and patient's comfort appeared improved.

V013

LAPAROSCOPIC COLLIS-NISSEN FUNDOPLICATION IN A PATIENT WITH TRACHEOESOPHAGEAL FISTULA REPAIR WITH RECURRENT HIATAL HERNIA AND GASTROESOPHAGEAL REFLUX, Anthony C Chin MD, Steven S Rothenberg MD, Rocky Mountain Hospital for Children Denver, CO; Childrens Memorial Hospital, Chicago, IL

INTRODUCTION: A 6 year old with a history of a tracheoesophageal fistula presents with a history problematic for recurrent hiatal hernias and severe gastroesophageal reflux. He underwent a laparoscopic Nissen fundoplication at 3 months of age. He had continued reflux and strictures and underwent a revision Nissen fundoplication with repair of a hiatal hernia at 3 ½ years of age. However, persistent reflux with recurrence of his hiatal hernia and resulted in 2 additional revisions with a diaphragmatic patch and subsequent crural patch at 4 1/2 and 5 years of age, respectively.

METHODS: Through a total abdominal intracorporeal technique using 5 ports (4-5mm and 1 12mm), esophageal lengthening was accomplished and a new intra-abdominal gastroesophageal junction was created via Collis-Nissen technique. Operative time was 180 minutes.

RESULTS: The patient recovered well and was discharged home. He had complete resolution of his symptoms.

CONCLUSION(S): Total intracorporeal laparoscopic revision of a Nissen fundoplication for recurrent reflux and hiatal hernias is feasible and safe in the pediatric patient. It should be considered as an alternative approach to the surgical management of patients with a history of tracheoesophageal repair with recurrent gastroesophageal reflux, hiatal hernias, with a presumed diagnosis of a short esophagus.

V014

TITLE: MANAGEMENT OF INTRAOPERATIVE COMPLICATION DURING LAPAROSCOPIC PROCTECTOMY FOR SUBMUCOSAL RECTAL TUMOR, Philippe Bouchard MD, Cuong Nguyen MD, Tonia Young-Fadok MD, Jacques Heppell MD, Jonathan Efron MD, Mayo Clinic Arizona

INTRODUCTION: This video demonstrates a laparoscopic proctectomy in a 51 year old female who presented with a symptomatic sub-mucosal anterior rectal lesion suspected of being a GIST tumour. The video illustrates work up, operative technique, and laparoscopic management of this patient; including two intra-operative complications that occurred during the pelvic dissection.

PROCEDURE: This case presentation demonstrates the key steps of a laparoscopic proctectomy with total meso-rectal excision, including high ligation of the inferior mesenteric artery and vein and complete mobilization of the splenic flexure. Restoration of intestinal continuity was performed with a colonic J pouch anal anastomosis. The video also describes how to recognize and manage two intra-operative complications that occurred during the pelvic dissection, specifically a vaginal perforation that occurred during a difficult anterior rectal dissection, and a misfiring of an endo-gia linear stapler during low transection of the rectum. Finally, we review the surprising pathological finding.

Scientific Session Video Abstracts

V015

ROBOTIC-ASSISTED, THORACOSCOPIC MEDIASTINAL PARATHYROIDECTOMY FOR PERSISTENT

HYPERPARATHYROIDISM, Adrian M Harvey MPA, Lynn Seto MD, Gurkan Tellioglu MD, Allan Siperstein MD, Tomislav Mihaljevic MD, Eren Berber MD, The Cleveland Clinic

Persistent / recurrent primary hyperparathyroidism is a challenging surgical problem. In a subset of these patients, the source of excess PTH production will be an ectopic parathyroid gland in the mediastinum. A number of these glands will be inaccessible through a low cervical incision. Minimally invasive approaches to these glands are preferable due to the pain and potential morbidity associated with an open thoracotomy. Robotic assisted surgery with its enhanced three-dimensional visualization and improved dexterity may be beneficial in these patients. In this video we present a case of robotic assisted, thoracoscopic resection of an ectopic, mediastinal parathyroid adenoma, in a 23-year old patient, with persistent primary hyperparathyroidism following neck exploration.

V016

CHOPSTICK SURGERY: A NOVEL TECHNIQUE ENABLES USE OF THE DA VINCI ROBOT TO PERFORM SINGLE INCISION LAPAROSCOPIC SURGERY (SILS)

Rohan A Joseph MD, Nilson A Salas MD, Christopher Johnson V.Tech, Michael A Donovan MS, Matthew G Kaufman BS, Alvin Goh MD, Brian Miles MD, Patrick R Reardon MD, Brian J Dunkin MD, Department of Surgery, The Methodist Hospital, Houston- Texas

INTRODUCTION: Single incision laparoscopic surgery (SILS) is limited by the coaxial arrangement of the instruments. A surgical robot with 'wristed' instruments could overcome this limitation but the 'arms' collide when working coaxially. This video demonstrates a new technique of 'chopstick surgery' which enables use of the robotic arms through a single incision without collision.

METHODS: Experiments were conducted utilizing the da Vinci S @ robot (Sunnyvale, CA) in a porcine model with 3 laparoscopic ports (12mm, 2-5mm) introduced through a single 'incision'. Pilot work varied the arrangement of the ports, distance between ports, and depth of the remote center while performing Fundamentals of Laparoscopic Surgery tasks (FLS, SAGES/ACS). This work determined the optimal set-up for SILS to be a triangular port arrangement with 2cm trocar distance and remote center at the abdominal wall. Using this set-up, an experienced robotic surgeon performed a cholecystectomy and nephrectomy in a porcine model utilizing the 'chopstick' technique. The chopstick arrangement crosses the instruments at the abdominal wall so that the right instrument is on the left side of the target and the left instrument on the right. This arrangement prevents collision of the external robotic arms. To correct for the change in handedness, the robotic console is instructed to drive the 'left' instrument with the right hand effector and the 'right' instrument with the left.

RESULTS: Both procedures were satisfactorily completed with no external collision of the robotic arms, in acceptable times and with no technical complications. This is consistent with preliminary results obtained with the box trainer where the chopstick configuration enabled significantly improved times in all tasks and decreased number of errors and instrument collisions.

CONCLUSION: Chopstick surgery significantly enhances the functionality of the surgical robot when working through a small single incision. This technique will enable surgeons to utilize the robot for SILS and possibly for intraluminal or transluminal surgery.

V017

LAPAROSCOPIC SIGMOIDECTOMY AND ANASTOMOTIC LEAK, I. D Francone MD, P Marcello MD, Lahey Clinic Medical Center

This video demonstrates a laparoscopic approach to complex diverticulitis, as well as post-operative anastomotic leak. The patient is a 43 year-old morbidly obese male (BMI 48) who developed diverticulitis with a 9cm intra-abdominal abscess. Despite percutaneous drainage, the patient had continued sepsis requiring surgery. The patient underwent a hand-assist sigmoid resection. This video highlights techniques to manage complicated diverticulitis including takedown of fistulae, adhesiolysis, and difficult ureter identification. The patient unfortunately developed sepsis and was taken back and explored laparoscopically. A small leak was identified, repaired, and proximally diverted. This video highlights the laparoscopic approach to postoperative intra-abdominal sepsis. As surgeons perform more laparoscopic colorectal surgery, we must learn to approach our complications by minimally invasive techniques.

V018

EARLY RE-EXPLORATION FOLLOWING INCISIONAL HERNIA WITH BIOLOGIC GRAFT, Emanuele Lo Menzo MD, Alberto Iglesias MD, Jose M Martinez MD, Diya Alaadeen MD, Seth A Spector MD, Atul K Madan MD, Miami VA Healthcare System & University of Miami, Miami, FL. USA

Introduction: Biologic grafts have been used for the repair of complex abdominal wall defects. Although much is known about the remodeling process, their propensity to form adhesions in humans has not been well studied yet. We present a case of early re-exploration after a complex incisional hernia repaired with bovine pericardium graft.

Methods: A 61 year-old man with a history of Hartmann pouch for pancreatocolonic fistula underwent a concomitant laparoscopic Hartman reversal and incisional hernia repair with intraperitoneal placement of bovine pericardium graft (Veritas® Synovis Surgical Innovations, St Paul, MN). The graft was used intraperitoneally after a component separation and primary closure of the hernia was obtained. The patient recovered uneventfully and was discharged home. On postoperative day # 18, the patient presented to the ER with sudden onset of abdominal pain and distension, after he heard a 'pop'. The patient was diagnosed with small bowel obstruction, resuscitated and taken to the operating room for laparoscopic re-exploration. Intraoperatively he was found to have detachment of the graft from the left lateral abdominal wall with small bowel herniation above the mesh itself. The adhesions between the graft and the bowel were very filmy and easily managed bluntly. The cause of the detachment was attributed to a failure of the primary hernia defect closure performed during the original repair. The small bowel was reduced, the mesh re-attached to the abdominal wall laparoscopically. Because of the insufficient lateral overlap and there was no concern about contamination, a tissue separating light weight polypropylene mesh was inserted intraperitoneally.

Results: The patient had no intraoperative complications. The diet was resumed of postoperative day 6 and the patient discharged home on day 8. No complaints of prolonged pain or evidence of recurrence are noted 4 months postoperatively.

Conclusions: Failure of the primary defect closure can cause early recurrence, even if good mesh overlap was originally achieved. Bovine pericardium graft seems to cause minimal amount of adhesions even in the early stages, before the remodeling process is complete.

V019

LAPAROSCOPIC MANAGEMENT OF ILIAC VEIN INJURY, Michael Hellinger MD, Michel Gagner MD, Irving Jorge MD, Jacob Tangir MD, Stelios Rekkas MD, Mount Sinai Medical Center

Laparoscopic Management of Iliac Vein Injury
Hellinger M, Gagner M, Jorge I, Rekkas S, Tangir J
Major vascular injuries during laparoscopy is uncommon. Most cases are reported while obtaining access into the peritoneal cavity. We report a case of an iliac vein injury during a laparoscopic abdominoperineal resection with hysterectomy. A 1 cm longitudinal laceration was made with the electrocautery tip of the Ligasure (Valleylab 5920 Longbow Dr. Boulder, Colorado). This injury was repaired laparoscopically. A 5mm trocar was placed over the site of injury and a Satinsky clamp was introduced into the abdomen through the puncture hole. A double layered 5-0 running prolene suture was used to repair the defect. There was no bleeding after the repair and good flow was observed.

V020

MINIMALLY INVASIVE FUNCTIONAL ABDOMINAL WALL RECONSTRUCTION: A NEW PARADIGM IN VENTRAL HERNIA REPAIR., Michael J Rosen MD, Case Medical Center. University Hospitals of Cleveland

Laparoscopic ventral hernia repair has resulted in significant reduction of wound complications as compared to standard open techniques. However, the current laparoscopic approach requires bridging of an adynamic sheet of prosthetic material. This can result in paradoxical abdominal wall motion during straining. Abdominal wall bulging and a poor functional and cosmetic outcome can result in patient dissatisfaction. Endoscopic component separation has been described for reducing wound complications when accompanied with complex open abdominal wall reconstructions. We hypothesize that the combination of an endoscopic component separation at the time of a purely laparoscopic ventral hernia repair with primary





Scientific Session Video Abstracts

fascial reapproximation and mesh augmentation might be the ideal abdominal wall reconstruction.

We present a case of an incisional hernia repaired with the use of an endoscopic component separation. After the myofascial advancement flaps are created, the laparoscopic ports are then placed intraperitoneally. The fascial defect is closed with transfascial sutures using a laparoscopic suture passer. After primarily closing the fascial defect a synthetic mesh is placed intraperitoneally and secured with transfascial fixation sutures.

A minimally invasive functional dynamic abdominal wall reconstruction with medialization of the rectus muscle and mesh augmentation might be the ideal hernia repair.

V021

HAND ASSISTED LAPAROSCOPIC SURGERY FOR MASSIVE SPLENOMEGALY, Winnie Tong MD, Jayleen Grams MD, Barry A Salky MD, Mount Sinai Hospital

The patient is a 57 yo male with history of chronic lymphocytic leukemia for fifteen years and splenomegaly. Patient had a palpable spleen below the level of the umbilicus. His preoperative white blood cell count was 46000 and lymphocyte count was 40000.

A Hand port was placed in the upper midline. The patient was in the left lateral decubitus position. Short gastric vessels were divided in order to gain access to the lesser sac. The splenic artery was dissected from surrounding tissue and clipped. The fundus of the stomach was completely separated from the spleen. The splenorenal ligament was divided as high as possible. The hilum was cleared and transected with a vascular stapler. The spleen was removed in a large non-porous retrieval bag. This video demonstrates the efficacy of the hand port in massive splenomegaly.

V022

LAPAROSCOPIC DISTAL PANCREATCTOMY AND SPLENECTOMY FOR SPLENIC ARTERY ANEURYSM, Brandon T Grover, DO

(1), Sigurd B Gundersen III, MD, FACS (2), Shanu N Kothari, MD, FACS (2), (1) Department of Medical Education, Gundersen Lutheran Medical Foundation, and (2) Department of Surgery, Gundersen Lutheran Health System, La Crosse, Wisconsin

Introduction: Large splenic artery aneurysms are rare, but comprise 60% of all visceral artery aneurysms. Most are found incidentally and rupture in the non-pregnant patient carries an approximate 25% mortality rate. Historically these have been managed with an open surgical approach for resection.

Methods: We present the case of a 45 year old male with a recent episode of bacterial endocarditis with an incidental finding of a large 6 cm splenic artery aneurysm. There was noted to be splenic vein occlusion and multiple splenic infarcts versus abscesses on pre-operative imaging. There were concerns this represented a mycotic aneurysm. He underwent a laparoscopic en bloc splenic artery aneurysm resection with splenectomy and distal pancreatectomy with the use of pre-operative prophylactic balloon catheter aneurysm occlusion.

Results: His large splenic artery aneurysm was adjacent to the splenic hilum. Due to the splenic vein occlusion there were large collateral vessels complicating the dissection. Additionally, the aneurysm had dense adhesions to the tail of the pancreas from a desmoplastic reaction. To safely remove the aneurysm a distal pancreatectomy was included with resection of the spleen. The specimen was successfully removed intact using the laparoscopic approach. The patient had an uneventful recovery and was discharged home on post-operative day two. Final pathology revealed no evidence of bacterial etiology.

Conclusion: Laparoscopic distal pancreatectomy with splenectomy is an appropriate minimally invasive option for the treatment of splenic artery aneurysms. This video demonstrates the technical challenges and management options for successfully completing a distal pancreatectomy and splenectomy in the face of a splenic artery aneurysm.

V023

LAPAROSCOPIC DISTAL PANCREATCTOMY WITH SPLEEN PRESERVATION, Petachia Reissman MD, Joseph Alberton MD, Shaare-Zedek Medical Center, Jerusalem, Israel

Spleen sparing distal pancreatectomy is usually performed for small or benign looking tumors of the body and tail of the pancreas. Such tumors include neuroendocrine pancreatic tumors, intraductal papillary mucinous neoplasm and other cystic lesions. The procedure of distal pancreatectomy with spleen preservation

may be challenging and technically difficult when performed in the open fashion, let alone when performed laparoscopically. However, in recent years there are several reports of this procedure with good results.

The use of laparoscopic intraoperative ultrasound became a mandatory tool for such procedure when performed for small intrapancreatic lesions. This is used to localize the tumor and its relation to the major vessels and pancreatic duct, and also to exclude the presence of synchronous lesions, as may be the case in pancreatic neuroendocrine tumors.

This video will demonstrate the technique of laparoscopic distal pancreatectomy with spleen preservation, performed for a mixed cystic solid lesion in the proximal body of the pancreas. The use of laparoscopic intraoperative ultrasound is well demonstrated.

V024

LAPAROSCOPIC REPAIR OF CONGENITAL BILATERAL MORGAGNI'S HERNIA, Saurabh Khandelwal MD, Brant K Oelschlager MD, University of Washington

Background: Morgagni's hernia is a rare type of congenital diaphragmatic hernia that presents as a defect in the anterior aspect of the diaphragm. It typically presents in the pediatric population and is rarely diagnosed in adults. Only 3% of diaphragmatic hernias are Morgagni's type, and only 4% of these are found to present bilaterally. Surgical repair of Morgagni's hernia has been performed through various approaches: laparotomy, laparoscopic abdominal approach, thoracotomy, thoracoscopic (VATS) approach, and with and without mesh.

The optimal method of surgical repair is not known due to the rarity of this condition and the limitations of setting up a prospective, randomized trial to evaluate the different methods. Laparoscopic repair with mesh has been described with good short term results. Few case reports exist in the literature describing laparoscopic repair with mesh of a bilateral Morgagni's hernia.

At the University of Washington, we present a video showing our technique for laparoscopic repair of a congenital, bilateral Morgagni's type hernia with mesh in a young adult.

V025

PURE NOTES CHOLECYSTECTOMY, Marc Bessler MD, Andrew Gumbs MD, Luca Milone MD, Peter Stevens MD, Dennis Fowler MD, Columbia University College of Physicians and Surgeons

Initial excitement for Natural Orifice Transluminal Endoscopic Surgery (NOTES) has been partly tempered by the reality that a NOTES procedure without laparoscopic or needleoscopic-assistance has not been widely performed. After safely performing laparoscopically-assisted transvaginal cholecystectomy in an IACUC-approved porcine model, we embarked on an IRB-approved protocol to ultimately perform a pure NOTES cholecystectomy.

We describe our experience with performing a true NOTES transvaginal cholecystectomy after safely accomplishing 3 laparoscopically-assisted or hybrid procedures in humans. The patient is a 35-year-old woman presenting with symptoms of biliary colic and ultrasound confirmed gallstones, her liver enzyme were normal.

Via a transvaginally-placed trocar made through a colpotomy under direct vision, pneumoperitoneum to 15torr was obtained. A double channel endoscope was then advanced into the abdomen. To overcome the retracting limitations of currently available endoscopes, we used an extra long 5mm articulating retractor that was placed into the abdomen via a separate colpotomy. Endoscopically-placed clips were used for both the cystic duct and artery, thus, obviating the need for any transabdominally placed instruments or needles.

This patient was the first patient to undergo a completely NOTES cholecystectomy at our institution, she was discharged on the day of surgery and has not suffered any complication after 1 month of follow-up.

NOTES Transvaginal Cholecystectomy without aid of laparoscopic or needleoscopic instruments is feasible and safe in humans. Additional experience with this technique will be required before comparative studies to standard laparoscopy and hybrid techniques are appropriate.

Scientific Session Video Abstracts

V026

TRANS-GASTRIC UTERINE HORN RESECTION USING A NOVEL NOTES TOOLBOX, Edward D Auyang MD, Eric S Hungness MD, Department of Surgery, Northwestern University

Introduction: Natural orifice transluminal endoscopic surgery (NOTES) is a developing area of minimally invasive surgery. In order for NOTES to be performed efficiently and safely, there are several fundamental challenges that need to be addressed. These include a safe method for peritoneal access, maintenance of visualization and spatial orientation, design of instruments that provide articulation for dissection and adequate tissue exposure, specimen retrieval, and reliable access closure methods.

Methods and Procedures: Unilateral uterine horn resection was performed in a live porcine model using the NOTES Toolbox. The Toolbox consists of prototype and newly developed devices used to create the gastrotomy, perform the dissection, retrieve the specimen, and close the gastrotomy. The procedure was performed using only NOTES instruments and video was recorded from the endoscope and an observational laparoscopic camera.

Results: A new access needle was employed that has a shielded needle, integrated dilation balloon, and guidewire that allowed for safer and easier introduction of the operating platform through the gastrotomy. A steerable flexible trocar system provided a rigid operating platform for maintenance of visualization and orientation. Articulating and rotational instruments provided greater freedom of movement, triangulation of instruments for dissection, and improved tissue retraction. A flexible bipolar energy device was used to cauterize tissue with minimal thermal spread. An endoscopic specimen retrieval bag allowed for isolation and removal of the specimen through the trocar. A full-thickness gastrotomy closure was achieved using a T-tag deployment system. The gastrotomy was inspected at necropsy and was found to be intact.

Conclusions: NOTES has several fundamental technical challenges that need to be addressed before it can gain wide acceptance. With the development and use of innovative endoscopic devices such as the ones used in the NOTES Toolbox, NOTES surgery can be more easily achieved.

V027

TRANS-ORAL ENDOSCOPIC REMOVAL OF AN ERODED ADJUSTABLE GASTRIC BAND, William Bertucci MD, Jay Grove MD, Karen Kopmann MD, Deborah Romero RN, Todd Peterson MD, Janos Taller MD, Naval Medical Center San Diego

Erosion of a laparoscopic adjustable band is a feared complication occurring in less than 0.5% of placed cases. Once diagnosed, removal is imperative. The options for removal include open, laparoscopic and endoscopic approaches. We present for review a video case presentation of an endoscopic removal of an intragastric erosion of an adjustable gastric band.

Our patient is a 40 year old female with a long-standing history of morbid obesity: Height 5'9" / Weight: 280 lbs / BMI: 41.3. She underwent laparoscopic placement of an adjustable gastric band in Mexico two years previously and was able to lose 89 lbs down to a BMI of 28.3. This represents an excess weight loss of > 66%. She presented to our institution one year postoperatively with erosion of her port through the skin. The port was subsequently removed and the wound healed by secondary intention. Due to patient desire for increased restriction, the access port was replaced 6 months later. 2 months later, she represented with a second port site infection requiring port removal with ligation of the residual tubing. After a frank discussion about her surgical options, the patient opted to retain what residual restriction the unfilled band provided. 4 months later, she presented with epigastric & LUQ pain. Diagnostic EGD revealed intragastric erosion of the band.

We performed a trans-oral endoscopic removal of the eroded adjustable gastric band. We utilized an Olympus dual lumen endoscope, endoscopic graspers and an endoscopic snare to accomplish this task. The band was grasped with the endoscopic graspers and with a combination of pulling and rotation, the buckle of the band was exposed intraluminally. The loop of the snare was passed through the band and was grasped with the endoscopic graspers. With a sawing motion, the buckle of the band was divided. The divided band was then snared and extracted trans-orally. The patient did extremely well in the peri-operative period. A scheduled upper GI on post-operative day one demonstrated no leak and she was advanced to a liquid diet. She was discharged home on postoperative day two and her LUQ pain has completely resolved. Trans-oral endoscopic removal of an adjustable gastric band is a safe and effective treatment of gastric band erosion.

V028

REVERSE NOTES: ESOPHAGEAL CANALIZATION, John Cullen MD, Kari Thompson MD, Adam Spivack MD, Lauren Fischer MD, Brian Wong MD, Mark Talamini MD, Santiago Horgan MD, Department of Surgery, University of California, San Diego

Introduction: Traditional natural orifice transluminal endoscopic surgery (NOTES) involves entry through a pre-existing orifice such as the mouth, anus or vagina. A surgically created 'orifice' such as a gastrotomy can also be used as an access site, performing a reverse NOTES surgery. This video describes such reverse access to treat a complete esophageal occlusion following radiation.

Methods: A 55-year-old female with a history of tonsillar cancer developed complete dysphagia and odynophagia after completing chemoradiation. Esophagoscopy and esophagogram demonstrated complete occlusion at the level of the pyriform sinus. Biopsy of the stricture was negative for neoplasia. Initially a 5mm trocar was placed in the right upper quadrant to obtain insufflation. Using visualization through this port, the pre-existing gastrotomy tube was removed and a 12mm trocar was placed into the stomach. The endoscope was introduced through this trocar and was carried retrograde up the esophagus to the level of the stricture. An operating laryngoscope visualized the stricture from above. Using simultaneous visualization from above and below the stricture, the stricture was incised and a guidewire passed through the gastroscope. After passing the guidewire up through the mouth the stricture was serially dilated up to 36 French. The stricture was then temporarily stented. The patient's gastrostomy tube was replaced at the termination of the procedure.

Results: The patient was extubated at the termination of the case and noted immediate improvement in dysphagia. She returned in two weeks for stent removal and repeated dilation. Inspection at that time demonstrated no mucosal lesions or tears.

Conclusions: Using a pre-existing gastrostomy provides access to the gastrointestinal tract for reverse NOTES procedures. Using a simultaneous antegrade and retrograde approach allows treatment of an esophageal stricture safely. Direct trocar placement into the stomach may allow future procedures to proceed with access to gastrointestinal tract which may not be otherwise available.

V029

SINGLE PORT ACCESS (SPA) TECHNIQUE, Andrew S Wu MD, Erica R Podolsky MD, Stephanie A King* MD, Paul G Curcillo MD, Department of Surgery, *Department of Obstetrics and Gynecology, Drexel University, College of Medicine, Philadelphia, PA

The Single Port Access (SPA) technique offers a novel approach to minimally invasive abdominal surgery. Using standard instrumentation, laparoscopic procedures can be performed entirely through the umbilicus in a similar fashion to standard multiport procedures.

Utilizing subcutaneous flaps, low profile trocars and standard instruments, we have demonstrated a platform that allows 'independence of motion' for each of three instruments and a camera in a wide array of laparoscopic procedures including cholecystectomy, colon resection, GE jxn procedures, hysterectomy, splenectomy, adrenalectomy.

This technique allows the entire incision to be hidden within the umbilicus.

V030

SINGLE INCISION RIGHT COLON FOR CANCER, Daniel J Rosen MD, Kevin McGill MD, Julio A Teixeira MD, St. Luke's - Roosevelt Hospital Center

We present a right colectomy performed on a 42-year-old woman with a recent diagnosis of a cecal mass and no significant prior history. The resection is done entirely through three clustered ports via an umbilical incision utilizing basic laparoscopic techniques. Sequential steps are outlined, as are some of the challenges unique to the technique that must be overcome.





Scientific Session Video Abstracts

V031

SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY, Kari Thompson MD, Lauren Fischer MD, Brian Wong MD, Adam Spivack MD, Garth Jacobsen MD, Mark Talamini MD, Santiago Horgan MD, Department of Surgery, University of California, San Diego

Introduction: Single incision laparoscopic surgery (SILS) has been proposed as a minimally invasive technique with proposed advantages of smaller external scars and reduced pain. Furthermore, usage of the flexible endoscope for SILS in lieu of the standard laparoscope provides distinct visualization advantages. This video illustrates a single incision cholecystectomy performed through a single incision placed through the umbilicus.

Methods: A 39 year old female with chronic symptomatic cholelithiasis was enrolled under IRB protocol to undergo SILS. She has previously undergone a laparoscopic tubal ligation. A single incision was made using the previous umbilical incision, and the abdomen entered in an open fashion. The flexible endoscope was placed directly through the fascial incision, with two 5 mm ports on either side. Adhesions to the gallbladder were taken down with the harmonic scalpel. Dissection proceeded using an articulating grasper and retraction to identify the cystic duct and artery. The duct and artery were serially clipped and divided. The cystic duct was additionally secured with a loop ligature. The gallbladder was cauterized from the liver bed using the articulating hook cautery and extracted through the wound.

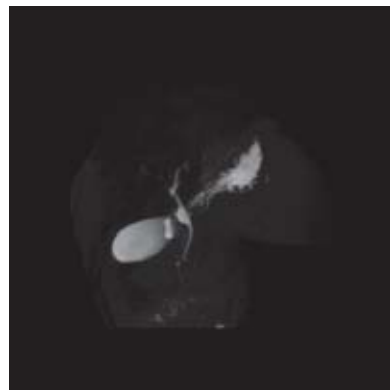
Results: The final incision was at the base of the umbilicus, and was 7mm in length. Operative time was 58 minutes, with minimal blood loss recorded. The patient was discharged home on the day of procedure, and did not develop any postoperative complications.

Conclusions: Single incision cholecystectomy can be performed safely through one incision in the umbilicus, optimizing cosmesis. Substitution of the flexible endoscope for the standard laparoscope allows many greater degrees of visualization in SILS. This allows clear identification of biliary ductal anatomy to allow cholecystectomy to proceed safely. Placing the endoscope directly through the incision decreases the profile of ports through the incision and increases maneuverability.

V032

LAPAROSCOPIC CHOLEDOCHAL CYST RESECTION WITH HEPATICOJEJUNOSTOMY, Steven B Bowers MD, Horacio Asbun MD, Kashif Z Malik MD, Mayo Clinic, Jacksonville, FL

28 year Old female presented with right upper quadrant pain since November 2007 and on workup was found to have Type 1 Choledochal cyst.



This is a Video presentation of Laparoscopic Choledochal Cyst resection with hepaticojejunostomy.

V033

ROUX EN Y INTRAHEPATIC-JEJUNOSTOMY AFTER COMMON BILE DUCT INJURY, Enrique Elli MD, Francesco Bianco MD, Mark S Choh MD, Fabio Sbrana MD, Pier C Giulianotti, University of Illinois, Chicago

We present a case of a 20 year old female, who underwent a laparoscopic cholecystectomy for symptomatic gallstones. Patient was discharged home the same day and returned to the hospital 48 hours after surgery complaining of abdominal pain. A CT scan performed showed a large abdominal fluid collection compatible with a biloma. An ERCP showed an interruption of the

bile duct with contrast extravasation.

The patient was transferred to our institution where the fluid collection was drained percutaneously. She was optimized and underwent a robotic assisted Roux en Y intrahepatic jejunostomy for a common bile duct injury.

The surgical procedure was performed with the da Vinci robotic system. The video shows the difficult dissection and identification of the anatomic structures in the hepatic hilum, the mapping of the remaining bile ducts by several cholangiograms and the surgical reconstruction by a double intrahepatic hepatico-jejunostomy.

V034

MINIMALLY INVASIVE PANCREATIC DEBRIDEMENT: INTRACAVITARY AND TRANSPERITONEAL DEBRIDEMENT, Patricio Polanco MD, Steven Hughes MD, Kenneth K Lee MD, Department of Surgery, University of Pittsburgh

Pancreatic debridement is necessary for treatment of infected pancreatic necrosis but is associated with significant morbidity that includes a high incidence of wound complications and enterocutaneous fistulae. We demonstrate two minimally invasive techniques of pancreatic debridement: catheter-guided intracavitary debridement and laparoscopic transperitoneal debridement.

In the first patient, fine needle aspiration of a heterogeneous lesser sac collection confirmed a diagnosis of infected pancreatic and peripancreatic necrosis. Under CT guidance, two widely spaced percutaneous drainage catheters were placed into the lesser sac collection. On the following day, the patient was taken to the operating room. Through his left-sided catheter a guide wire was passed, and the catheter was removed. First a dilator was passed over the guide wire, and then the dilator was passed through a 5 mm port and together this assembly was passed over the guide wire. The guide wire and dilator were removed, carbon dioxide was insufflated, and a laparoscope was inserted and confirmed placement of the port within the lesser sac cavity. The second catheter was identified, and using a guide wire was exchanged for a second port. Using these two ports, fluid was evacuated from the lesser sac and debridement of extensive necrotic tissue was completed. After there was no additional debridement to perform, the ports were replaced with two drains. Subsequent x-rays confirmed thorough debridement of the pancreatic and peripancreatic tissues.

In the second patient, gas bubbles were identified in an extensive lesser sac collection. A 12 mm port was placed using an open technique, and then two left sided 5 mm ports were placed. The gastocolic ligament was divided, and the stomach was gently elevated. Because of the ongoing inflammatory process, the usual planes posterior to the stomach were obliterated, but with careful dissection along the posterior surface of the stomach, the dissection could be carried downward toward the lesser sac and pancreatic bed. As the dissection was continued downward, an abscess cavity containing a large amount of purulent fluid was entered. After evacuating the fluid, the opening into the lesser sac was enlarged and the stomach was elevated anteriorly, allowing visualization of the lesser sac and the pancreatic and peripancreatic tissues. Under direct vision, debridement of the necrotic pancreatic and peripancreatic tissues was performed. Additional collections of purulent fluid and necrotic tissue were identified, drained, and debrided. After no further collections could be identified and no further necrotic tissue could be debrided, the lesser sac was copiously irrigated, and drains were positioned in it. Follow up CT scans showed that the debridement had been thorough, and the patient subsequently recovered uneventfully.

These two cases illustrate two minimally invasive methods of accessing the lesser sac and pancreatic bed to perform pancreatic and peripancreatic debridement. These approaches minimize the potential for wound and fistula complications associated with debridement procedures performed through a standard laparotomy incision.

V035

LAPAROSCOPIC INTERVENTION FOR MASSIVE, RAPIDLY PROGRESSIVE PANCREATIC PSEUDOCYST DISEASE WITH ENDOCRINE AND EXOCRINE DYSFUNCTION, Carlos Godinez MD, Yassar Youssef MD, Ivan George, Ethan Hagan BS, Adrian Park MD, University of Maryland Medical Center

Introduction: Therapeutic interventions for pancreatic pseudocyst disease are most often based on symptoms, lesion size, and in particular duration of the lesion. Conventional wisdom typically avoids early surgical therapy for 'immature' pseudocysts, citing concerns

Scientific Session Video Abstracts

of cyst wall thickness, durability, and ability to hold suture material for a secure anastomosis. We present a case of a woman with biliary pancreatitis and a rapidly enlarging pseudocyst, complicated by endocrine and exocrine insufficiency. Prompt surgical therapy resulted in symptom relief and improved pancreatic function.

Case Report: A 53 year old woman with a 6-week history of biliary pancreatitis had initially undergone a CT scan that revealed an edematous pancreas without other lesion. Her symptoms included abdominal pain, diarrhea, and malaise, and were not responsive to medical therapy. New-onset diabetes mellitus was diagnosed along with steatorrhea. She became insulin dependent and required pancreatic enzyme supplementation. Repeat CT scan revealed a massive cystic lesion of the pancreas had developed in just a few weeks time. Pressure necrosis on the remaining pancreatic parenchyma was suspected. The lesion was not amenable to endoscopic drainage; she was referred by gastroenterology for surgical evaluation. Three-dimensional modeling using computerized volumetric analysis systems techniques (CVAS) demonstrated the extensive and complex nature of the lesion. A laparoscopic approach via the lesser sac allowed access to both the lesion and the posterior stomach. A satisfactory cystgastrostomy was constructed using a combination of stapled and suture technique. Flexible gastroscopy was performed across the anastomosis and into the pseudocyst cavity, verifying an airtight closure. Laparoscopic cholecystectomy completed the operation. The patient recovered uneventfully with prompt restoration of pancreatic endocrine and exocrine function.

Discussion: Insufficient published data exists to confirm or refute the traditional teaching that pancreas pseudocyst disease should be managed non-operatively early in its presentation. Rapidly progressive lesions causing pancreatic parenchymal destruction with resultant exocrine and/or endocrine insufficiency demand prompt intervention. When endoscopic intervention is not possible or available, the surgeon may be called upon for management. Laparoscopy provides an effective means to assess cyst characteristics and provide therapy, with minimal morbidity to the patient.

Conclusions: Pancreatic pseudocyst disease can be rapidly progressive, resulting in prompt loss of gland function, and significant morbidity. Internal drainage to decompress the lesion can result in prompt relief of symptoms, and restoration of gland function. Minimally invasive techniques can be used to achieve this end, with little to no added morbidity, even in the face of a massive lesion. Traditional wait times to allow cyst wall maturity may need to be reconsidered in the face of progressive pancreatic failure, particularly if a surgical team experienced in advanced laparoscopic techniques is available.

V036

LAPAROSCOPIC COMMON BILE DUCT EXPLORATION AND LASER LITHOTRIPSY: A NOVEL APPROACH TO MANAGEMENT OF COMMON BILE DUCT STONES, Oliver A Varban MD, Carl Westcott MD, Dean Assimos MD, Corey Passman MD, Wake Forest University Baptist Medical Center

Introduction: Common bile duct stones (CBDS) are found in approximately 10% of patients who undergo cholecystectomy. Symptomatic common bile duct stones are a source of significant morbidity as they may cause obstructive jaundice, cholangitis, biliary cirrhosis and pancreatitis. Endoscopic retrograde cholangiopancreatography (ERCP) has been a mainstay of treatment for common bile duct stones. Laparoscopic common bile duct exploration has also proven to be a safe, cost effective and efficacious way of clearing ductal stones. Failure to clear stones by either method however often requires more invasive measures such as open common bile duct exploration, which in turn increases morbidity, hospital length of stay and recovery time. We present a novel approach to managing impacted common bile duct stones by utilizing laparoscopic transcystic common bile duct exploration and holmium laser lithotripsy with favorable outcomes.

Methods: This is a case series of patients undergoing laparoscopic cholecystectomy who had concomitant management of impacted CBDS by laparoscopic transcystic common bile duct exploration and holmium laser lithotripsy. Technique is described and outcomes measured include: ductal clearance, 30-day morbidity and mortality, complications and post-operative hospital length of stay.

Results: Five patients underwent laparoscopic cholecystectomy with common bile duct exploration and laser lithotripsy. All achieved stone clearance from the common bile duct. There was no mortality associated with this procedure with a median follow up of 30 days. Common bile duct diameter ranged from 10mm-20mm and median pre-operative total bilirubin was 3.7 mg/dl. Median length of hospitalization was 2 days.

Conclusions: Laparoscopic common bile duct exploration via a transcystic approach along with holmium laser lithotripsy is a safe and effective way to clear impacted common bile duct stones. Laser lithotripsy is practical for large impacted solitary stones and serves as an additional tool for the laparoscopic surgeon when standard basket removal techniques fail. This technique also avoids choledochotomy and may be used in concert with other modalities, such as ERCP or open exploration.

V037

MODIFIED SINGLE INCISION LAPAROSCOPIC ADJUSTABLE GASTRIC BAND, Daniel J Scott MD, Antonio O Castellvi MD, Esteban Varela MD, Homero Rivas MD, Southwestern Center for Minimally Invasive Surgery, University of Texas Southwestern Medical Center

Introduction: Single incision surgery is an evolving technique which aims to minimize pain and scarring related to multiple laparoscopic incisions. This video describes a modified single incision laparoscopic approach for adjustable gastric band placement in a 28 year old female with a BMI 48.75.

Methods: Although we originally used a true single incision technique and placed all instruments through one subcostal incision, we currently favor a modified approach which includes standard midepigastic placement of a Nathanson liver retractor and placement of three working ports in the left upper quadrant. The three working ports include two 5mm low profile trocars placed on either side of a 12mm optical entry trocar; these trocars are placed closely together within a 4.5cm distance and the skin bridges are incised at the end of the procedure to allow implantation of the band reservoir. A conventional 45 degree 5mm laparoscope is used for visualization. A hand-over-hand motion facilitates the use of conventional straight laparoscopic instruments in the setting of limited range of motion due to the single incision approach. Two stay sutures are placed in the stomach and perigastric fat and externalized through the 12mm trocar; external traction on these sutures provides suitable exposure to the angle of His and the right crus. An articulating 5mm grasper is used to create the retrogastric tunnel and retrieve the band into the appropriate position. An automated suturing device is used to create an anterior gastric plication using an intracorporeal knot-tying technique. The band tubing is externalized through the 12mm trocar and the working port incisions are joined together to allow implantation of the band reservoir. The final result is a 4.5cm incision in the left upper quadrant, in addition to the 5mm incision for the liver retractor.

Results: Operative time was 1 hour and 50 minutes with minimal blood loss. The patient did well postoperatively with no complications. She had a negative routine swallow study and was discharged home on postoperatively day 1.

Conclusions: While single incision surgery is still evolving, we believe that this technique for adjustable gastric band placement is feasible and provides patients with improved cosmesis. Clinical trials may demonstrate other potential benefits including less pain and a faster recovery.

V038

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN A PATIENT WITH PREVIOUS GASTRIC BYPASS SURGERY, Maria V Gorodner MD, Alberto Gallo MD, Federico Moser MD, Carlos A Galvani MD, University of Illinois at Chicago

Introduction: We present a case of laparoscopic adjustable gastric banding (LAGB) in a patient with previous Roux -en- Y gastric bypass (RYGB).

Methods: 39 year old morbidly obese woman (BMI 44 kg/m²) referred for evaluation for revisional bariatric surgery. She underwent open RYGB in 2000. She lost 250 lbs after her surgery but slowly she regained 90 lbs. Her past medical history was significant for hypertension, OA/DJD, and diabetes. Her past surgical history was significant for open RYGB, appendectomy and cholecystectomy. Barium swallow showed normal esophagus, postoperative changes from RYGB, gastric pouch and anastomosis without evidence for obstruction or leak. An upper endoscopy showed normal endoscopy with 6 cm of gastric remnant, anastomosis wider than expected, and no evidence of erosions, ulcers or evidence of inflammation.

Results: patient underwent LAGB after RYGB. The operative time was 75 minutes, blood loss 50 cc, and she was discharged home 1 day after the operation. At 7 months follow up she underwent 2 band adjustments and she lost 55 lbs.

Conclusion: LAGB can be safely performed after RYGB as a revisional bariatric surgery. At short term follow up this revisional procedure also offers excellent weight loss.





Scientific Session Video Abstracts

V039

THE MARTIAN CHRONICLES: SURGICAL CARE 100 MILLION MILES FROM HOME....

S A Dulshavsky MD, C Otto MD, J M Comptois MD, I Rubinfeld MD, A G Dulchavsky, A E Sargsyan MD, Henry Ford Hospital, Detroit MI, University of Ottawa, NASA, and the Canadian Space Agency

Despite rigorous health screening in astronaut crews, there are a number of conditions that may occur during long duration, exploration class spaceflight. The risk of abdominal conditions requiring surgical intervention is not clear, yet submarine and polar base experiences suggest contingency planning is warranted. While radio communication time delay is only 2 seconds to the international space station (ISS), a potential Mars mission would necessitate time delays of about 15 minutes. We sought to demonstrate the feasibility of remote expert guidance of diagnostic ultrasound followed by laparoscopic appendectomy in a simulated Mars environment.

Research was deemed exempt by the institutional review board. A simulated Mars research environment was utilized on Devon Island in the Canadian Arctic. Electronic communications including audio and video were established between the Arctic base and Henry Ford Hospital serving as Mission Control and incorporated the 15-minute communications lag into all communication. Ultrasound and laparoscopic capabilities were integrated into communications for remote guidance. Remote guidance methods and technology utilized has been previously published in communication with the international space station.

A simulated scenario involving a young female astronaut developing right lower quadrant pain was developed and utilized for this demonstration. An anatomical appendectomy model was utilized for the ultrasound and laparoscopic portions. Reference aids describing background technical aspects were developed. A set of confirmation milestones was used to generate a hard stop and mandated remote review.

We report a successful remote guidance demonstration from a simulated Mars environment with clinical control from a terrestrial base utilizing appropriate delay and consistent bandwidth and technology. Reference aids were appropriate for non-surgical personnel and hard stops for milestones with remote approval and go ahead were shown to be feasible. The appendicitis was appropriately diagnosed utilizing remote guidance of ultrasonography and the appendix removed laparoscopically using stapled technique with remote guidance as well.

V040

HAND ASSISTED LAPAROSCOPY FOR WANDERING SPLEEN,

Michael W Cripps MD, Jonathan D Svahn MD, Department of Surgery, Kaiser Permanente East Bay, Oakland, Ca

This is a case presentation of a patient with a wandering spleen. The patient is an 18 year old female who suffered from a malarial infection at age five. A CT scan at that time documented her spleen was located in the normal anatomical position. When the patient was 18 years old, she underwent an ultrasound to rule out the possibility of polycystic ovaries. At that time, it was discovered that her spleen was in her pelvis. A CT scan was performed showing the spleen located in the right lower quadrant (RLQ). The patient was offered a laparoscopic splenopexy to return the spleen to its correct anatomical position. This allows the patient to retain her spleen and avoid the complications associated with splenectomy, such as Overwhelming Post Splenectomy Infection (OPSI).

At time of laparoscopy, the presence of the spleen in the RLQ was confirmed. Using three 5mm ports and a hand port, the spleen was mobilized to the left upper quadrant (LUQ). The wandering spleen was secured in the left subdiaphragmatic location by the use of a vicryl mesh bag that was fashioned out of a single large vicryl mesh. An ommental sling was also used to further support the spleen. A one year follow up confirms that the spleen is still located in the correct anatomical position.

This is a unique case in that the patient was known to have a normally located spleen at a young age and then found to have a wandering spleen later in life. The wandering spleen in this patient is most likely secondary to her malarial infection which caused hypersplenism leading to attenuation of the suspensory ligaments and eventual migration into the RLQ. A wandering spleen is a rare condition, with an unknown incidence. A recent literature search shows only case reports, without any documentation of incidence or prevalence of wandering spleens. Most cases are due to congenital or acquired absence of anchoring ligaments. The risk of

performing a splenectomy on this patient is OPSI. The incidence of OPSI is documented at 0.13 to 8.1% with a mortality of 30 to 60%. This makes the option of splenopexy very attractive and the use of minimally invasive techniques avoid large painful incisions.

V041

SINGLE PORT SURGERY MADE EASY WITH INTERNAL

RETRACTORS, Yoav Mintz MD, Ram Elazary MD, Abed Khalaileh MD, Amir Szold MD, Avraham Schlager MD, Avraham I Rivkind MD, Hadassah-Hebrew University Medical Center, Jerusalem, Israel. Assuta Medical Center, Tel-Aviv, Israel

Achieving adequate retraction and exposure during abdominal surgery is a fundamental requirement. In traditional open surgery retraction is achieved by the surgeons' hands and mechanical devices anchored to the operating table. During laparoscopy dedicated incisions are performed and instruments are inserted into the peritoneal cavity for this purpose alone. For example, during a standard laparoscopic cholecystectomy two trocars are devoted for retraction purposes only. Single port surgery reduces the number of abdominal wall incisions and may lower the post operative pain, reduce the risk for surgical wound infection, reduce the risk of developing post operative incisional hernias and improve the cosmetic results. Achieving adequate retraction in this approach is critical yet difficult and quite challenging even when using novel articulating instruments.

The EndoGrab® is an internally anchored device, which retracts organs to the internal abdominal wall. It is introduced into the peritoneal cavity through a 5mm trocar at the beginning of the operation, and is removed following completion of the procedure. A flexible endoscope and articulating instruments provide the necessary triangulation, and the internal retractors provide the necessary retraction, therefore making single port procedures realistic.

Following IRB approval we conducted a study for evaluating the safety and efficacy of these retractors in a single port cholecystectomy. The procedures will be presented and the implications discussed.

One of the major obstacles in single port surgery is achieving adequate retraction. Internal retractors such as the EndoGrab® can now be safely positioned through a 5mm working port and left behind leaving the trocar and surgeons hands free for dissection. These endoretractors will hopefully pave the way to implementing single trocar procedures more extensively.

V042

SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY: DEMONSTRATION OF CRITICAL VIEW DISSECTION AND

INTRAOPERATIVE CHOLANGIOGRAPHY, Steven E Hodgett MD,

Peggy Frisella MD, Brent D Matthews MD, L Michael Brunt MD, Department of Surgery and Institute for Minimally Invasive Surgery, Washington University School of Medicine, St. Louis, MO.

Single incision laparoscopic cholecystectomy is emerging as a potentially less invasive alternative to both standard laparoscopic cholecystectomy and NOTES cholecystectomy. However, as this technique becomes more widely employed, it is important to maintain the ability to perform the critical view dissection and intraoperative cholangiography. This video presentation demonstrates one technique for visualization of these two vital steps for safety in laparoscopic cholecystectomy. The patient is a 28-year old female with symptomatic cholelithiasis. The technique shown utilizes two 5mm ports placed through a single incision at the umbilicus and suture retraction of the gallbladder. The critical view dissection is accomplished prior to clipping of any ductal structures. For intraoperative cholangiography, the catheter is inserted through a percutaneously placed Verres needle in the right subcostal area.

V043

MINIMALLY INVASIVE OESOPHAGECTOMY WITH TWO-

FIELD LYMPHADENECTOMY, Darmarajah Veeramootoo, Clare Taylor, Rakesh Krishnadas, Richard G Berrisford MD, Saj A Wajed MD, Department of Thoracic and Upper GI Surgery, Royal Devon and Exeter NHS Foundation Trust, UK

THORACOSCOPIC PHASE

1. Thoracoscopic access and Ports
2. Diaphragm retraction stitch
3. Division of inferior pulmonary ligament up to inferior pulmonary vein
4. Division of mediastinal pleura and development of pericardial

Scientific Session Video Abstracts

plane
5.Division of azygous vein
6.Completion of oesophageal mobilisation
Meso-esophageal vessels are ligated and vagal branches are clipped on the
Oesophagus. Slings are applied
7.Radical nodal resection. Lymph node groups: subcarinal, left and right bronchi, right paratracheal and paracardial
8.Skeletonisation of aortic adventitia and resection of thoracic duct
9.Paravertebral catheter inserted
10.Two chest drains are inserted
LAPAROSCOPIC PHASE
11.Laparoscopic access and Ports
12.Division of gastro-hepatic ligament and mobilisation of right crus
13.Skeletonisation of left gastric artery pedicle and coeliac axis with extended lymphadenectomy, removing coeliac, common hepatic and splenic artery origin nodes
14.Ligation of left gastric artery
15.Mobilisation of greater curve with careful preservation of gastro-epiploic arcade
16.Division of short gastric vessels and mobilisation of left crus
17.Division of gastro-epiploic ligament and mobilisation of retro-pyloric region
18.Kocherisation of duodenum
19.Division of gastric artery arcade and preservation of right gastric artery
20.Division of stomach to create lower border of resection and formation of gastric conduit
21.Completion of mobilisation of gastro-oesophageal junction with division of phreno-esophageal junction and retrieval of lower sling
22.Division of right crus
23.Suturing of conduit to lower specimen

ANASTOMOTIC PHASE

24.Delivery of specimen into neck via left cervical incision. The proximal oesophagus is divided with completion of oncological resection
25.Open, end-to-side anastomosis
26.Return of anastomosis into neck, and removal of slack from conduit
27.Suturing of conduit to right crus
RESULTS
28.Wounds after six weeks
29.Results (MIO 70 BJS), mortality rate, op time (med/range), LN yield (m/r)
30.Results 2, Survival and DFS survival graphs and text for % @ 2yrs
31.Acknowledgements
TOTAL RUNNING TIME: 8 MINS
Direction: Veeramootoo D
Narration: Taylor C
Editing: Cresswell R
Operating Team: Krishnadas R, Berrisford RG, Wajed SA

V044

LAPAROSCOPIC TOTAL GASTRECTOMY WITH HAND-SEWN ESOPHAGO-JEJUNAL ANASTOMOSIS AND D2 LYMPHADENECTOMY FOR GASTRIC CANCER, Camilo Boza BA, Cristian Gamboa MD, José Salinas MD, Ricardo Funke MD, Luis Ibañez MD, Nicolás Jarufe MD, Pontificia Universidad Católica de Chile

Introduction: This video will detail the relevant steps in laparoscopic total gastrectomy and D2 lymphadenectomy with a hand-sewn esophago-jejunal anastomosis.

Method and Patient: A 53 year-old male presented with weight loss and significant familiar history for gastric cancer (Both parents and sister). An upper GI endoscopy revealed a 10 mm gastric ulcer between the body and the antrum; and a mucosal deformity in the body. Both lesions were biopsed and histology was positive for signet-ring cell adenocarcinoma. Muscularis propria was not involved on endoscopic ultrasound. Laboratory work was normal and a chest-abdomen-pelvis CT did showed signs of dissemination. Although a small lesion a total gastrectomy was decided due to familiar history and histology.

Surgical technique: The patient was placed in supine position. The surgeon worked from the right of the patient at a higher level. Five trocars were used: three 10-12mm, and 2 of 5mm. The greater omentum was dissected with the gastrocolic ligament as we entered the lesser sac using the harmonic scalpel. Lymph-nodes groups 5 and 6 were dissected with the first portion of the duodenum was transected with a 45mm blue linear stapler. The dissection is then continued proximally. The hepato-duodenal ligament is dissected

with the lymph nodes and the hepatic artery is dissected along to the celiac trunk. The left gastric artery is dissected with the lymph-nodes and transected between hemostatic clips. The splenic artery is dissected retrieving the lymph nodes. The dissection continues up to the diaphragmatic pillars and groups 1 and 2 are dissected. The esophago-gastric junction is dissected. We complete the dissection along the greater curve dissecting the short gastric vessels and lymph-nodes of the splenic ileus. A Roux-en-Y is performed, and the roux limb is ascended in an antecolic fashion. The distal esophagus is transected using the harmonic scalpel and an esophago-jejunal end-to-side hand-sewn anastomosis is performed in a one layer continuous 3-0 vycril. A negative blue dye test was carried. The surgical specimen was extracted in a plastic bag. Two drainages was placed near the anastomosis. No conversion was required.

Operative time was 180 minutes. The patient was discharged on postoperative day 5 with no complication. Definitive histology confirmed signet-ring cell adenocarcinoma with several focus around the ulcer. The tumor involved no further lamina propria, without vascular or perineural permeation. The surgical borders were negatives. Two positive lymph-nodes were found in groups 3 and 5. Postoperative stage was T1N1M0 and the patient was scheduled for adjuvant radio-quimiotherapy.

Conclusion: The laparoscopic total gastrectomy with hand-sewn esofago-jejunal anastomosis is a feasible option for reconstruction with good results.

V045

LAPAROSCOPIC PANCREATODUODENECTOMY:SAFETY AND EFFICACY OF RADICAL RESECTION, Chinnusamy Palanivelu¹, Palanisamy Senthilnathan MS, Ramakrishnan Parthasarathi MD, Pidigu Seshiyer Rajan MS, Palanivelu Praveenraj MD, GEM Hospital & Research Institute

Aim: To prove that radical laparoscopic pancreatoduodenectomy for malignancy can be safely performed, adhering to sound oncological principles. **Methods:** From March 1998 to January 2008, we retrospectively reviewed 52 patients undergoing laparoscopic pancreatoduodenectomy with nodal clearance for malignancy, and present a step-by-step video demonstration. **Results:** Mean age was 62 years and the types were ampullary, distal CBD, pancreatic head and duodenal carcinoma. Postoperative morbidity was 28.5%. Overall follow up rate was 95.1%, metastasis occurred in 2 cases, local recurrence in 1 case, perioperative mortality was 2.38%, conversion rate was 2% and tumor-free margins in 2% of cases. Mean number of nodes harvested was 5 and was positive in 12% of cases. The 5-year overall actuarial survival rate was 33.27%.

Conclusion: It is known that radical resection prolongs overall survival. Based on our study, laparoscopic pancreatoduodenectomy with standard lymphadenectomy (clearance of common hepatic nodes, nodes along portal vein, superior mesenteric artery and vein) is safe, effective and provides all the benefits of minimally invasive surgery while maintaining oncological principles.

V046

LAPAROSCOPIC COMPLETION PROCTOCOLECTOMY AND IPAA, Jayleen Grams MD, Winnie Tong MD, Barry Salky MD, Mount Sinai Hospital

The patient is a 21 year old female status post laparoscopic subtotal colectomy with end ileostomy 7 months earlier for fulminant ulcerative colitis. She has been off steroids for 2 months. She presents now for elective takedown of end ileostomy, completion proctocolectomy, and J-pouch reconstruction.

This video demonstrates the laparoscopic completion proctocolectomy and ileal pouch anal anastomosis. It shows how to achieve adequate length on the ileum for the pouch to reach into the pelvis and the use of laparoscopic technique to complete the proctocolectomy in a relatively atraumatic manner.





Video Channel Loop Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

V047 COMBINED TRANSABDOMINAL AND PREPERITONEAL OBTURATOR HERNIOPLASTY Daniel Rossi, DO, Stephen McNatt, MD, West Virginia University, Wake Forest University Baptist Medical Center

V048 LAPAROSCOPIC REPAIR OF A PARAESOPHAGEAL HERNIA AFTER GASTRIC BYPASS FOR MORBID OBESITY WITH REPAIR OF AN INCIDENTAL INTERNAL HERNIA AND GASTRO-GASTRIC FISTULA. Sheetal Patel, MD, Samuel Szomstein, MD, Raul Rosenthal, MD, Cleveland Clinic Florida

V049 LAPARO-ENDOSCOPIC SINGLE SITE SURGERY (LESSS) FOR PLACEMENT OF ADJUSTABLE GASTRIC BAND Kevin M McGill, MD, Nikalesh Ippagunta, MD, Glenn J Forrester, MD, Julio A Teixeira, MD, St. Luke's-Roosevelt Hospital Center New York, NY

V050 ENDOSCOPIC AND RADIOGRAPHIC CHANGES FOLLOWING INCISIONLESS REVISIONAL SURGERY FOR TREATMENT OF POST ROUX-EN-Y (RYGB) STOMA AND POUCH DILATATION Richard Ruchman, MD, Steven Gorcey, MD, Frank Borao, MD, Faisal Shah, MD, Amir Hameedi, BS, Maciej Tobola, BS, Monmouth Medical Center

V051 SINGLE INCISION LAPAROSCOPIC SURGERY (SILS) TRAINING USING A MODIFIED SKILLS CURRICULUM Andrew S Wright, MD, Saurabh Khandelwal, University of Washington

V052 SINGLE INCISION LAPAROSCOPIC APPENDECTOMY Ashkan Moazzez, MD, Rodney J Mason, MD, University of Southern California

V053 ENDOLUMINAL VERTICAL GASTROPLASTY Brant K Oelschlager, MD, Renato Soares, MD, Andrew Wright, University of Washington

V054 TRANSVAGINAL NOTES PARTIAL GASTRECTOMY FOR GASTRIC SUBMUCOSAL TUMORS: EARLY EXPERIENCE IN HUMANS Kiyokazu Nakajima, MD, Toshirou Nishida, MD, Tsuyoshi Takahashi, MD, Yoshihito Souma, MD, Junichi Nishimura, MD, Yasuaki Miyazaki, MD, Masaki Mori, MD, Yuichiro Doki, MD, Osaka University Graduate School of Medicine

V055 NOTES RETROPERITONEAL TRANSVAGINAL TOTAL AND PARTIAL RIGHT NEPHRECTOMY Pierre Allemann, MD, Silvana Perretta, MD, Bernard Dallemagne, MD, Jacques Marescaux, MD, IRCAD-EITS, University Louis Pasteur, Strasbourg, France

V056 TRANSGASTRIC CHOLECYSTECTOMY USING THE ENDOSAMURAI - A NOVEL ENDOSCOPIC OPERATING PLATFORM Michael M Awad, MD, Danny V Martinec, Timothy Kennedy, MD, Georg Spaun, MD, Christy M Dunst, MD, Lee L Swanstrom, MD, Legacy Health Systems, Portland, Oregon, USA

V057 LAPAROSCOPIC TELEMENTORING ON A SHOESTRING BUDGET: LEVERAGING FREE AND UBIQUITOUS TECHNOLOGIES TO IMPROVE SURGICAL PATIENT SAFETY N Shah, BS, I Rubinfeld, A Parker, D Nguyen, J Butler, P Patton, MD, V Velanovich, MD, Henry Ford Hospital, Detroit, MI

V058 LAPAROSCOPIC LINEAR STAPLER LATERO-LATERAL ESOPHAGOJEJUNOSTOMY AFTER TOTAL GASTRECTOMY FOR HEREDITARY DIFFUSE GASTRIC CANCER SYNDROME Emeka Acholonu, MD, Samuel Szomstein, MD, Raul Rosenthal, MD, Cleveland Clinic Florida

V059 INCISIONLESS ENDO-LAPAROSCOPIC COLECOTMY FOR LEFT-SIDED COLONIC TUMORS Hester, YS Cheung, MD, Cliff, CC Chung, MD, Michael, KW Li, MD, Department of Surgery, Pamela Youde Nethersole Eastern Hospital

V060 N.O.T.E.S. SENTINEL NODE BIOPSY COMBINED WITH ENDOSCOPIC SUBMUCOSAL DISSECTION OF THE SIGMOID COLON Ronan A Cahill, MD, Mitsuhiro Asakuma, MD, Silvana Perretta, MD, Dallemagne Bernard, MD, Dmitri Coumaros, MD, Joel Leroy, MD, Jacques Marescaux, MD, IRCAD EITS, Strasbourg

V061 LAPAROSCOPIC ROUX-EN-Y CYSTJEJUNOSTOMY AND CHOLEDOCHOJEJUNOSTOMY FOR A PANCREATIC PSEUDOCYST WITH BILIARY OBSTRUCTION James R Nitzkowski, MD, G Forrester, MD, Julio Teixeira, MD, Grace Kim, MD, St. Luke's-Roosevelt Hospital Center

V062 LAPAROSCOPIC REPAIR OF INCARCERATED LEFT PARADUODENAL HERNIA Abed Khalaileh, MD, Avraham Schlager, MD, Samir Abu Gazala, MD, Bala Miklosh, MD, Ram Elazary, MD, Avraham I Rivkind, MD, Yoav Mintz, MD, Hadassah Hebrew University Medical Center, Surgery Department

V063 LAPAROSCOPIC CYSTGASTROSTOMY Preeti Malladi, MD, Dina Elaraj, MD, Alexander Nagle, MD, Northwestern University

V064 LAPAROSCOPIC EXCISION OF A URACHAL REMNANT David H Rothstein, MD, Children's Memorial Hospital, Chicago, IL

V065 TOTALLY LAPAROSCOPIC RIGHT HEMICOLECTOMY WITH TRANSVAGINAL SPECIMEN EXTRACTION Shaun McKenzie, MD, Jeong-Heum Baek, MD, Alessio Pigazzi, MD, City of Hope National Medical Center, Duarte, California

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P001

A COMPARISON OF TOTAL LAPAROSCOPIC HEMI-COLECTOMY VS ASSISTED LAPAROSCOPIC AND LAPAROTOMY, Gilberto

Lozano-Dubernard MD, Juan J Calva-Mercado MD, Fidel Ruiz-Healy MD, Ramon Gil-Ortiz MD, Mauricio Rodriguez-Gonzalez MD, Siegfried Figueroa-Barkow MD, Hospital Angeles del Pedregal, Mexico City, Mexico

Objective: Our study aims to compare clinical outcomes from left total laparoscopic hemi-colectomy with trans-anal extraction and intra-abdominal anastomosis (TL), versus left hemi-colectomy by laparotomy (LPT) and abdominal-incision assisted laparoscopy (AL). **Methods:** A retrospective hospital chart review of patients undergoing colonic resection at Hospital Angeles del Pedregal was performed to identify clinical features and outcomes as surgical time, trans-surgical bleeding, initiation of oral fluid intake, hospital complications and length of stay. A total of 233 patients were identified: LPT (107 patients), AL (65 patients) and TL (61 patients). Statistically comparison was using the U-Mann-Whitney test and the chi2 test (SPSS.10). TL was carried-out only by our team, the other 2 procedures, by several other surgeons.

Results: The TL group of patients were younger (median age: 46 y) compared to LPT and AL patients (median age: 55y and 59y; p <0.05). Percentage of men in each group was: 28 %, 42 % and 51 %, respectively. Post-surgery diagnosis among patients with TL was: complicated diverticulitis (36%), dolichosigmoid (26%), non-complicated colonic diverticular disease (16%), sigmoid volvulus (11%) and others (11%). Median time of LPT and TL surgery was shorter than AL (150 and 170 min vs. 180 min; p <0.05). Median volume of bleeding during surgery was smaller in LPT and TL than in AL (100 and 125 ml vs. 200 ml; p <0.001). Median time to start of oral fluid intake after surgery was shorter in TL vs. LPT and AL (1.5 days vs. 3 days, in both; p <0.001). Median time to discharge from the hospital was shorter in TL vs. LPT and AL (4 days vs. 8 days, in both; p <0.001). Severe post-surgical complications were more frequent in AL (10%) vs. LPT (5%) and TL (2%); p<0.05. There were only 3 deaths related to surgery, all in AL.

Conclusions: Since 1995 our team has successfully practiced the TL. This novel surgery is a safe technical procedure, similar to LPT and less morbid than AL. It offers the benefits of short incisions (5 to 15 mm), and a significantly shorter time of clinical recovery and hospital discharge.

P002

COMPARISON OF INTRACORPOREAL VERSUS EXTRACORPOREAL ANASTOMOSIS IN LAPAROSCOPIC HEMICOLECTOMY, Jayleen

Grams MD, Winnie Tong MD, Alexander J Greenstein MD, Barry Salky MD, Mount Sinai Hospital

INTRODUCTION: The aim of this study was to determine short-term outcomes of an intra- vs extra-corporeal anastomosis in laparoscopic hemicolectomy.

METHODS: Retrospective chart review of 105 consecutive patients who underwent laparoscopic hemicolectomy performed by a single surgeon from January 2006-August 2008. Pearson Chi-square and student's t-test were used to test for significance.

RESULTS: There were 105 patients (males=47, females=58) with a mean age of 47.5 years who underwent laparoscopic colectomy (ileocolic resection=66, right=29, left=9, subtotal=1). Indications included inflammatory bowel disease=64, neoplasm=27, polyp=9, and other=7. There was no perioperative mortality. While there were more males in the extracorporeal group, patients in the two groups were otherwise demographically comparable. Mean results are shown in the table below.

	IC	EC	p-value
Number of patients	54	51	
Duration of operation (min)	190	157	<0.01
Estimated blood loss (mL)	88.7	164.0	0.02
Intraoperative narcotics (mg)*	49.0	48.3	0.83
Length of stay (days)	3.2	3.8	0.01
Postoperative narcotics (mg)*	16.0	43.6	<0.01
Time to flatus (days)	2.0	2.4	0.02
Time to bowel movement (days)	2.2	2.5	0.17
Perioperative morbidity	6	15	0.02

IC=intracorporeal, EC=extracorporeal, *mg in morphine equivalents

CONCLUSION: In comparison to the extracorporeal technique, intracorporeal anastomosis produces superior results with a shorter length of stay, decreased postoperative narcotic use, faster return of bowel function and decreased morbidity. Further studies will be needed to verify our findings.

P003

A NOVEL BASIC LAPSIM® CURRICULUM IMPROVES FUNDAMENTALS OF LAPAROSCOPIC SURGERY SKILLS

PERFORMANCE IN SURGICAL INTERNS, Jenny J Choi MD, Nancy J Hogle MS, Andrew J Duffy MD, Tracey L Arnell MD, Dennis L Fowler MD, Columbia University, College of Physicians and Surgeons, Department of Surgery

Introduction: Laparoscopy is the standard of care for many basic general surgical procedures. Simulators have been developed to train surgical residents in laparoscopy; but there is no standard curriculum that has clearly shown a translational benefit in the operating room. Small studies have shown that Fundamentals of Laparoscopic Surgery (FLS) skills performance score predicts intraoperative laparoscopic skill. We examined skill performance of novice laparoscopic surgeons before and after completion of a novel basic LapSim® curriculum.

Methods: Twenty-one surgical interns underwent FLS skills testing on the first day of internship. Each then completed our novel basic curriculum on LapSim®, including camera navigation, instrument navigation, coordination, grasping, lifting and grasping, cutting, and clip applying modules. After completion of the curriculum, each underwent FLS skills testing again. Scores were compared. No intern participated in any laparoscopic cases during the duration of the study.

Results: The mean initial FLS skills testing score was 37.0 ± 17.5 . After completing the basic LapSim® curriculum, scores increased to 53.9 ± 17.2 (p<0.001). The difference between baseline and completion scores was 16.9 ± 14.2 . Interns required an average of 3.9 ± 1.9 hours to complete the curriculum (range 1.9 to 9.4 hours). There was no linear correlation between the amount of time to complete the curriculum and improvement in FLS skills scores.

Conclusions: Our curriculum significantly improves FLS skills performance. The amount of time taken to complete the LapSim® curriculum does not affect incremental change on FLS skill performance. The LapSim® curriculum has great potential in surgical resident education.

P004

OUTCOMES OF FUNDAMENTALS OF LAPAROSCOPIC SURGERY (FLS) SKILLS TRAINING FOR SENIOR MEDICAL STUDENTS

ENTERING SURGICAL RESIDENCY, Richard A Pierce MD, Debra Tiemann RN, Brent D Matthews MD, L Michael Brunt MD, Department of Surgery and Institute for Minimally Invasive Surgery, Washington University School of Medicine, Saint Louis, MO

Introduction: Laparoscopic skills training is usually reserved for surgical residents who have some experience in performing open surgical procedures. This study examined the outcomes of training 4th year medical students matched in a surgical specialty (who had no prior open case experience as primary surgeon) in the skills tasks of the SAGES FLS program.

Methods: Over a 3 year period (2006 to 2008), nineteen 4th year medical students who had matched in general or urologic surgical residency were instructed in the SAGES FLS drills (Peg Transfer, Pattern Cutting, EndoLoop Placement, Extracorporeal Knot Tying, Intracorporeal Knot Tying) as a part of a 6 week skills preparation course for surgical internship. Students participated in one 2.5 hour instructional session and were then given 24-hour access to laparoscopic trainer box equipped with the FLS materials. Students were asked to record practice times after training. At the end of the course, after independent practice and one additional optional instruction session, the FLS manual skills exam was administered by an FLS approved proctor and was scored using standard FLS criteria (passing score = 54 for each task). Where appropriate, either a Mann-Whitney or unpaired T-test was used for statistical analysis; data are expressed as mean \pm standard deviation.

TABLE 1	Peg	Pattern Cut	EndoLoop	Extracorp Knot	Intracorp Knot
Task Time (sec)	87	122	95	169	215
Task Score	89.6	61.0	62.0	79.1	73.2

TABLE 2	2006 (N=7)	2008 (N=6)	p
Practice Time (min)	130.7 \pm 94.0	302.5 \pm 264.4	0.0378
Task Time (sec)	153.9 \pm 85.3	163.0 \pm 39.2	0.0008
Task Score	67.2 \pm 25.6	85.0 \pm 10.8	0.0008

Results: Eleven male and 8 female students participated. Mean task times and mean composite task scores for all 19 students are shown above in Table 1.



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Additionally, mean practice times were available for students participating in the 2006 and 2008 (but not in 2007) courses, with an overall mean of 210 minutes (range = 45-600 minutes). Practice times in 2006 averaged 131 minutes (range = 45-315 minutes) compared to 303 minutes (range 150-600 minutes) in 2008 ($p < 0.05$). As shown Table 2, the difference in practice time was reflected in significantly faster task performance and higher composite task scores for students in the 2008 course.

Eleven of 19 students (58%) passed all 5 FLS tasks; in 2006, only 2 of 7 (29%) students passed all components of the exam compared to 6 of 6 students (100%) in 2008. The two lowest scoring students also logged the least amount of individual practice time (45 and 60 min). Conclusion: Training in FLS skills, including laparoscopic suturing, is appropriate for 4th year medical students entering surgical residency, and competence on the FLS skills exam can be achieved over a short training and practice interval. FLS skills training should be integrated into skills training curricula earlier than is practiced in most residency programs, including at the senior medical student level.

P005

EFFECTIVENESS OF A NEW TROCAR SYSTEM TO ENABLE NOTES,

Edward D Auyang MD, Eric S Hungness MD, Benjamin Yuh BS, Renee Rowe BSME, Greg Bakos MS, Michelle Lewis BBA, Suzanne Thompson DVM MS, Brian Thompson MBA, Jeffrey W Hazey MD, Department of Surgery, Northwestern University Feinberg School of Medicine, Department of Surgery, The Ohio State University College of Medicine, Ethicon Endo-surgery, Inc.

Introduction: Natural orifice transluminal endoscopic surgery (NOTES) is a developing area of minimally invasive surgery. Fundamental challenges of NOTES include development of safe ways to perform transluminal access and maintaining visualization and spatial orientation using a stable operating platform. This study examines the functionality of a new rotary access needle (RAN) device and technique for creation of gastrotomies for peritoneal NOTES access, and functionality and effectiveness of a new steerable flex trocar (SFT) system to enable targeting.

Methods: Transgastric access under direct laparoscopic visualization was performed in a porcine model using one of two techniques: 1) the established method of monopolar needle-knife cautery and balloon dilation with a standard flexible dual-channel endoscope (CONTROL), or 2) RAN / SFT operating system (RAN / SFT). Access was performed in 8 pairs of animals in a randomized order. Time of access, accidental injuries, and damage to adjacent structures were recorded. After gaining peritoneal access, visualization and the ability to touch the four corners of the peritoneum were evaluated. Ability to grasp and manipulate the gallbladder without deflection of the operating system was also recorded. One-tailed Fisher's exact test was performed to compare the groups. Differences between groups were considered statistically significant at $p < 0.05$.

Results: The mean difference in access time between the groups (1.16 minutes) was not significant. No injuries or damage to adjacent structures were found with either system. Targeting of the upper peritoneal quadrants was superior with the RAN / SFT system versus CONTROL, but equivalent in the targeting of the lower quadrants (Table 1). The ability to exert adequate force to manipulate the gallbladder was superior with the RAN / SFT system compared to CONTROL ($p = 0.03$).

Ability to Target Peritoneal Quadrants		
	RAN / SFT	CONTROL
Upper Left	100%	17%
Upper Right	100%	0%
Lower Left	100%	100%
Lower Right	100%	100%

Table 1

Conclusions: Development of safe techniques for transgastric peritoneal access and stable operating platforms are fundamental technical challenges that need to be addressed before NOTES can gain wide acceptance. Under direct visualization in the porcine model, RAN / SFT is an effective alternative to needle-knife cautery and balloon dilation for transgastric access. RAN / SFT provides a more stable operating platform that enables improved targeting and force transmission when compared to a standard dual-channel endoscope.

P006

PHYSIOLOGIC IMPACT OF PROLONGED INTRA-LUMINAL

INSUFFLATION. Cedric S.F. Lorenzo MD, Thai H. Pham MD, Kyle A. Perry MD, Blair A. Jobe MD, John G. Hunter MD, Charles R. Phillips MD, Robert O'Rourke MD. Department of Surgery; Oregon Health and Science University, Portland, OR.

Introduction: Prolonged intra-luminal and intra-peritoneal insufflation with gas is a critical component of endoluminal and transluminal surgery. The physiologic effects of peritoneal insufflation have been extensively studied, but similar investigations on the impact of intra-luminal insufflation are lacking. This study describes the physiologic effects of prolonged intra-visceral insufflation associated with carbon dioxide (CO₂) or room air (RA) insufflation.

Methods: Ten swine were divided equally into 2 groups that underwent gastric insufflation with CO₂ or RA to pressures of 15 and 30 mmHg for sixty minutes at each pressure. The following hemodynamic and respiratory parameters were measured at 10 minutes intervals: heart rate (HR), systolic and diastolic blood pressure (SBP and DBP), mean arterial pressure (MAP), stroke volume (SV), cardiac output (CO), systemic vascular resistance (SVR), oxygen saturation (O₂ sat), end-tidal carbon dioxide (EtCO₂), tidal volume (TV), and peak airway pressures (PAP). In addition, arterial blood gases were taken at 0, 30, and 60 minutes during the insufflation periods. The average change of each variable from baseline during the insufflation periods was compared using Student's t-test.

Results: Comparing gases used for intragastric insufflation, the EtCO₂ (12.6±8.2 mmHg CO₂ vs. 6.3±4.1 mmHg RA, $p = 0.05$) and pCO₂ (20.8±4.1 mmHg CO₂ vs. 7.1±7.9 mmHg RA, $p = 0.023$) were statistically higher in the CO₂ than RA group. At an insufflation pressure of 30 mmHg there were significantly higher changes in HR (32.9±21.4 BP/min; $p = 0.002$), CO (0.44±1.0 L/min; $p = 0.032$), SV (10.6±9.2 ml; $p = 0.008$), EtCO₂ (12.7±7.6 mmHg; $p = 0.012$), PAP (9.2±4.6 mmHg; $p = 0.001$), pO₂ (45.5±54.7 mmHg; $p = 0.014$), and BE (2.8±2.0 mmol/L; $p = 0.008$) when compared to an insufflation pressure of 15 mmHg.

Conclusion: Carbon dioxide and room air showed few significant physiologic effects when used for intra-luminal insufflation at low pressures. However, high intra-luminal pressures resulted in significant hemodynamic and respiratory changes during prolonged insufflation. To ensure safety, intra-luminal pressures should be carefully monitored during lengthy endoluminal surgeries.

P007

USING VIBRATION TO PROVIDE FORCE INFORMATION IN

SURGERY, Audrey K Bell BS, Steven D Schwaartzberg MD, Caroline G Cao PhD, Tufts University, Cambridge Health Alliance

Laparoscopic surgeons receive distorted force feedback during tissue manipulation. Research shows that sensory augmentation using vibrotactile stimulation with amplitude modulation enhances performance in tissue differentiation tasks. It was hypothesized that the capacity of information transmission through vibration can be increased by adding signal frequency and spatial location modulations. A study was conducted to evaluate this hypothesis. Ten naive subjects performed 104 trials of a tissue compliance differentiation task using a laparoscopic tool while wearing the vibration device on the non-active arm. The task required subjects to probe two simulated tissue with a laparoscopic tool to assess whether the second sample was harder than, softer than, or the same in compliance as the first sample. Subjects received vibrotactile stimulation in 4 conditions: 1) Frequency, in which vibration frequency varied as a function of applied force, 2) Location, in which the spatial location of the active vibration motors varied as a function of applied force, 3) Combination, in which both vibration frequency and location changed in response to applied force, and 4) No Vibration, in which no vibration feedback was provided. Data analysis using analysis of variance (ANOVA) showed a significant main effect in vibration conditions for maximum applied force ($p = 0.002$); however, a post-hoc Tukey test revealed no further significance. There were no significant differences in either accuracy or time to task completion. Subjective results indicated that subjects differed in their assessment of which vibration feedback condition was most useful. Data were separated into three groups according to feedback preference, and t-tests revealed that subjects who preferred the Frequency modulation and Combination modulation were significantly more accurate in these conditions than in the No Vibration condition ($p = 0.006$, $p = 0.005$, respectively). These results suggest that subjects were not

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equally sensitive to vibration frequency modulation, as they were to amplitude modulation. Vibration frequency modulation, in addition to amplitude modulation, has the potential to increase the capacity of force information transmission and improve the safety of tissue manipulation in laparoscopic surgery, but only for selected individuals.

P008

LAPAROSCOPIC SURGERY FOR EPIPHRENIC DIVERTICULA: THE IDEAL APPROACH, Renato V Soares MD, Martin I Montenegro MD, Carlos A Pellegrini MD, Brant K Oelschlager MD, University of Washington Medical Center, Seattle, WA

Laparoscopy provides excellent exposure of the distal esophagus, thus is an ideal approach for most epiphrenic diverticula. This study reviews our outcomes to support this statement, which is the largest laparoscopic series to date.

Methods: From 1997 to 2008, we operated on 23 patients for epiphrenic diverticula. Of these, 18 had laparoscopic diverticulectomy, myotomy, and fundoplication (1 had a gastric bypass), while 5 had thoracotomy (22%) and diverticulectomy due to severe adhesions from previous abdominal surgery or morbid obesity. **Results:** Median age was 57 years (range, 23-83 years-old). Eighteen patients had manometry in our institution preoperatively. 12 patients (66.67%) had esophageal dysmotility and 2 others an associated Leiomyoma. The size of diverticula ranged from 2 to 10cm (median 4cm). The laparoscopic group had a shorter length of stay (median = 3 days) than the open thoracotomy group (median = 7 days).

Complications occurred in 3 patients (16%) laparoscopy group and 3 patients in the thoracotomy group (60%). Early on we approached larger more proximal diverticula via thoracotomy. The most recent case was a 9 cm diverticulum extending 12 cm above the GEJ which was resected laparoscopically. Since 2005 we have performed nine consecutive cases laparoscopically. Sixteen patients answered the follow-up survey at a median post-operative time of 34 months (range 1-138). Dysphagia improved in 15 (94%), nausea and vomiting in 12 (75%) and regurgitation in 11 (69%). Fourteen (88%) patients rated the operation as good or excellent. None of the patients developed a recurrent diverticulum.

Conclusions: Laparoscopy is a safe, feasible, and effective approach for epiphrenic diverticula, and probably should be the method by which most are resected.

P009

PATIENT SATISFACTION BEST DETERMINES THE MANAGEMENT OF RECURRENT DYSPHAGIA AFTER HELLER MYOTOMY FOR ACHALASIA, Waleed Saleh MD, Mathieu Rousseau MD, Lorenzo E Ferri MD, Liane S Feldman MD, Donna Stanbridge RN, Serge Mayrand MD, Gerald Fried MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery, McGill University Health Centre

Heller myotomy (HM) is an effective treatment for achalasia, however failure to reliably achieve long-term palliation of dysphagia occurs in about 10%. It is unclear when and how best to manage these patients. We sought to characterize patients with recurrent dysphagia with particular focus on the management of this difficult patient population. **METHODS:** A prospectively entered database of all achalasia patients undergoing HM at a single institution (1997-2007) was reviewed for recurrent dysphagia: variables included demographics, health-related physical (P) and mental (M) quality of life (QoL) (SF12), dysphagia and satisfaction (SAT) scores (0 best - 5 worse), Ba upper GI, motility studies (EMS) and endoscopy (EGD). Recurrent dysphagia was defined as initial reduction of ≥ 2 in the dysphagia score followed by increase in the score of ≥ 2 at any time period. We analyzed the clinical course, investigations, and treatment of recurrent dysphagia patients in relation to QoL and satisfaction scores. Data presented as median (range); paired t-test or Wilcoxon signed ranks test determined significance (* $p < 0.05$).

RESULTS: 87 achalasia patients with a median age of 49(20-84) and duration of symptoms 3.5 (0.5-30) years underwent HM. Recurrent dysphagia occurred in 13 (15%). Of these, pre-op dysphagia scores 3 (2-5), initially improved to 0 (0-2)*, but deteriorated to 2 (2-5)* at 6 (3-24) months. Despite this, QoL was maintained or improved ($P = \text{preop } 42.6:\text{postop } 49.7, \text{NS}; M = \text{preop } 47.7:\text{postop } 53.3$)*. The 13 patients were dichotomized based on SAT scores (SAT = 0-1: NotSAT = 2-5). In the 6 SAT patients (SAT = 0.5 (0-1)), EMS, LES pressure, EGD, and/or UGI failed to find a treatable cause, thus none underwent further therapy. In 7 NotSAT patients (SAT = 3(2-5)), no mechanical cause was found by UGI/EGD. Elevated post-op EMS LES pressure was identified in 2 and dilation performed in 4, none of whom improved and one subsequently underwent lap esophagectomy with excellent

results (SAT = 0, dysph = 0). At last f/u (36 (12-60) months) 7 patients (4 SAT and 3 NotSAT) with recurrent dysphagia (2 (2-5)) improved to 1(0-2)* without any invasive treatment. **CONCLUSION:** Self-perception of dysphagia in achalasia patients varies over time and is not a reliable measure of success after Heller myotomy. Investigation of recurrent dysphagia is required to identify patients with objective evidence of a treatable problem, but timing and decision to proceed with therapy should consider over-all satisfaction.

P010

PREOPERATIVE ENDOSCOPY IN THE EVALUATION OF PATIENTS BEFORE BARIATRIC SURGERY, Fady Moustarah MD, Joseph Talarico MD, Jill Zink MD, Allen Mikhail MD, Shaneeta Johnson, Amy Cha MD, Vasanth Stalin MD, Stacy Brethauer MD, Philip Schauer BA, Bipan Chand MD, Cleveland Clinic Foundation, Cleveland

BACKGROUND: This study evaluates the diagnostic yield of esophago-gastroduodenoscopy (EGD) before bariatric surgery and its influence on the planned surgery. **METHODS:** Endoscopy reports of all patients having undergone an EGD at our endosurgical unit were reviewed. We identified a non-consecutive series of morbidly obese patients that had an endoscopic evaluation before their primary bariatric procedure between July 2006 and September 2008. All patients in the selected cohort had no previous gastric surgery and underwent an EGD for gastrointestinal symptoms. Endoscopic findings were extracted directly from the patients' original endoscopy report, classified, and analyzed. Other relevant clinical information was obtained from the patients' electronic medical records. **RESULTS:** A total of 212 patients (58 Male:154 Female) had an EGD prior to their planned index bariatric procedure. The most common indication for endoscopy was poorly controlled reflux or dyspepsia type symptoms (66%). Overall, 81% (172/212) of patients had abnormalities identified endoscopically. Abnormal findings that did not influence surgery occurred in 99% of patients; and these included mucosal inflammation (53%), hiatal hernias (48%), polyps (12%), and ulcers (2%). Findings that changed surgical management occurred in only 2 patients diagnosed with neoplasia. **CONCLUSION:** In 212 patients who underwent preoperative EGDs at our institution, endoscopic findings identified significant pathology leading to a change in planned bariatric surgery in only 1%. In the remaining patients, preoperative EGD also yielded a high proportion of endoscopic abnormalities.

P011

A PROSPECTIVE RANDOMIZED TRIAL COMPARING SINGLE STAGE VERSUS TWO STAGE MANAGEMENT OF PATIENTS WITH GALL STONES AND CBD STONES, Virinder K Bansal MS, M C Misra MS, Manik prabhu MS, Parmod Garg MD, Department of Surgical Disciplines and Gastroenterology, All India Institute of Medical Sciences, New Delhi, India

The optimal management of patients with concomitant gall stones and CBD calculi is controversial. The options for management include either a single stage approach of laparoscopic cholecystectomy along with laparoscopic common bile duct exploration or a two stage approach which includes preoperative endoscopic stone extraction followed by laparoscopic cholecystectomy. This prospective randomized trial was done to compare the outcome of patients undergoing treatment with these two approaches.

MATERIALS AND METHODS: The study was carried out between January 2007 and April 2008. 30 patients with gall stones and CBD stones were randomized to either of the two treatment options: Group I i.e. single stage laparoscopic cholecystectomy and laparoscopic CBD exploration (LC + LCBDE) or Group II i.e. two stage endoscopic stone extraction followed by laparoscopic cholecystectomy (ESE- LC). The diagnosis of CBD stones was confirmed preoperatively in all patients with either MRCP (magnetic resonance cholangiopancreatography) or EUS (endoscopic ultrasound). Outcome measures like success of the intended approach, complications and patient satisfaction scores were recorded.

RESULTS: 15 patients were randomized to each group. The demographic and clinical profiles were well matched in both the groups. MRCP and EUS had 100% sensitivity and positive predictive value for diagnosis of CBD stones. Success rate with the intended treatment option was 93.5% (14 out of 15 patients) in Group I as compared to 73.3% in Group II (2 failures of ESE and 2 conversions for laparoscopic cholecystectomy). Group I was found to have a 20% higher success rate as compared to Group II (RR 1.27), which did not attain any statistical significance because of small sample size.



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There was no statistically significant difference in hospital stay, intra-operative complications, conversions, post operative wound infection rates or major complications. Patients in Group 1 showed a better overall satisfaction score as compared to Group 2.

CONCLUSIONS: Single stage laparoscopic management of patients with gall stones and CBD stones is favorable because of lesser number of procedures and hospital visits, with no major difference in outcome.

P012

LAPAROSCOPIC VERSUS OPEN RESECTION OF GASTROINTESTINAL STROMAL TUMORS (GISTS), Laleh G. Melstrom MD, Joseph Phillips MD, David J Bentrem MD, Jeffrey D Wayne MD, Feinberg School of Medicine Northwestern University

INTRODUCTION: GISTs are the most common mesenchymal tumors of the gastrointestinal tract. Although they can occur anywhere along the gastrointestinal tract, they are most commonly identified in the stomach. Surgery is the optimal therapy in the majority of patients with non-metastatic GISTs. There is still some controversy as to the effectiveness of laparoscopic resection of these tumors in obtaining negative margins to minimize recurrence risk. GISTs have traditionally been managed by open surgical resection. Increasingly these lesions are managed laparoscopically. The hypothesis of this study was that laparoscopic resection of gastric GISTs would offer similar perioperative outcomes compared to the traditional open approach, while affording patients the benefits of a laparoscopic approach.

METHODS: A retrospective review of a prospectively collected database was conducted on all GISTs treated at a tertiary care urban teaching hospital between January 1999 and August 2008. The complete medical record of each patient was examined for demographic and clinicopathological features. The pathology reports were reviewed for tumor size, margin status, c-KIT/CD34 staining, mitotic activity and necrosis. The medical record was also reviewed for type of resection (laparoscopic versus open), tumor location, operative time, estimated blood loss, perioperative complications and length of stay. Data were statistically analyzed via Chi-square analysis and students t-test where appropriate.

RESULTS: Sixty-six patients were identified with a pathological diagnosis of GIST. We excluded GISTs found incidentally during other operations and GISTs not located in the stomach. With the above exclusion criteria, 46 gastric GISTs were identified. There were 17 treated laparoscopically and 29 treated via the traditional open approach. The median age of patients in these groups were comparable at 62 and 60 respectively. Body mass index of these patients were also similar at 28.2 kg/m² for the laparoscopic and 29.9 kg/m² for the open group. The average size of tumors were slightly smaller in the laparoscopic group at 4.27 cm versus the open group at 6.39 cm, however, this was not statistically significant. The estimated blood loss for the laparoscopic group was lower at 94 mL versus 169 mL (P=0.059). Operative time for the two surgical approaches were not significantly different at 135 minutes for laparoscopic and 157.4 minutes for open. Laparoscopic resection yielded a significantly shorter length of stay compared to open at 2.68 versus 6.25 days (P<0.001). On pathological review, the two groups had comparable microscopic tumor characteristics in terms of c-KIT/CD34 staining, mitotic activity and necrosis. All tumors in both groups reviewed had a negative margin. There were no significant differences between the open and laparoscopic groups in terms of perioperative complications or tumor recurrence. There was one conversion to open in the laparoscopic group secondary to adhesive disease.

CONCLUSIONS: Laparoscopic resection of gastric GISTs offers comparable oncologic results to open surgical resection in terms of attaining negative margins. The laparoscopic approach offers the additional benefits of decreased operative blood loss, operative time and length of stay. These findings indicate that a laparoscopic approach should be considered in all patients with gastric GISTs who do not have a contraindication to this approach.

P013

A VALIDATED SUBJECTIVE RATING OF DISPLAY QUALITY: THE MARYLAND VISUAL COMFORT SCALE, Jacob Seagull PhD, Tommy Lee MD, Erica Sutton MD, Carlos Godinez MD, Gyoung Lee PhD, Adrian Park MD, University of Maryland School of Medicine

Introduction: Minimally invasive surgery requires high-quality imaging to provide effective visual displays to surgeons. In many regards, a good surgical image impacts the conduct of a laparoscopic operation and ultimately patient safety. We understand little about

what constitutes a good surgical image. While objective measures - such as pixels, resolution, display size, and contrast ratio - are often used to evaluate imaging systems, there are no validated tools for assessing the actual perceptual impact of the physical measures comprising imaging systems. In this study, we present an initial validation of the 'Maryland Visual Comfort Scale' (MVCS), a tool we developed to measure perceptual qualities in relation to an imaging system. We theorize that what the surgeon perceives as a high-quality image can be summarized by a composite scoring of seven characteristics related to human perception. We also theorize that image quality is not homogenous regionally across a video display and that object location impacts perception and surgeon's evaluation of display quality.

Method: We created a rating scale (0-5, 0 = unable to distinguish, 5 = easy to distinguish) for seven dimensions of display characteristics (contrast, detail, brightness, lighting uniformity, focus uniformity, color, sharpness). For validation, 30 participants in a within-subjects experiment underwent a structured viewing of test patterns and manipulated physiologic images, rating the image quality for all seven dimensions. Images were also rated for contrast and detail dimensions across five locations on the video display. In the rating procedure two imaging systems were used, having the same light sources, cameras, and LCD displays and differing primarily in the 10mm zero-degree scope's quality: one was a standard scope and one had been taken from service due to quality degradation.

Results: The rating scale was sensitive to differences in scope quality for seven of the seven items in the MVCS (all seven p-values <0.01). Significant differences existed between quality ratings at central and peripheral display locations (p<0.05). Assessments at specific locations within the video display showed that the scale was sensitive to image degradation on the periphery. Comparably no differences existed between attending surgeons' ratings and residents and non-surgeons (p>0.05).

Conclusion: This methodology and seven-item rating scale for assessing visual comfort is reliable and sensitive to scope quality differences and independent of viewer expertise. The scale is sensitive to degradation of image quality at video display edges. With more validation, this methodology and seven dimensions of display characteristics can be refined to create a psychometric tool to serve as a composite of perceptual quality in laparoscopy.

P014

NEEDLESCOPIC RESECTION OF SMALL PULMONARY NODULE AFTER PREOPERATIVE DUAL LOCALIZATION WITH HOOK WIRE AND LIPIODOL, Hyun Koo Kim MD, Doo Young Kang MD, Yoon Kyung Kim MD, Hwan Seok Yong MD, Young Ho Choi MD, College of Medicine, Korea University Guro Hospital

Introduction: The needlescopic surgery using instruments with a diameter of 2-mm is devised to leave minimal scarring and reduce the need for postoperative analgesia. For needlescopic lung biopsy for small pulmonary nodule (< 20mm), accurate and convenient method for preoperative localization is necessary. The aim of this study is to evaluate the usefulness of combined mammographic hook wire anchoring and lipiodol injection for localization of small pulmonary nodules before needlescopic lung biopsy.

Methods and Procedures: Twenty six small pulmonary nodules in 19 patients (men, 13; age, 55.8±13.07 years) were localized preoperatively by using CT-guided hook wire and 0.2ml of lipiodol. A 2-mm needlescope and a 2-mm minisite endograsp were inserted at the sixth intercostal space along the mid and the posterior axillary line, respectively. The site of pulmonary nodules was found by needlescopic detection of a hook wire and their resection margin was decided by lipiodol showed on the C-arm fluoroscopic monitor. A biopsy specimen was obtained using 1 or 2 endostaplers via an 11.5-mm port at the fifth intercostal space along the anterior axillary line. Histopathologic diagnosis was performed immediately after resection.

Results: The nodules had an average diameter of 6.7±3.27mm (range, 0-16) and were located an average distance of 11.4±1.34mm (range, 0-60) from the pleural surface. The radiologic pattern of pulmonary nodule was pure ground glass opacity in 8 cases, pure solid in 11, and mixed type in 7. CT-guided dual localization was successful in all patients without severe complication and all nodules were easy to be detected and resected successfully under needlescopy. Localization and operation times were 12.5±5.00min (range, 5-24) and 38.3±15.70min (range, 18-75), respectively and 2.2±0.57 (range, 1-4) of endostaplers were used for resection of a nodule. The pathologic diagnosis was benign lesion in 18 cases and malignant lesion in 8. The chest tube remained in the pleural cavity for 2.2±0.73 days (range, 1-4).

Conclusion: CT fluoroscopic localization of small pulmonary nodules

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using combined mammographic hook wire anchoring and lipiodol injection makes needlescopic lung biopsy technically feasible and accurate for resection margin and pathologic confirmation of small pulmonary nodule.

P015

'LESSONS' LEARNT: SINGLE CENTRE EXPERIENCE OF SINGLE PORT CHOLECYSTECTOMY, Prashanth P Rao MD, Sonali Rao MD, Pradeep Rao MD, Mamata Hospital, India

Introduction: Single Port Surgery has been described and published by various authors. A recent consensus meeting and white paper from the Cleveland Clinic gave the acronym LESSS (Laparo-Endoscopic Single Site Surgery) for all such procedures. We present the largest series of single port cholecystectomies to date using the R Port (Tri port). The paper gives the evolution of single port surgery in our hands. **Materials and Methods:** From May 2007 to date a total of 42 patients were subjected to LESSS for symptomatic Cholelithiasis. The initial problems we faced were the chopsticks effect of all three instruments entering through the same site, the light cable clashing with the instruments and the inability to place a 10 mm clip applier. All these were surmounted using modified instruments and special equipment. **Results:** In the initial cases, one patient required a 5mm port and one 5 mm port was used for two patients for CBD exploration. One other patient needed a 2mm grasper for suturing. Single port surgery was successfully accomplished in 38 / 42 (90%) of the patients. Of these, in 10 patients, a port closure needle was used to retract the gall bladder. In 28 patients (66%) no extra needle or any kind of instrumentation was used. We realized that using a sandbag under the right scapula, lifted the gall bladder sufficiently into the field of view to obviate the need for a Similarly, increasing the umbilical port incision from 17 mm in our early cases, to 25 mm in our later cases, gave us the increased play between the instruments, needed for free movement to finish the procedure without extra instrumentation. **Conclusion:** The operative time showed a significant decline later. Decreased pain, decreased need for analgesics and improved cosmesis were the benefits of the procedure.

P016

BLUNT THYROID WORKING SPACE CREATION: A TOOL TO FACILITATE TRANSAXILLARY ENDOSCOPIC THYROIDECTOMY, Suthep Udomsawaengsup MD, Pornthep Prathanvanich MD, Suppa-ut Pungpaong MD, Chadin Tharavej MD, Sopark Manasayakorn MD, Sirachai Jindarak MD, Patpong Navichareern MD, Chula Minimally Invasive Surgery Center, Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

BACKGROUND: Endoscopic thyroidectomy has been proved to be a safe and effective alternative treatment of a benign small thyroid lesion. To perform this operation, the working space needs to be created. Initially, the space surrounding the incisions is directly made and endoscopic part is followed. The appropriate working space is then endoscopically harvested with the ultrasonic dissection. This part could make the operative time unnecessarily long. Some techniques are compromising with an initial big incision that allows the space to be completely created under a conventional manner. We propose that this space can be safely and shortly created via a small incision.

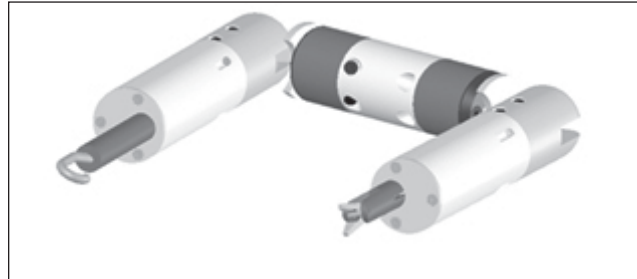
METHODS: Our 3-port transaxillary endoscopic thyroidectomy begins with a 1.5-cm incision. The appropriate working space is bluntly harvested with our 'Chula thyroid space creator' which is a 1.5-cm. largest width and 30-cm length metallic instrument. Two 5-mm ports are introduced. Finally, a 12-mm Hasson port is placed and endoscopic dissection continues.

RESULTS: From February 2004 to September 2008, 71 patients underwent endoscopic thyroidectomy in the department of Surgery, Faculty of Medicine, Chulalongkorn University. Forty of 71 were transaxillary approach. Twenty seven of this 40 cases were utilizing the blunt thyroid space creator. The space was successfully created without any major complication. There was a minimal bleeding that required no additional intervention.

CONCLUSION: Blunt thyroid working space creation is a safe and effective method of creating a working space for endoscopic transaxillary thyroidectomy. It would be able to shorten the operative time.

P017

DEXTEROUS ROBOT FOR SINGLE INCISION ADVANCED MINIMALLY INVASIVE SURGERY, Amy C Lehman MS, Nathan A Wood MS, Shane M Farritor PhD, Matthew R Goede MD, Dmitry Oleynikov MD, University of Nebraska-Lincoln, University of Nebraska Medical Center



Introduction: This study demonstrates the feasibility of using a miniature robot platform to perform complex, single-incision, minimal access surgery, including colon resection and Nissen fundoplication. Open surgical procedures are highly invasive; single-incision laparoscopic surgery is complicated by instrument position and lack of triangulation. Using minimally invasive techniques with miniature robotic platforms offers significant clinical benefits.

Methods: A miniature robot platform has been designed to perform advanced laparoscopic surgery with speed, dexterity, and tissue handling capabilities comparable to standard laparoscopic instruments. The robotic platform includes a dexterous in vivo robot with vision and lighting capabilities and a remote control surgeon console. The basic design of the robot consists of a central body, and two arms that extend and rotate. Each arm is connected to the body with a two degree-of-freedom shoulder joint. The arms are fitted with either a grasper or cautery. This robot, with four degrees of freedom for each arm, has the equivalent manipulability of two laparoscopic instruments working through standard trocars. In addition, multiple robots can be inserted through a single incision, rather than the traditional use of four or five different ports, to provide additional capabilities, including retraction and supplementary visualization or lighting. **Results:** The efficacy of this robot has been demonstrated in a non-survival, porcine colon resection. Following insertion, via a small abdominal incision, the robot was positioned and a segment of the colon was dissected. The resected colon and robot were then removed through the same incision. **Conclusion:** This study demonstrates the feasibility of using a dexterous robotic platform for performing single incision, advanced minimally invasive surgery.

P018

DIFFERENT APPROACHES FOR LAPAROSCOPIC ADRENALECTOMY LOOKING FOR A TAILORED ROUTE, E Lezoche MD, R Campagnacci MD, AM Paganini MD, M Coletta MD, A Patrizi MD, M Rimini MD, M Guerrieri MD, 1 Dpt of Surgery -Paride Stefanini- II Clinica Chirurgica -La Sapienza- Roma, Italy ; 2 Dpt of Metodologia Chirurgica University of Ancona, Italy

Aim: to report our experience in laparoscopic adrenalectomy (LA) through anterior, lateral and submesocolic approaches .

Methods: 267 patients (pts) underwent LA in our departments. The choice of the surgical route was based on patient (BMI, previous abdominal surgery) and lesion features (size, side, secreting mass, suspect malignancy). Dissection and coagulating technology did change over the decade, shifting for monopolar cautery to electrothermal bipolar energy device. The submeso way, we first described in 2005, was reserved for left lesions not larger than 6 cm. Finally, the approach for right LA was anterior in 116 cases and flank in 4 pts. Left LA was performed by means of anterior way in 103 pts, submesocolic route in 27 cases and flank in 17 pts.

Results: Mean operative time (OpT) was 80,1 min. for right anterior LA (65-150) and 103 for flank right LA (96-180), 108 min. for left anterior LA (80-305) and 81,5 min for left submesocolic LA (40-345). Moreover the mean OpT for bilateral flank LA was 390 min vs 194 min in the anterior bilateral LA route. One intraoperative death occurred in a left LA for pheochromocytoma flank approached. Intraoperative major complications requiring conversion to open surgery were observed in 7 pts: bleeding (5), splenic colonic flexure tear (1), hypertension and severe arrhythmia in pho removal



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(1). There were not significant statistically differences comparing anterior, flank and submesocolic routes in terms of hospital stay and pain medications, while bleeding and OpT were significantly lower in anterior submesocolic series. This positive trend was particularly noteworthy in the last year series.

Conclusion: LA compared with open adrenalectomy allows short hospital stay, rapid return to work and best cosmetic results. Moreover, further benefits seem to be found if we are looking for tailor the best approach to the best patient/lesion we are going to treat, leaving the axiom of the absolute superior route for LA toward the each case related best choice

P019

LAPAROSCOPIC ADRENALECTOMY FOR PRIMARY HYPERALDOSTERONISM: COMPARISON OF CLINICAL RESPONSE BASED ON ADRENAL PATHOLOGY, Jennifer E Keller MD, Charles

J Dolce MD, K. Christian Walters MD, Yuri W Novitsky MD, Sathya G Jyothinagaram MD, B. Todd Heniford MD, Kent W Kercher MD, Division of GI and Minimally Invasive Surgery, Carolinas Medical Center, Charlotte, NC

Introduction: Primary hyperaldosteronism may be caused by adrenal hyperplasia (nodular [NH] or diffuse [DH]) or functional adenoma [FA]. We compare response of hypertension and hypokalemia for both pathologies following laparoscopic adrenalectomy.

Methods: All adrenalectomies performed for hyperaldosteronism at a single institution were retrospectively reviewed. Hypertension / hypokalemia were considered improved in patients with reduction in post-operative antihypertensives and/or postassium supplementation.

Results: From January 1999 - July 2008, 64 adrenalectomies were performed for hyperaldosteronism. Sixty-three were laparoscopic, one required laparotomy for concomitant partial gastrectomy. History of admission for hypertensive crisis occurred in 32% NH/DH (n=9) and 29% FA (n=10). Hypokalemia affected 57% NH/DH (n=16) and 65% FA (n=22). Aldosterone:renin ratio averaged 71.43 (5.62 - 1488.5). When no mass was seen on imaging, preoperative adrenal venous sampling was performed (n=30). In these patients, adjusted aldosterone:cortisol ratio averaged 15.67 (range 0.56 - 48.47). Pathology included NH (n=25), DH (n=3), FA (n=34), and normal gland (n=2). Post-operative follow-up was available for all patients, averaging 31 weeks (1-186). Improvement or resolution of hypertension occurred in 71% with NH/DH (n=20) vs 91% with FA (n=31), p=0.02. Resolution or improvement of hypokalemia occurred in 80% with NH/DH vs 90% with FA, p=0.63.

Conclusions: Adrenalectomy for lateralizing hyperplasia or adenoma results in improvement of hypertension and hypokalemia in over 70% of patients. Laparoscopic adrenalectomy should be offered for primary hyperaldosteronism when lateralization is documented by preoperative venous sampling or in patients with unilateral adenomas.

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Bariatric Surgery

P020 INTUSSUSCEPTION COMPLICATING POST GASTRIC BYPASS PREGNANCY Subhasis Misra, MD, Kenneth Lee, MD, Richard C Treat, MD, Fairview Hospital, Cleveland Clinic Health System

P021 REVERSAL RATHER THAN REVISION OF FAILED BARIATRIC OPERATION Muhammad E Asad, MD, WAI Y CHAU, MD, ROBERT E BROLIN, MD, University Medical Center, Princeton, NJ

P022 SPLENIC UPPER POLE ISCHEMIA FOLLOWING SLEEVE GASTRECTOMY: FIRST CASE REPORT Nilesh H Bhoot, MD, Michael Seger, MD, Terive Duperier, MD, New Dimensions Weight Loss Surgery, San Antonio, TX, Minimally Invasive Surgeons of Texas

P023 COMPARISON OF THE SERUM MICRONUTRIENTS CHANGES IN PATIENTS WITH MORBID OBESITY AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) OR LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH (LBPD/DS) SURGERY Ke Gong, MD, Michel Gagner, MD, Alfons Pomp, MD, Taghreed Almahmeed, MD, Sergio Bardaro, MD, Department of Surgery, Beijing Shijitan Hospital, Beijing, China

P024 ANASTOMOTIC LEAK AFTER GASTRIC BYPASS FOR MORBID OBESITY: LAPAROSCOPIC MANAGEMENT. Victor M Quintero, MD, Carlos A Lopera, MD, Jesus N Vasquez, MD, Jean P Vergnaud, MD, Sergio Diaz, MD, University of Antioquia in Medellin, Colombia.

P025 DOES VISCERAL FAT RESECTION GIVE AN ADDITIONAL BENEFIT TO GASTRIC BANDING Yuichi Endo, MD, Masayuki Ohta, MD, Seiichi Kai, MD, Hidetoshi Eguchi, MD, Teijiro Hirashita, MD, Seigo Kitano, MD, Department of surgery 1, Oita University Faculty of Medicine

P026 LAPAROSCOPIC SLEEVE GASTRECTOMY: EARLY OUTCOMES AT A MILITARY TRAINING CENTER Rob D Rice, MD, Jason M Seery, MD, Arthur B Chasen, MD, James D Frizzi, MD, Yong U Choi, MD, Dwight D. Eisenhower Army Medical Center

P027 A COMPARISON STUDY OF 100 CONSECUTIVE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASSES AND 100 LAP-BANDS DURING THE LEARNING CURVE Rodrick D McKinlay, MD, Steven C Simper, MD, Sherman C Smith, MD, St. Mark's Hospital, Salt Lake City, Utah

P028 LAPAROSCOPIC GASTRIC BYPASS AT A MAJOR MILITARY MEDICAL CENTER: SAFE, EFFECTIVE, AND MORE COST EFFICIENT M. Logan Rawlins, MD, Jayson C Dock, MD, Matthew I Goldblatt, MD, Department of Surgery, Wright Patterson Medical Center, Boonshoft School of Medicine, Wright State University, Wright Patterson AFB, OH

P029 VERTICAL SLEEVE GASTRECTOMY PERFORMED ON AN OUTPATIENT BASIS Robert W Landerholm, MD, Peter S Billing, MD, Melanie Machado, BS, Rachelle I Tomei, BS, Puget Sound Surgical Center

P030 BARIATRIC SUPPORT LINE: A PROSPECTIVE STUDY OF TELEPHONE ACTIVITY. Kirsten A Mc Dougall, RN, Segaran Ella, BA, Pratik Sufi, MD, Dugal I Heath, MD, North London Obesity Surgery Service, Whittington Hospital, Magdala Rd., London N19 5NF, UK.

P031 VAGOTOMY VS NONVAGOTOMY IN GASTRIC BYPASS SURGERY Constantine T Frantzides, MD, Jacob E Roberts, DO, George Stavropoulos, MD, George Ayiomamitis, MD, Mark Carlson, MD, Tallal Zeni, MD, Angela Jones, MD, John G Zografakis, MD, Chicago Institute of Minimally Invasive Surgery

P032 ENDOSCOPIC MANAGEMENT OF ERODED PROSTHESIS IN VERTICAL BANDED GASTROPLASTY PATIENTS Shahzeer Karmali, MD, Brad Snyder, MD, Erik B Wilson, MD, Vadim Sherman, MD, Baylor College of Medicine and University of Texas-Houston

P033 MORBIDLY OBESE PATIENTS WITH POST TRAUMATIC STRESS DISORDER PERFORM AS WELL AS MATCHED CONTROLS AFTER 1 YEAR FOLLOWING ROUX-EN-Y GASTRIC BYPASS Danagra G Ikossi, MD, Kim Rhoads, MD, Nina Bellatorre, RN, Sherry M Wren, MD, Dan Eisenberg, MD, Palo Alto VA HCS and Stanford School of Medicine

P034 CAN MORBIDLY OBESE PATIENTS AWAITING BARIATRIC SURGERY ACHIEVE A 10% WEIGHT LOSS PRIOR TO SURGERY AND WHAT IS ITS SIGNIFICANCE? Ella Segaran, BA, Kirsten Mc Dougal, RN, Pratik I Sufi, MD, Dugal Heath, MD, North London Obesity Surgery Service, The Whittington Hospital, London, N19 5NF, UK

P035 ROUTINE POSTOPERATIVE UPPER GASTROINTESTINAL FLUOROSCOPY IS UNNECESSARY AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BAND PLACEMENT Noelle L Bertelson, MD, Jonathan A Myers, MD, Department of General Surgery, Rush University Medical Center

P036 INITIAL JAPANESE EXPERIENCE WITH LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING Masayuki Ohta, MD, Seiichi Kai, MD, Yuichi Endo, MD, Hidetoshi Eguchi, MD, Teijiro Hirashita, MD, Yukio Iwashita, MD, Kohei Shibata, MD, Seigo Kitano, MD, Department of Surgery I, Oita University Faculty of Medicine, Oita, Japan

P037 THE STAGED APPROACH TO ACUTE GASTRIC PROLAPSE IN ADJUSTABLE GASTRIC BANDING Raffi Barsoumian, MD, Colin J Powers, MD, Alan C Geiss, MD, Dierdre Hamilton, Miriam Borsch, June Warman, RN, Baiju C Gohil, MD, Center for Bariatric Surgical Specialties at Syosset Hospital, Northshore-Long Island Jewish Health System

P038 GASTRIC BAND COMPLICATIONS: AVOIDANCE AND TREATMENT Daniel R Leff, BA, Pratik Sufi, BA, Dugal Heath, MD, North London Obesity Surgical Service, Whittington NHS Trust

P039 LAPAROSCOPIC ESOPHAGOMYOTOMY FOR ACHALASIA AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOR MORBID OBESITY Kelvin Higa, MD, Gavin Sigle, MD, Keith Boone, MD, Abdelrahman Nimeri, MD, UCSF Fresno/ALSA Minimally Invasive Surgery

P040 TREATMENT OF GASTROJEJUNAL LEAKS USING COVERED METAL STENTS IN A PORCINE MODEL Emanuel Sporn, MD, Brent W Miedema, MD, J Andres Astudillo, MD, Joe Karch, MD, Sharon L Bachman, MD, Klaus Thaler, MD, Department of Surgery, University of Missouri

P041 LAPAROSCOPIC SLEEVE GASTRECTOMY FOR THE PATIENTS WITH BMI<50 Nobumi Tagaya, PhD, Kazunori Kasama, MD, Eiji Kanahira, MD, Akiko Umezawa, MD, Souji Ohshiro, MD, Yoshimochi Kurokawa, PhD, Keiichi Kubota, PhD, Second Department of Surgery, Dokkyo Medical University, *Minimally Invasive Surgical Center, Yotsuya Medical Cube

P042 LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY: SURGICAL TECHNIQUE AND EARLY RESULTS Brent W Allain, Jr., MD, Roderick J Romero, MD, Kenneth P Kleinpeter, Jr., MD, Mark G Hausmann, MD, Karl A LeBlanc, MD, Minimally Invasive Surgery Institute, Inc., Baton Rouge, Louisiana, U.S.A.; Department of Surgery, Louisiana State University Health Sciences Center, New Orleans, Louisiana, U.S.A.

P043 LAP BAND: SAFE AND EFFECTIVE PROCEDURE? Scott N. Welle, DO, Mark Pleatman, MD, St Joseph Mercy Oakland, Pontiac Osteopathic Hospital, Crittenton Hospital

P044 SINGLE INCISION LAPAROSCOPIC GASTRIC BAND PLACEMENT Jenny J Choi, MD, Marc Bessler, MD, Columbia University, College of Physicians and Surgeons, Department of Surgery

P045 ULTRASOUND GUIDED LOCALIZATION OF ADJUSTABLE GASTRIC BANDING ACCESS PORT James T Mayes, MD, J.R. Salameh, MD, Department of Surgery, Georgetown University, Washington, DC and Surgical Associates at Virginia Hospital Center, Arlington, VA

P046 INITIAL EXPERIENCE WITH HYBRID NOTES SLEEVE GASTRECTOMY USING TWO TROCARS Michel Vix, MD, Cynthia Solano, MD, Sergio Con, MD, Chrysoula Zacharopoulou, MD, Bernard Dallemagne, MD, Jacques Marescaux, MD, IRCAD-EITS, University Louis Pasteur, Strasbourg, France

P047 GASTRIC BAND MANOMETRY: ARE PRESSURE MEASUREMENTS AND THE BAND PRESSURE RATIO USEFUL? Sebastian V Demyttenaere, MD, Simon Bergman, MD, Brian J Winkleman, MD, Rebecca Dettorre, BA, Dean Mikami, MD, Bradley Needleman, MD, The Ohio State University Medical Centre



SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P048 LAPAROSCOPIC REVISION OF ANTIREFLUX SURGERY TO ROUX-EN-Y GASTRIC BYPASS IN MORBIDLY OBESE PATIENTS H L Fitzgerald, MD, G G Wisbach, MD, T K Nguyen, MD, A Tavakkoli-zadeh, MD, D B Lautz, MD, Brigham and Women's Hospital, Boston, MA

P049 SMALLER PATIENTS DO BETTER: THE RATIONALE FOR EXPANDING THE CRITERIA FOR OBESITY SURGERY Gopal S Grandhige, Andrew J Duffy, MD, Kurt E Roberts, MD, James Dziura, PhD, Shu Chen, MS, Robert L Bell, MD, Yale New Haven Hospital. Department of Surgery. Section of Gastrointestinal Surgery

P050 LAPAROSCOPIC SLEEVE GASTRECTOMY AS TREATMENT FOR PATIENTS WITH MORBID OBESITY WITH CONCURRENT PARAESOPHAGEAL HERNIA Hien T Nguyen, MD, Kimberley Steele, MPA, Bryant McIver, MS, Anne Lidor, MD, Michael Schweitzer, MD, Johns Hopkins Medical Institutions

P051 ENDOSCOPIC TECHNIQUE FOR REMOVAL OF AN INTRA-GASTRIC BALLOONS CAUSING GASTRIC OUTLET OBSTRUCTION N Agee, MD, T Urbas, MD, J Goodman, MD, W Arnold, MD, Maricopa Medical Center Phoenix, AZ USA

P052 EARLY RESULTS OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN BMI<35: THE APPROPRIATE CHOICE Kari Thompson, MD, Adam Spivack, MD, John Cullen, MD, Garth Jacobsen, MD, Lauren Fischer, MD, Brian Wong, MD, Mark Talamini, MD, Santiago Horgan, MD, Department of Surgery, University of California, San Diego

P053 ETHICON REALIZE BAND VERSUS ALLEGRA AP SERIES BANDS: EARLY RESULTS AT UC SAN DIEGO Adam Spivack, MD, Kari Thompson, MD, Lauren Fischer, MD, John Cullen, MD, Brian Wong, MD, Garth Jacobsen, MD, Mark Talamini, MD, Santiago Horgan, MD, Department of Surgery, University of California, San Diego

P054 RETROGRADE INTUSSUSCEPTION AFTER ROUX-EN-Y GASTRIC BYPASS PATIENTS: A CASE SERIES OF 10 PATIENTS Nilesh H Bhoot, MD, John Pilcher, MD, Dana Reiss, MD, Michael V Seger, MD, Lloyd Stegemann, MD, Terive Duperier, MD, New Dimensions Weight Loss Surgery, San Antonio, TX, Minimally Invasive Surgeons of Texas

P055 SAFETY OF LAPAROSCOPIC ADJUSTABLE GASTRIC BAND (LAGB): 7-YEAR DATA FROM A U.S. CENTER OF EXCELLENCE George Fielding, MD, Marina Kurian, MD, Heekoung Allison Youn, RN, CCR, MA, Christine Ren, MD, New York University Medical Center

P056 IMPACT OF ROUX LENGTH ON WEIGHT LOSS AFTER LAPAROSCOPIC GASTRIC BYPASS Brandon Williams, MD, Willie V Melvin, MD, Robert O Carpenter, MD, Sharon E Phillips, MPH, William O Richards, MD, Vanderbilt University Medical Center

P057 LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY FOR BMI < 50 Janos Taller, MD, Jay Grove, MD, Kristen Stevens, MD, Tamara Middlesworth, DO, Deborah Romero, RN, Annelise Brown, RN, William Bertucci, MD, Naval Medical Center San Diego

P058 REGRESSION OF NEPHROPATHY IN TYPE 2 DIABETIC PATIENTS WITH BMI BELOW 30 SUBMITTED TO THE LAPAROSCOPIC ILEAL INTERPOSITION Aureo L De Paula, PhD, Antonio Macedo, MD, Cesar Machado, MD, Vladimir Schraibman, MD, Luiz Silva, Bruno Mota, MD, Sergio Vencio, MD, Hospital de Especialidades, Goiania, Brazil

P059 TWO YEARS RESULT ON GLYCEMIC CONTROL OF OBESE TYPE 2 DIABETES PATIENTS FOLLOWING INTRAGASTRIC BALLOON REMOVAL Simon K Wong, MD, Enders K Ng, MD, Bonnie Y Tsung, PhD, Candice C Lam, RN, Man Yee Yung, RN, The Chinese University of Hong Kong

P060 LINEAR ASSOCIATION OF LIMB LENGTH AND WEIGHT LOSS IN 3,309 MINI-GASTRIC BYPASS PATIENTS R Rutledge, MD, Center for Laparoscopic Obesity Surgery

P061 MIGRATION OF SUTURE MATERIAL: AN UNUSUAL CAUSE OF ABDOMINAL PAIN AFTER GASTRIC BYPASS SURGERY Tahir E Yunus, MD, Francisco Tercero, MD, Abdelrahman Nimeri, MD, Keith Boone, MD, Kelvin Higa, MD, UCSF-Fresno

P062 MINI-GASTROPLASTY: RESULTS OF NON-RESECTIONAL SLEEVE TYPE GASTROPLASTY R Rutledge, MD, The Centers for Laparoscopic Obesity Surgery

P063 LAPAROSCOPIC REVISION AFTER ROUX-EN-Y GASTRIC BYPASS FOR POUCH ENLARGEMENT Guillaume Becouarn, BA, Patrick Ritz, BA, Philippe Topart, BA, Société de Chirurgie Viscérale, Clinique de l'Anjou, Angers, France and PCVM, CHU, Toulouse, France

P064 EARLY EFFECTS OF BARIATRIC SURGERY ON PRO AND ANTI-INFLAMMATORY MEDIATORS AND CARDIOVASCULAR RISK FACTORS Patrick Gatmaitan, MD, Stacy Brethauer, MD, Dan Cottam, MD, Tomasz Rogula, MD, Bipan Chand, MD, Hazel Huang, MS, Deanne Nash, RN, Ramy Fouad, MD, John Kirwan, PhD, Sangeeta Kashyap, MD, Philip Schauer, MD, Cleveland Clinic, Cleveland, OH

P065 RESOLUTION OF DIABETES MELLITUS FOLLOWING LAPAROSCOPIC GASTRIC BYPASS. A PROSPECTIVE ANALYSIS OF 49 PATIENTS. Piotr Gorecki, MD, Paul Thodiyil, MD, Catherine Gribbin, MD, Sabita Moktan, MD, Tortolani Anthony, MD, New York Methodist Hospital, Brooklyn, New York

P066 EFFECT OF GASTRIC BYPASS ON C-REACTIVE PROTEIN LEVELS: A PROSPECTIVE ANALYSIS Piotr Gorecki, MD, Ankeet Udani, BA, Tetsuya Takeuchi, MD, Krystyna Kabata, Anthony Tortolani, MD, Department of Surgery, New York Methodist Hospital, Brooklyn, New York

P067 MULTIPLE DIAGNOSTIC INVESTIGATIONS DELAY APPROPRIATE CARE IN THE MANAGEMENT OF BARIATRIC SURGERY-RELATED MALNUTRITION Geoffrey P Kohn, MD, Juan C Vasquez, MD, Raghd S Bitar, MD, Timothy M Farrell, MD, Division of Gastrointestinal Surgery, University of North Carolina, Chapel Hill, NC

P068 DOES MEDICALLY SUPERVISED WEIGHT-LOSS EFFECT WEIGHT LOSS AFTER BARIATRIC SURGERY? Galaxy Shah, MD, Mark Choh, MD, Heather Herren, Subhashini Ayloo, MD, University Of Illinois, Chicago

P069 SUTURE LINE BUTTRESSES ARE NOT ASSOCIATED WITH FEWER COMPLICATIONS IN ROUX-EN-Y GASTRIC BYPASS William M Bowling, MD, Judith L Priestley, BS, Janet A Fike, Kurt A Kralovich, MD, James W Wagner, MD, Jamal Farhan, MD, Hurley Bariatric Center

P070 LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: SHORT TERM WEIGHT LOSS OUTCOMES AT A MILITARY TREATMENT FACILITY Joel R Brockmeyer, MD, Jason M Seery, MD, Yong U Choi, MD, Arthur B Chasen, MD, D.D. Eisenhower Army Medical Center, Ft. Gordon, GA

P071 EQUAL SHORT TERM WEIGHT LOSS FOR SELF-PAY AND INSURANCE COVERED PATIENTS AFTER ADJUSTABLE GASTRIC BANDING John P Cullen, MD, Garth Jacobsen, MD, Kari Thompson, MD, Adam Spivack, MD, Bryan Wong, MD, Lauren Fischer, MD, Bryan Sandler, MD, Yoav Mintz, MD, Mark Talamini, MD, Santiago Horgan, University of California San Diego

P072 SURGERY VS. NO SURGERY: A CONTROLLED STUDY OF OUTCOMES FOLLOWING BARIATRIC SURGERY Preeti Malladi, MD, Edward Auyang, MD, Alexander P Nagle, MD, Eric S Hungness, MD, Patrick N Smith-Ray, MPH, C Lin, BA, K Vaziri, MD, J B Prystowsky, MD, Feinberg School of Medicine, Northwestern University, Chicago, IL

P073 LAPAROSCOPIC SLEEVE GASTRECTOMY: REVIEW OF 536 CASES AND 2 YEAR FOLLOW UP Camilo Boza, MD, Jose Salinas, MD, Cristian Gamboa, MD, Gustavo Perez, MD, Alex Escalona, MD, Fernando Pimentel, MD, Luis Ibañez, MD, Pontificia Universidad Católica de Chile

P074 WITHDRAWN

P075 CT SCAN: AN EFFECTIVE WAY TO MEASURE GASTRIC POUCH'S VOLUME IN GASTRIC BYPASS A. Ibarzabal, J.R. Ayuso, S. Delgado, D. Momblan, R. Corcellles, R. Bravo, R. Almenara, J. Vidal, A.M. Lacy, Hospital Clinic, Barcelona.

P076 STARTING LAPAROSCOPIC SLEEVE GASTRECTOMY PROGRAM: SHORT TERM OUTCOMES S Wiebe, MD, D Klassen, MD, J Bonjer, MD, D Lawlor, RN, J Plowman, BS, T Ransom, MD, J Ellsmere, MD, Departments of Medicine and Surgery, Dalhousie University, Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P077 INTRAGASTRIC BALLOONS ARE EFFECTIVE FOR THE

WEIGHT CONTROL IN NON OBESE PATIENTS Gustavo L. Carvalho, PhD, Carlos Eduardo Moraes, MD, Alvaro Freire, MD, Pedro Paulo C Albuquerque, José Sergio N Silva, Raphael M Coelho, Masaichi Okazaki, MD, Cesar B Barros, MSc, Nair C Almeida, MD, Moacir F Novaes, PhD, Faculdade De Ciências Médicas Da Universidade De Pernambuco (Fcm/Upe), Clínica Cirúrgica Videolaparoscópica Gustavo Carvalho And Unidade De Pesquisa Clínica Do Hospital Universitário Oswaldo Cruz - Unipeclin, Recife - Pe, Brazil.

P078 INTRAGASTRIC BALLOON FOR WEIGHT LOSS BEFORE CARDIAC TRANSPLANT – A CASE REPORT

Gustavo L. Carvalho, PhD, Masaichi Okazaki, MD, José Sérgio N Silva, Pedro Paulo C de Albuquerque, Raphael M Coelho, Fábio Moura, MD, Moacir F Novaes, PhD, Faculdade De Ciências Médicas Da Universidade De Pernambuco (Fcm/Upe), Clínica Cirúrgica Videolaparoscópica Gustavo Carvalho And Unidade De Pesquisa Clínica Do Hospital Universitário Oswaldo Cruz - Unipeclin, Recife - Pe, Brazil.

P079 INTRAGASTRIC BALLOONS FOR OBESITY - A NOVEL TECHNIQUE FOR MORE SECURE, QUICKER, AND LESS EXPENSIVE OFFICE PLACEMENT AND REMOVAL – THE FIRST 138 BALLONS.

Gustavo L. Carvalho, PhD, Moacir F Novaes, PhD, Nair C Almeida, MD, Pedro C de Albuquerque, MD, Masaichi Okazaki, MD, Chika Wakiyama, Pedro Paulo C de Albuquerque, José Sérgio N Silva, Raphael M Coelho, Cesar B Barros, MSc, Faculdade De Ciências Médicas Da Universidade De Pernambuco (Fcm/Upe), Clínica Cirúrgica Videolaparoscópica Gustavo Carvalho And Unidade De Pesquisa Clínica Do Hospital Universitário Oswaldo Cruz - Unipeclin, Recife - Pe, Brazil.

P080 POOR OUTCOMES AFTER LAPAROSCOPIC ADJUSTABLE

GASTRIC BAND Jason R Kasza, MD, Fredrick J Brody, MD, Khashayar Vaziri, MD, Brian Wallace, Carl Scheffey, PhD, Sheldon McMullan, BS, George Washington University Medical Center

P081 CHANGING PRACTICE OF LAPAROSCOPIC BARIATRIC

SURGERY IN 2 COUNTRIES Esteban Moscoso, MD, Brandon Williams, MD, Willie Melvin, MD, Michael D Holzman, MD, William O Richards, MD, Santa Ana Hospital, Cuenca Ecuador, Vanderbilt, Nashville, USA

P082 GASTRO-COLONIC FISTULA AFTER ROUX-EN-Y GASTRIC

BYPASS FOR MORBID OBESITY Oscar A Garcia, MD, J Andres Astudillo, MD, Raffatt Jaber, MD, Angel J Tamez, MD, Loma Linda University Medical Center, Department of Surgery

P083 FEEDING TUBE PLACEMENT IN THE EXCLUDED STOMACH AFTER GASTRIC BYPASS: A NOVEL LAPAROSCOPIC

TECHNIQUE Andrew A Wheeler, MD, Brent W Miedema, MD, Roger A de la Torre, MD, University of Missouri, Columbia, Mo.

P084 LAPAROSCOPIC BARIATRIC SURGERY ON A VIDEO

SHARING WEBSITE Atul K Madan, MD, Emanuele Lo Menzo, MD, Alberto R Iglecias, MD, Ray I Gonzalez, Diya I Alaadeen, MD, Jose M Martinez, MD, Division of Laparoendoscopic and Bariatric Surgery, University of Miami Miller School of Medicine

P085 MANAGEMENT OF COMMON BILE DUCT STONES IN

PATIENTS AFTER ROUX-EN-Y GASTRIC BYPASS. Dmitri V. Baranov, MD, David R Lichtenstein, MD, Miguel A Burch, MD, Donald T Hess, MD, Departments of Surgery and Medicine Boston University School of Medicine.

P086 CONCURRENT HIATAL HERNIA REPAIR DURING LAPAROSCOPIC ADJUSTABLE GASTRIC BAND PLACEMENT

AND ITS EFFECT ON GASTROESOPHAGEAL REFLUX DISEASE Pavlos K Papasavas, MD, Darren S Tishler, MD, Simon Buttrick, Ela Banerjee, Kristy Thurston, MD, Hartford Hospital

P087 MINIMALLY INVASIVE REMOVAL OF SILASTIC BAND

FOLLOWING BANDED GASTRIC BYPASS Robert O Carpenter, MD, Brandon Williams, MD, Willie V Melvin, MD, William O Richards, MD, Vanderbilt University Medical Center

P088 LAPARO-ENDOSCOPIC SINGLE SITE (LESS) SURGERY FOR

PLACEMENT OF ADJUSTABLE GASTRIC BAND Kevin M McGill, MD, Nikalesh Ippagunta, MD, Julio A Teixeira, MD, St. Luke's-Roosevelt Hospital Center New York, NY

P089 PERIOPERATIVE NASAL ADMINISTRATION OF KETAMINE

SUCCESSFULLY ELIMINATES THE NEED FOR OPIOID USAGE IN THE BARIATRIC PATIENT Ismail H Ozerhan, MD, Onur C Kutlu, MD, Yusuf Peker, MD, Sadettin Cetiner, MD, Turgut Tufan, MD, Gulhane Medical Academy Department of General Surgery Ankara Turkey, Etimesgut 600 Bed Army Hospital Ankara Turkey

P090 LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY FOR MORBID OBESITY: THE NEW STANDARD OF TREATMENT FOR

BMI < 50 William Bertucci, MD, Jay Grove, MD, Kristen Stevens, MD, Tamara Middlesworth, DO, Deborah Romero, RN, Annelise Brown, RN, Janos Taller, MD, Naval Medical Center San Diego

P091 PREOPERATIVE EXERCISE ON OUTCOMES IN BARIATRIC

SURGERY Robert B Lim, BA, Limaris Barrios, BA, Daniel B Jones, BA, Daniel Rooks, PhD, Benjamin Schneider, MD, Henry Lin, MD, Jody Dushay, MD, Corine Carsuro, MSc, George Blackburn, MD, Beth Israel Deaconess Medical Center

P092 ENDOFLIP: A NOVEL DEVICE FOR PRECISE MEASUREMENT OF GASTRIC POUCH VOLUME AND WALL COMPLIANCE

Brian J Winkleman, MD, Peter N Nau, MD, Bradley J Needleman, MD, Dean J Mikami, MD, The Ohio State University

P093 CHYLOPERITONEUM AFTER LAPAROSCOPIC ROUX Y

GASTRIC BYPASS (LRYGB) Hidalgo E Jesus, MD, Alexander Ramirez, MD, Sheetal Patel, MD, Emeka Acholonu, MD, Jeremy Eckstein, MD, Wasef Abu-Jaish, MD, Samuel Szomstein, MD, Raul Rosenthal, MD, Cleveland Clinic Florida

P094 REASONS AND OUTCOMES OF SURGICAL REVISION OF GASTROJUNAL ANASTOMOTIC COMPLICATIONS IN

PATIENTS AFTER LAPAROSCOPIC RYGB FOR MORBID OBESITY. Alexander Ramirez, MD, Rafael Arias, MD, Samuel Szomstein, MD, Raul Rosenthal, MD, Cleveland Clinic Florida

P095 UNEXPECTED AND UNUSUAL FINDINGS DURING

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS. HOW TO PROCEED? Piotr Gorecki, MD, Paul Thodiyil, MD, Teddy Takeuchi, MD, Leslie Wise, MD, New York Methodist Hospital

P096 FAVORABLE OUTCOMES IN ELDERLY PATIENTS

UNDERGOING BARIATRIC SURGERY DESPITE INCREASED CO-MORBIDITIES Christopher J Myers, MD, Sandhya Lagoo-Deenadayalan, MD, Rebecca P Petersen, MD, John Grant, MD, Dana D Portenier, MD, Aurora D Pryor, MD, Eric J DeMaria, MD, Duke University Medical Center, Durham, North Carolina

P097 LARGE BLOOD CLOT CAUSING AN ACUTE OBSTRUCTION AT THE JEJUNOJEJUNOSTOMY FOLLOWING LAPAROSCOPIC

ROUX-EN-Y GASTRIC BYPASS Obos I Ekhaese, DO, Timothy Oppermann, MD, Luis A Bonilla, MD, Fariba Dayhim, MD, Philip Leggett, MD, Patrick Reardon, MD, University of Texas @ Houston/ MIST/ Methodist Hospital System

P098 REDUCTION OF OBESITY COMORBIDITIES: LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS VERSUS LAPAROSCOPIC

ADJUSTABLE GASTRIC BANDING Phuong H Nguyen, MD, Timothy S Kuwada, MD, Dimitrios Stefanidis, MD, Amy E Lincourt, PhD, B. Todd Heniford, MD, Keith S Gersin, MD, Carolinas Medical Center

P099 POST-OPERATIVE GASTRIC BYPASS MARGINAL ULCERS

AND STRICTURES LEAD TO INCREASED WEIGHT LOSS Gavitt Woodard, BS, Tina Hernandez-Boussard, PhD, John Morton, MD, Stanford University

P100 IS THERE A DIFFERENCE BETWEEN EARLY AND LATE ENDOSCOPIC BALLOON DILATION FOR GASTROJUNAL

STRICTURE AFTER ROUX-EN-Y GASTRIC BYPASS? Joseph A. Talarico, MD, Amy Cha, MD, Jill Zink, MD, Fady Moustarah, MD, Ramy Fouad, MD, Patrick Gatmaitan, MD, Matthew Kroh, MD, Stacy Brethauer, MD, Philip Schauer, MD, Bipan Chand, MD, Bariatric and Metabolic Institute, Cleveland Clinic Foundation

P101 GASTRIC BYPASS IMPROVES MUSCLO-SKELETAL QUALITY

OF LIFE Gavitt Woodard, BS, Tina Hernandez-Boussard, PhD, John Morton, MD, Stanford University

P102 THE RELEVANCE OF USING FLUROSCOPY AS A ROUTINE IN

GASTRIC BANDING CONTROL Ali Fardoun, MD, Fawaz Torab, PhD, Frank Branicki, PhD, Tawam Hospital Al-ain UAE





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

Basic Science (cellular bio, physiology)

- P103 ENHANCED LOCAL PERITONEAL LEUKOCYTE P38 ACTIVATION AND TNF SECRETION WITH AIR VERSUS CO₂ INSUFFLATION** Edward D Auyang, MD, Eric S Hungness, MD, Ann Koons, BS, Nathaniel J Soper, MD, Michael A West MD, PhD, Department of Surgery, Northwestern University, Department of Surgery, University of California San Francisco
- P104 CARDIOVASCULAR DIFFERENCES WITHIN THE OMENTUM OF MORBIDLY OBESE DIABETIC PATIENTS** A Katharine Hindle, MD, Claire Edwards, MD, Jason Kasza, MD, Tim McCaffrey, PhD, Sidney Fu, PhD, Fred Brody, MD, The George Washington University
- P105 ADIPONECTIN AND LEPTIN IN THE BARIATRIC PATIENT** A Katharine Hindle, MD, Claire Edwards, MD, Jason Kasza, MD, Tim McCaffrey, PhD, Sidney Fu, PhD, Fred Brody, MD, The George Washington University
- P106 LARYNGOPHARYNGEAL REFLUX (LPR): PATHOPHYSIOLOGIC EVIDENCE OF TWO DIFFERENT SUBTYPES** Shahin Ayazi, MD, Peter F Crookes, MD, Jeffrey A Hagen, MD, Jorg Zehetner, MD, Arzu Oezcelik, MD, Matthew R Lilley, BA, Priyanka K Wali, BA, Emmanuele Abate, MD, Farzaneh Banki, MD, Steven R DeMeester, MD, John C Lipham, MD, Tom R DeMeester, MD, Department of Surgery, University of Southern California
- P107 THE EFFECT OF INHALED LPS ON THE DEVELOPMENT OF BRONCHIOLITIS OBLITERANS.** Sean M Lee, MD, Frank Schneider, MD, Errol Bush, MD, Hao-Jin Wei, MD, Keki Balsara, MD, William Parker, PhD, Robert D Davis, MD, Shu S Lin, MD, Department of Surgery and Department of Pathology, Duke University Medical Center, Durham, NC, USA, 27710.
- P108 DETAIL ANALYSIS OF VESSEL SEALING PERFORMANCE OF BIPOLAR VESSEL SEALING SYSTEM FOR LAPAROSCOPIC SURGERY** Hideki Hayashi, MD, Terumasa Yamaoka, Satoki Zenbutsu, BS, Masashi Sekine, BS, Hozumi Tatsuoka, MD, Yoichi Miyake, MSc, Research Center for Frontier Medical Engineering, Chiba University
- P109 NO HEMODYNAMIC DIFFERENCE BETWEEN NOTES AND ENDOSCOPY OVER SHORT TIME PERIOD** Juliane Bingener, MD, Erica Moran, MD, Chris Gostout, MD, Marianne Huebner, PhD, Mayo clinic
- P110 WEIGHT LOSS INDUCED BY LAPAROSCOPIC BARIATRIC SURGERY IS ASSOCIATED WITH A REDUCTION IN AUTONOMIC RESPONSIVENESS** William Bertucci, MD, Erica Sturdivant, MD, Janos Taller, MD, Ryan Woodman, BS, Deborah Romero, RN, David Gallus, MD, Todd Peterson, MD, Warren Lockette, MD, Department of Surgery and Department of Clinical Investigations, Naval Medical Center, San Diego, CA

Colorectal / Intestinal Surgery (also P550)

- P111 RETROSPECTIVE ANALYSIS OF RESECTED PRIMARY COLORECTAL CANCER REVEALED NO CORRELATION BETWEEN NODE HARVEST AND NODE INVOLVEMENT** Munir A Rathore, Muhammad I Bhatti, Liz Hand, Derek Allen, Mohey Ismail, Victor Loughlin, Lagan Valley Hospital Lisburn and Belfast City Hospital, Northern Ireland UK
- P112 ROLE OF INITIAL CLINICAL ASSESSMENT IN THE DIAGNOSIS OF ACUTE DIVERTICULITIS** Munir A Rathore, Muhammad I Bhatti, Celma DeSirva, Adel Osman, Maurice Fernando, Liz Hand, Victor Loughlin, Lagan Valley Hospital Lisburn, Northern Ireland UK
- P113 LAPAROSCOPIC RESECTION OF LYMPHANGIOMA OF THE SMALL BOWEL MESENTERY IN AN ADULT** Susan A Garand, DO, George Y Apostolides, MD, Greater Baltimore Medical Center
- P114 USE OF ALVARADO CLINICAL SCORE FOR ACUTE APPENDICITIS TO DIRECT UTILIZATION OF CT FOR ACUTE APPENDICITIS.** Robert McKay, MD, Roger Barrowman, MD, Ellis Hospital, Schenctady NY
- P115 LAPAROSCOPIC MANAGEMENT OF ENTEROVESICLE FISTULAS IN CROHN'S DISEASE** Amir Dagan, MD, Petachia Reissman, MD, Department of General Surgery, Shaare-Zedek Medical Center, Jerusalem

- P116 OPPORTUNITY COST IN THE EVALUATION OF SURGICAL INNOVATIONS: A CASE STUDY OF LAPAROSCOPIC VERSUS OPEN COLECTOMY** Abhishek Chatterjee, MD, Lilian Chen, BS, Elie A Goldenberg, MD, Harold T Bae, MS, Samuel R G Finlayson, MD, Dartmouth Hitchcock Medical Center
- P117 SHORT AND LONG-TERM OUTCOME AFTER LAPROSCOPIC-ASSISTED SURGERY FOR STAGE III COLORECTAL CANCER: A MATCHED-CASE CONTROL STUDY** Shunichi Osada, PhD, Shigeru Yamagishi, PhD, Mitsuyoshi Ota, PhD, Shoichi Fujii, PhD, Yasushi Ichikawa, PhD, Itaru Endoh, PhD, Shigeo Ooki, PhD, Department of Gastroenterological Surgery, Yokohama City University Graduate School of Medicine
- P118 NEW METHOD OF RECTAL IRRIGATION AND CUTTING IN LAPAROSCOPIC-LOW ANTERIOR RESECTION FOR RECTAL CANCER: EXTRACORPOREAL HALS' METHOD** Shoichi Fujii, PhD, Hirokazu Suwa, MD, Shigeru Yamagishi, MD, Shunichi Osada, MD, Mitsuyoshi Ota, MD, Yasushi Ichikawa, PhD, Chikara Kunisaki, PhD, Shigeo Ohki, PhD, Hiroshi Shimada, PhD, Yokohama City University, Gastroenterological Center, Department of Surgery
- P119 EVALUATION OF THE SHORT TERM OUTCOME OF LAPAROSCOPIC COLORECTAL SURGERY** Mitsuyoshi Ota, MD, S Fujii, MD, C Kunisaki, MD, S Ohki, MD, S Yamagishi, MD, S Osada, MD, Y Ichikawa, MD, Yokohama City University Medical Center
- P120 LAPAROSCOPIC RESTORATION OF INTESTINAL CONTINUITY AFTER HARTMAN'S PROCEDURE** Laurent Potiron, BA, Timothee Dugue, BA, Catholic Institute of Lille
- P121 ACCURACY OF PREOPERATIVE ASSESSMENT AND CLINICAL OUTCOME OF T1 COLORECTAL CANCER** Takeshi Naitoh, MD, Takashi Tsuchiya, MD, Hiroshi Honda, MD, Masaya Oikawa, MD, Tetsuya Kakita, MD, Atsushi Oyama, MD, Department of General Surgery, Sendai City Medical Center
- P122 SIMPLE RECTAL IRRIGATION IN LAPAROSCOPE-ASSISTED RESECTION FOR COLORECTAL CANCER** Shigeoki Hayashi, MD, Minoru Matsuda, MD, Motoo Yamagata, MD, Tadatosh Takayama, MD, Department of Digestive Surgery, School of Medicine, Nihon University, Japan
- P123 OUTCOME OF LAPAROSCOPIC COLONIC RESECTION FOR SUBMUCOSAL COLORECTAL CARCINOMA NOT SUITABLE FOR ENDOSCOPIC RESECTION** Kazuki Ueda, MD, Haruhiko Imamoto, MD, Tadao Tokoro, MD, Eizaburo Ishimaru, MD, Takehito Yoshifuji, MD, Jin-ichi Hida, MD, Kiyotaka Okuno, MD, Hitoshi Shiozaki, Kinki University School of Medicine
- P124 IMPACT OF VISCERAL OBESITY ON LAPAROSCOPIC SURGERY FOR COLORECTAL CANCER** Ryoko Oura, MD, Mitsuo Shimada, MD, Nobuhiro Kurita, MD, Takashi Iwata, MD, Masanori Nishioka, MD, Kozo Yoshikawa, MD, Jun Higashijima, MD, Departments of Surgery, The University of Tokushima, Japan.
- P125 LAPAROSCOPIC RECTAL SURGERY: DIFFERENT OUTCOME IN RELATION TO GENDER?** JM Sanchez-Hidalgo, MD, EM Targarona, PhD, MC Martinez, MD, MP Hernandez, MD, R Renger, MD, L Pallares, MD, F Marinello, MD, M Trias, PhD, Serv of Surgery, Hospital Santpau, UAB, Barcelona, Spain
- P126 LAPAROSCOPIC VS. OPEN PROCTOCOLECTOMY IN THE TREATMENT OF ULCERATIVE COLITIS AND FAMILIAL ADENOMATOUS POLYPOSIS** L Sommarruga, MD, R Renger, MD, EM Targarona, PhD, MC Martinez, MD, MP Hernandez, MD, C Balague, MD, L Pallares, MD, F Marinello, MD, M Trias, PhD, Service of Surgery,
- P127 LAPAROSCOPIC VS. OPEN COLECTOMY FOR SIGMOID DIVERTICULAR DISEASE. 8 YEARS OF MINIMALLY INVASIVE SURGERY AT THE COMMUNITY TEACHING HOSPITAL.** Robert Shirinov, MD, Dan Ruiz, MD, Amanda Bailey, James W Turner, MD, Howard Tiszenkel, MD, New York Hospital of Queens
- P128 PLASMA LEVELS OF SVEGFR2 ARE DECREASED AND SVEGFR1 INCREASED EARLY AFTER COLECTOMY FOR CANCER; THE NET IMPACT IS DECREASED BINDING OF FREE VEGF WHICH MAY ACCOUNT FOR INCREASED PLASMA VEGF LEVELS EARLY POSTOPERATIVELY** HMC Shantha Kumara, PhD, A Hoffman, MD, N Dujovny, MD, M Kalady, MD, M Luchtefeld, MD, N Hyman, MD, D Feingold, MD, R Baxter, BS, Whelan L R, MD, Columbia University New York, NY, USA, Fergusson Clinic, Grand Rapids, MI, USA, Cleveland Clinic, Cleveland, OH, USA, University of Vermont, Burlington, VT, USA

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P129 LONGTERM OUTCOMES OF LAPAROSCOPIC SURGERY FOR RECTAL CANCER J Westerholm, MD, S Garcia-Osogobio, MD, F Farrokhyar, PhD, M Cadeddu, MD, M Anvari, MD, Centre for Minimal Access Surgery, St Joseph's Hospital, Hamilton Ontario

P130 MINIMALLY INVASIVE APPROACH TO LEFT-SIDED LARGE BOWEL OBSTRUCTION William Bisland, MD, Henry J Lujan, MD, Gustavo Plasencia, MD, Manuel Viamonte III, MD, Rene F Hartmann, MD, Laparoscopic Center of South Florida at Mercy Hospital

P131 COMPARISON WOUND BACTERIAL CONTAMINATION BETWEEN OPEN COLORECTAL SURGERY AND LAPAROSCOPIC COLORECTAL SURGERY Yoshihisa Saida, MD, Y Nakamura, MD, T Enomoto, MD, K Takabayashi, MD, M Katagiri, MD, S Nagao, MD, R Watanabe, MD, Y Okamoto, MD, M Watanabe, MD, S Kusachi, MD, J Nagao, MD, Toho University Ohashi Medical Center, Third Department of Surgery

P133 LAPAROSCOPIC SURGERY FOR FAMILIAR ADENOMATOUS POLYPOSIS: FEASIBILITY AND SAFETY Jung Wook Huh, MD, Hyeon Rok Kim, PhD, Sang Hyuk Cho, MD, Jae Kyoong Joo, MD, Young Jin Kim, PhD, Department of Surgery, Chonnam National University Hwasun Hospital and Medical School

P134 IMPACT OF GENDER ON EARLY SURGICAL OUTCOMES AFTER LAPAROSCOPIC SURGERY FOR RECTAL CARCINOMA. Seiichiro Yamamoto, PhD, Masazumi Okajima, PhD, Takao Hinoi, PhD, Koki Otsuka, PhD, Hisanaga Horie, PhD, Masahiko Watanabe, PhD, National Cancer Center Hospital, Hiroshima University Hospital, Iwate Medical University, Jichi Medical University, Kitasato University Hospital,

P135 MINIMALLY INVASIVE COLORECTAL RESECTION IS ASSOCIATED WITH A RAPID AND SUSTAINED DECREASE IN PLASMA EPIDERMAL GROWTH FACTOR LEVELS IN THE COLON CANCER SETTING HMC Shantha Kumara, PhD, A Hoffman, MD, D Feingold, N Dujovny, MD, N Hyman, MD, M Kalady, MD, M Luchtefeld, MD, R L Whelan, Columbia University, New York, NY, USA, Ferguson Clinic, Grand Rapids, MI, USA, University of Vermont, Burlington, VT, USA, Cleveland Clinic, Cleveland, OH, USA,

P136 MINIMALLY INVASIVE COLORECTAL RESECTION IS ASSOCIATED WITH A TRANSIENT INCREASE IN PLASMA HGF LEVELS EARLY AFTER SURGERY FOR CANCER HMC Shantha Kumara, PhD, I Y Kim, MD, D Kim, MD, M Kalady, MD, M Luchtefeld, MD, K Hoffman, BS, V DiMaggio, BS, R L Whelan, MD, Columbia University, New York, NY, USA, Ferguson Clinic, Grand Rapids, MI, USA, Cleveland Clinic, Grand Rapids, MI, USA, Cleveland Clinic, Cleveland, OH, USA.

P137 PLASMA ANGIOSTATIN AND ENDOSTATIN LEVELS REMAIN UNCHANGED FOR THE FIRST 3 WEEKS AFTER COLORECTAL CANCER RESECTION HMC Shantha Kumara, PhD, A Hoffman, MD, A Nasar, MSc, A Senagore, MD, M Kalady, MD, N Hyman, MD, I Y Kim, MD, R L Whelan, MD, Columbia University, New York, NY, USA, Ferguson Clinic, Grand Rapids, MI, USA, Cleveland Clinic, Cleveland, OH, USA, University of Vermont, Burlington, VT, USA,

P138 IS PFANNENSTIEL BETTER? SURGICAL SITE INFECTIONS FOLLOWING LAPAROSCOPIC-ASSISTED COLORECTAL SURGERY Lacee J Laufenberg, BS, Jaime E Sanchez, MD, Beth R Krieger, MD, Jorge E Marcet, MD, Division of Colon and Rectal Surgery, University of South Florida

P139 CECECTOMY MAY BE A SUPERIOR ALTERNATIVE TO RIGHT HEMICOLECTOMY FOR SELECT BENIGN CECAL POLYPS K C Walters, MD, C D Dolce, MD, J E Keller, MD, A E Lincourt, PhD, H J Norton, PhD, K S Gersin, MD, K W Kercher, MD, T S Kuwada, MD, D Stefanidis, MD, B T Heniford, MD, Carolinas Medical Center

P140 TEST METHOD FOR EVALUATION OF BLOOD LOSS AND FREE BLEED TIME Elizabeth M Lalime, BS, Jennifer Broom, BS, Michael Soltz, PhD, Christina Rideout, MS, Jeffrey Zaruby, PhD, © 2008 Covidien AG or its affiliates. All rights reserved.

P141 CT SCAN AS A COMPLEMENTARY STUDY FOR COLON TUMOR LOCALIZATION Jessica Lee, MD, Robert Kozol, MD, William Pennoyer, MD, Kristy Thurston, MD, Anthony Voytovich, MD, University of Connecticut

P142 SHORT-TERM RESULT OF LAPAROSCOPIC COLORECTAL SURGERY FOR ELDERLY PATIENTS Yosuke Hashimoto, MD, Shuji Saito, MD, Yusuke Kinugasa, MD, Akio Shiomi, MD, Hiroyuki Tomioka, MD, Hiroyuki Hazama, MD, Seiichi Kawasaki, MD, Takashi Kojima, MD, Yujiro Kokado, MD, Etuo Bando, MD, Hideyuki Kanemoto, MD, Masanori Terashima, MD, Katsuhiko Uesaka, MD, Masayuki Ishii, MD, Shizuoka Cancer Center Hospital

P143 ACTINOMYCOTIC MECKEL'S DIVERTICULITIS – A CASE STUDY AND REVIEW OF LITERATURE Venkata K Kella, MD, Zafar Jamil, MD, Nalini S Parikh, MD, John M Cosgrove, MD, Bronx Lebanon hospital center and St Michaels medical center

P144 COMPARISON OF EARY AND LATE EXPERIENCE FOR LAPAROSCOPIC LOW RECTAL CANCER RESECTION ; PERIOPERATIVE OUTCOME AND SURVIVAL ANALYSIS; PROSPECTIVE COHORT STUDY Pornthep Prathanvanich, MD, Jirawat Pattana-Arun, MD, Chuchep Sahakitrunguang, MD, Arun Rojanasakul, MD, Colorectal Division, Department of Surgery, Chulalongkorn University, Kingdom of Thailand

P145 IMPACT OF LAPAROSCOPIC ANTERIOR RESECTION ON POSTOPERATIVE BOWEL FUNCTION H Matsuo, PhD, T Masaki, PhD, T Mori, PhD, M Sugiyama, PhD, Y Atomu, PhD, Department of Surgery, Kyorin University, Tokyo, Japan

P146 LAPAROSCOPIC RECTOPEXY IN THE TREATMENT OF RECTAL PROLAPSE Bac Hoang Nguyen, MD, Tuan Le Quan Anh, MD, University medical center Ho Chi Minh City VietNam

P147 CLINICAL ANALYSIS OF ANASTOMOTIC LEAKAGE IN LAPAROSCOPIC LOW ANTERIOR RESECTION FOR RECTAL CANCER Bac Hoang Nguyen, MD, Thanh Nguyen Huu, MD, Viet Van Ung, MD, University Medical Center Ho Chi Minh City VietNam

P148 LAPAROSCOPIC COLECTOMY FOR COLON CANCER: THREE-PORT TECHNIQUE Bac Hoang Nguyen, MD, Thanh Nguyen Huu, MD, tuan Le Quan Anh, MD, University Medical Center Ho Chi Minh City VietNam

P149 TEMPORARY MUCOCUTANEOUS TRANSVERSE COLOSTOMY: TECHNICAL APPROACH. Luis Gramatica (h), PhD, Pedro R Martinez Duarte, MD, Sabino Ochoa, MD, Jorge A Canedo, MD, Hospital Nacional de Clinicas. Cordoba. Argentina

P150 LAPAROSCOPIC IRRIGATION AND DRAINAGE IN THE TREATMENT OF COMPLICATED ACUTE DIVERTICULITIS: INITIAL EXPERIENCE J. R Salameh, MD, James T Mayes, MD, Department of Surgery, Georgetown University, Washington, DC and Surgical Associates at Virginia Hospital Center, Arlington, VA

P151 DOES THE LEARNING CURVE DURING LAPAROSCOPIC COLECTOMY ADVERSELY AFFECT COSTS? Hasan T Kirat, MD, Ersin Ozturk, MD, Daniel P Geisler, MD, Feza H Remzi, MD, Ravi P Kiran, MD, Cleveland Clinic Foundation

P152 12 MONTHS RESULTS OF EVALUATION OF ANAL SPHINCTER RADIOFREQUENCY REMODELING. Roman Herman, PhD, P Walega, PhD, Michal Nowakowski, PhD, Jakub Kenig, PhD, Katarzyna Smeder, MD, Jerzy Salowka, MD, Dorota Zelazny, MD, 3rd Department of General Surgery Jagiellonian University Collegium Medicum

P153 SINGLE INCISION LAPAROSCOPIC APPENDECTOMY IS SAFE AND RESULTS IN EXCELLENT COSMETIC OUTCOMES Chris Edwards, MD, Alan Bradshaw, MD, Regional Surgical Specialists, Mission Hospitals, Asheville NC

P154 CLINICAL AND FUNCTIONAL RESULTS OF TRANSANAL ENDOSCOPIC LOCAL EXCISION OF RECTAL TUMORS. P Walega, PhD, J Kenig, PhD, T Cegiely, MD, M Nowak, PhD, R Herman, PhD, 3rd Department of General Surgery Jagiellonian University Collegium Medicum

P155 SERRATED ADENOMA OF THE APPENDIX: A RISK FOR COLON CANCER? Mark E Lytle, MD, Chad R Edwards, MD, James P Dolan, MD, Robert M Cromer, MD, Keesler Medical Center - Department of Surgery

P156 VISUAL ENHANCEMENT OF FASCIA FACILITATES LAPAROSCOPIC PREPARATION Tilman Laubert, MD, Hamed Asnaashari, DO, Robert Keller, MD, Uwe Johannes Roblick, PhD, Jan Nolde, MD, T. Stehle, MD, Hans-Peter Bruch, MD, Department of Surgery, University Hospital Schleswig-Holstein, Campus Luebeck





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

- P157 TOTALLY LAPAROSCOPIC RIGHT HEMICOLECTOMY WITH INTRACORPOREAL ANASTOMOSIS** Naresh K Ahuja, MD, Bethany Sacks, MD, Artun Aksade, Ramesh Ramanathan, MD, Department of Surgery, University of Pittsburgh, Pittsburgh, PA
- P158 LAPAROSCOPIC LEFT COLONIC RESECTION FOR PERITONITIS CAUSED BY DIVERTICULITIS** Elie K Chouillard, MD, Abe L Fingerhut, MD, Poissy Medical Center (FRANCE)
- P159 ILEOSTOMY REVERSAL AFTER LEFT COLONIC OR RECTAL RESECTION FOR CANCER: DOES THE INITIAL APPROACH (LAPAROSCOPY VERSUS LAPAROTOMY) AFFECT OUTCOME?** Elie K Chouillard, MD, Nicolas TABARY, MD, Abe L Fingerhut, MD, Poissy Medical Center (FRANCE)
- P160 DIAGNOSIS, TREATMENT, AND OUTCOMES OF DUODENAL NEOPLASMS** S. Medda, William W Hope, MD, Charles J Dolce, MD, B. Todd Heniford, MD, Department of Surgery, Division of Gastrointestinal and Minimally Invasive Surgery, Carolinas Medical Center, Charlotte, North Carolina
- P161 ADVERSE EVENTS ASSOCIATED WITH LAPAROSCOPIC COLOSTOMY REVERSAL FOLLOWING HARTMANN'S PROCEDURE : A MULTI-INSTITUTIONAL STUDY.** Hai P Huynh, MD, Daniel C Trottier, MD, Husein Moloo, MD, Eric C Poulin, MD, Joseph Mamazza, MD, Robin P Boushey, MD, The Ottawa Hospital – MIS Research Group, Ottawa, Canada.
- P162 LAPAROSCOPIC ANTERIOR RESECTIONS USE FEWER DEFUNCTIONING STOMAS.** S H Clark, MD, P Schwingschackl, MD, E Drye, MD, K Jaggs, RN, S Warren, MD, Chase Farm Hospital, Middlesex, UK; North Middlesex Hospital, Greater London, UK; Colchester Hospital, Essex, UK.
- P163 ONCOLOGIC AND PERIOPERATIVE OUTCOMES OF HAND-ASSISTED LAPAROSCOPIC SURGERY (HALS) VS OPEN LOW RECTAL CANCER RESECTION: A CASE MATCH STUDY.** Jirawat Pattana-Arun, DO, Pornthep Prathanvanich, DO, Chuchep Sahakitrungruang, DO, Puttarat Atithansakul, DO, Arun Rojanasakul, DO, Colorectal Division, Department of Surgery, Chulalongkorn University, Kingdom of Thailand
- P164 BODY IMAGE AND COSMESIS AFTER LAPAROSCOPIC OR OPEN APPENDECTOMY** I Sucullu, BA, Al Filiz, BA, AE Canda, BA, E Yucel, MD, Y Kurt, MD, M Yildiz, MD, Department of Surgery, Gulhane Military Medical Academy, Haydarpasa Training Hospital and Manisa State Hospital, TURKEY
- P165 COMPARATIVE STUDY OF LAPAROSCOPIC VERSUS OPEN APPENDECTOMY AT A TERTIARY CARE HOSPITAL IN PAKISTAN** Shaikh A Razaque, MD, Sangrasi A Khan, MD, Basant Kumar, MD, Liaquat University of Medical Health & Sciences Jamshoro Pakistan
- P166 EFFECTS OF PREVENTING OXIDATIVE AND NITROOXIDATIVE STRESS ON HEALING OF EXPERIMENTAL RAT COLON ANASTOMOSIS** Yavuz Poyrazoglu, MD, Taner Yigit, MD, Ali Harlak, Öner Menten, MD, Semih Görgülü, MD, Ihsan A Uzar, MD, Orhan Kozak, MD, Gülhane Military Medical Academy Dep. Of General Surgery
- P167 LAPAROSCOPIC SURGERY FOR COLON DIVERTICULITIS: ADVANTAGES OF HAND-ASSISTED LAPAROSCOPIC SURGERY IN THE PRIMARY SURGERY AND HARTMANN REVERSAL** Fumihiko Uchikoshi, MD, Yuko Yamagami, MD, Osamu Yamada, MD, Takahiko Tatsumi, MD, Department of Surgery, Tatsumi clinic & Hospital
- P168 LAPAROSCOPIC SIGMOID COLON RESECTION IN THE MANAGEMENT OF A 13-YEAR-OLD PATIENT WITH SEVERE RECTAL PROLAPSE** Aaron P Leshner, MD, Katherine A Morgan, MD, Andre Hebra, MD, Medical University of South Carolina
- P169 COULD THE TUMOR CHARACTERISTICS IDENTIFIED BY COLONOSCOPY PREDICT THE LOCALLY ADVANCED RECTAL CARCINOMA?** Hao Wang, PhD, Fuao Cao, MD, Ronggui Meng, MD, Xiaohui Wu, MD, Enda Yu, MD, Wei Zhang, PhD, Lianjie Liu, PhD, Liqiang Hao, PhD, Chuangang Fu, PhD, Department of Colon and Rectal Surgery, Changhai Hospital, Shanghai, China, 200433
- P170 ACCURACY OF COLONOSCOPIC VISUALIZATION** Khashayar Vaziri, MD, Sarah C Choxi, BA, Bruce A Orkin, MD, George Washington University Medical Center
- P171 SHORT TERM OUTCOME OF LAPAROSCOPIC TOTAL MESORECTAL EXCISION IN LOW RECTAL CANCER FOLLOWING NEOADJUVANT CHEMORADIATION.** Hao Wang, MD, Paula Denoya, MD, Eric Weiss, MD, Dana R Sands, MD, Juan Nogueras, MD, Steven Wexner, MD, Cleveland Clinic Florida
- P172 LAPAROSCOPIC PROCTECTOMY FOR LOWER RECTAL CANCER** Shigeki Yamaguchi, MD, Jo Tashiro, MD, Toshimasa Ishii, MD, Tomonori Hosonuma, MD, Takahiro Sato, MD, Shutaro Ozawa, Department of Surgery, Saitama Medical University International Medical Center
- P173 LAPAROSCOPY IN THE ELDERLY POPULATION** Yair Edden, MD, Badma Bashankaev, MD, Sue M Cera, MD, Anthony Vernava III, MD, Eric Weiss, MD, Juan Nogueras, MD, Steven D Wexner, MD, Cleveland Clinic Florida
- P174 CLINICAL RESULTS OF LAPAROSCOPE-ASSISTED GASTRECTOMY (LAG) FOR GASTRIC CANCER IN THE EARLY STAGE: ANALYSIS OF 200 CASES PERFORMED BY A SINGLE SURGEON.** Masayuki Kakyo, PhD, Chikashi Shibata, PhD, Iwao Sasaki, PhD, Department of Surgery, School of Medicine, Tohoku University
- P176 LAPAROSCOPIC SURGERY FOR INFLAMMATORY BOWEL DISEASE:** Jorge Canedo, MD, Rodrigo Pinto, MD, Sthela Regadas, MD, Lester Rosen, MD, Steven Wexner, MD, Cleveland Clinic Florida
- P177 PREDICTIVE VALUE OF COMPUTERIZED TOMOGRAPHY SCAN ON CONVERSION IN LAPAROSCOPIC SURGERY FOR DIVERTICULITIS** Sherief Shawki, MD, Rodrigo Pinto, MD, Jacobo Kirsch, MD, Kazuhiro Narita, MD, Eric Weiss, MD, Steven Wexner, MD, Cleveland Clinic Florida
- P178 DOES OPERATIVE TIME INFLUENCE OUTCOME IN PATIENTS UNDERGOING LAPAROSCOPIC COLORECTAL SURGERY?** Dan Geisler, BA, Cleveland Clinic Foundation
- P180 LAPAROSCOPIC SIGMOID RESECTION FOR ALL PATIENTS WHO PRESENT WITH COMPLICATED DIVERTICULITIS AND FISTULA FORMATION** Carrie B Jahraus, MD, Edward C Lee, MD, Brian T Valerian, MD, Albany Medical College
- P181 FECAL INCONTINENCE QUALITY OF LIFE AFTER TRANSANAL ENDOSCOPIC MICROSURGERY (TEM)** Elsa B Valsdottir, MD, Shadi Sadeghi Yarandi, MD, John H Marks, MD, Gerald J Marks, MD, Lankenau Hospital and Institute for Medical Research and University Hospital of Iceland
- P182 INITIAL EXPERIENCE IN SINGLE-PORT LAPAROSCOPIC APPENDECTOMIES** Amanda J Kravetz, MD, Douglas M Iddings, DO, Michael A Kia, DO, McLaren Regional Med Ctr, Genesys Regional Med Ctr
- P183 IS A LAPAROSCOPIC APPROACH USEFUL FOR TREATING COMPLICATIONS AFTER PRIMARY** Nicolas Rotholtz, MD, Mariano Laporte, MD, Sandra Lencinas, MD, Maximiliano Bun, MD, Laura Aued, MD, Norberto Mezzadri, Hospital Aleman de Buenos Aires
- P184 ENSEAL™ VS. CONVENTIONAL FERGUSON HEMORRHOIDECTOMY: COST AND CLINICAL OUTCOMES.** Fuad Alkhoury, MD, Alejandro Betancourt, MD, Scott Helton, MD, Christopher McLaughlin, MD, Hospital of Saint Raphael
- P185 LAPAROSCOPIC COLORECTAL RESECTION FOR HIGH RISK PATIENTS** WL Law, MD, Jensen TC Poon, MD, Joe KM Fan, MD, Oswen SH Lo, MD, The University of Hong Kong
- P186 THE INFLUENCE OF MAJOR CARDIAC COMORBIDITIES ON LAPAROSCOPIC COLORECTAL PROCEDURES** Dan Geisler, MD, Cleveland Clinic Foundation
- P187 HAND-ASSISTED LAPAROSCOPIC VS. LAPAROSCOPIC TPC IPAA** Alex J Ky, MD, Erin Ly, BA, Randolph Steinhagen, MD, Mount Sinai Hospital
- P188 TWO WEEK WAIT COLORECTAL CANCER REFERRALS – ITS COMPLIANCE AND YIELD?** Kamal Nagpal, MS, Abdul Hakeem, PhD, J Muen, Doncaster & Bassetlaw NHS Trust, Doncaster, UK
- P189 ADVANTAGES OF LAPAROSCOPIC ASSISTED COLORECTAL SURGERY AT A VA HOSPITAL INDIANAPOLIS** Virgilio George, MD, Munshi Imtiaz, MD, Chihara Ray, MD, Bruce Robb, MD, Jose Moreno, MD, Indiana University Department of Surgery

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

- P190 OBJECTIVE MAPPING OF THE ANAL SPHINCTER COMPLEX USING 3-D ENDOANAL ULTRASOUND** Johan Nordenstam, MD, David Rothenberger, MD, Jan Zetterstrom, PhD, Department of Surgery, University of Minnesota, Minneapolis, MN, USA; Department of Obstetrics and Gynecology, Danderyd Hospital, Karolinska Institutet, Stockholm, Sweden
- P191 VESSEL SEALING IN LAPAROSCOPIC COLONIC SURGERY** Matthew Albert, MD, Sergio Larach, MD, Sam Atallah, MD, Florida Hospital, Department of Colorectal Surgery
- P192 MAXIMIZING THE BENEFITS OF LAPAROSCOPY, HALS COLECTOMY IN THE MORBIDLY OBESE** Matthew Albert, MD, Sergio Larach, MD, Sam Atallah, Florida Hospital, Department of Colorectal Surgery
- P193 APPLICATION OF LAPAROSCOPIC AND HAND-ASSISTED APPROACH IN SEGMENTAL COLECTOMY** Y Y Yurko, MD, A S Prabhu, MD, P H Ngyuen, MD, D Stefanidis, MD, A E Lincourt, PhD, K W Kercher, MD, B T Heniford, MD, Carolinas Medical Center
- P194 LAPAROSCOPIC COLECTOMY FOR ULCERATIVE COLITIS THAT LEAVES NO INCISIONAL WOUND** Yukihito Kokuba, PhD, Masayoshi Nakanishi, PhD, Kazuma Okamoto, PhD, Chohei Sakakura, PhD, Eigo Otuji, PhD, Kyoto Prefectural University Of Medicine
- P195 HAND-ASSISTED LAPAROSCOPIC PELVIC NERVE SPARING RESECTION OF RECTAL CANCER: PREOPERATIVE CHEMORADIATION INFLUENCES CONVERSION RATE** Mona Shah, MD, H Kargozaran, MD, M Ali, MD, Vijay Khatri, M.B.Ch.B., FACS, MD, University of California-Davis, Sacramento, CA USA

Complications of Surgery

- P196 PORTAL VEIN THROMBOSIS AFTER LAPAROSCOPIC SPLENECTOMY FOR MASSIVE SPLENOMEGALY** Eran Iavi, MD, Joseph Alberton, MD, Ram Spira, MD, Petachia Reissman, MD, Department of General Surgery, Shaare Zedek Medical Center – Hebrew University-Hadassah School of Medicine, Jerusalem
- P197 SMALL BOWEL OBSTRUCTION IN A POSTPARTUM FEMALE FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: A CASE REPORT** W. Borden Hooks III, MD, Annick D Westbrook, MD, Thomas V Clancy, MD, William W Hope, MD, South East Area Health Education Center/New Hanover Regional Medical Center
- P198 LAPAROSCOPIC APPENDECTOMY FOR ACUTE APPENDICITIS DOES NOT CARRY A HIGHER RISK OF POSTOPERATIVE COMPLICATIONS** Philippe Topart, MD, Guillaume Becouarn, MD, Pierre Olivier Betton, MD, Michel Bressollette, MD, Jean Delaby, MD, Raoul Duplessis, MD, Frederic Marichez, MD, Societe de Chirurgie Viscerale, Clinique de l'Anjou, Angers, France
- P199 LAPAROSCOPIC MANAGEMENT OF GASTROGASTRIC FISTULAS RESULTING FROM OPEN UNDIVIDED GASTRIC BYPASS** David S Tichansky, MD, Atul K Madan, MD, Khurram A Khan, MD, Carol Hendrix, RN, University of Tennessee Health Science Center
- P200 5 YEAR NATIONAL AUDIT OF BILE DUCT INJURIES FOLLOWING LAPAROSCOPIC CHOLECYSTECTOMY** C E Moffat, S Agrawal, G David, D J Durkin, J P Slavin, M Deakin, University Hospital of North Staffordshire, Stoke on Trent, & Leighton Hospital, Crewe
- P201 COMPLICATIONS OF THE MINI-GASTRIC BYPASS: 10 YEARS EXPERIENCE** R Rutledge, MD, Center for Laparoscopic Obesity Surgery
- P202 THE IMPACT OF BODY MASS INDEX (BMI) AND INTRAPERITONEAL FAT TISSUE ON LAPAROSCOPY ASSISTED GASTRECTOMY FOR GASTRIC CANCER** Nobuhiro Kurita, MD, Mitsuo Shimada, MD, Takashi Iwata, MD, Masanori Nishioka, MD, Kozo Yoshikawa, MD, Jun Higashijima, MD, Tomohiko Miyatani, MD, Motoya Chikakiyo, MD, Toshihiro Nakao, MD, Masato Komatsu, MD, Department of Surgery, the University of Tokushima
- P203 THE IMPACT OF THE TYPE AND ROUTE OF POSTOPERATIVE NUTRITIONAL SUPPORT ON COMPLICATIONS IN MALNOURISHED PATIENTS UNDERGOING UPPER GASTROINTESTINAL SURGERY** Stanislaw Klek, PhD, Jan Kulig, PhD, Marek Sierzega, PhD, Piotr Szybinski, Kinga Szczepanek, 1st Department of Surgery, Jagiellonian University Medical College, Krakow, Poland
- P204 CONVERSIONS IN ANATOMIC VATS LUNG RESECTION: A METHOD OF ASSESSING REASONS FOR CONVERSION** Sayf Gazala, MD, Ian Hunt, MD, Azim Valji, MD, Kenneth Stewart, MD, Eric L Bédard, MD, Division of thoracic surgery, University of Alberta, Edmonton, Alberta, Canada
- P205 ENDOSCOPY IN THE MANAGEMENT OF CERVICAL SPINE PLATING-RELATED ESOPHAGEAL INJURY** Michael A Sawyer, MD, Videoendoscopic Surgical Institute of Oklahoma, Comanche county Memorial Hospital, Lawton, Oklahoma
- P206 CHYLOTHORAX – A RISK FROM LAPAROSCOPIC NISSEN FUNDOPPLICATION** Charles Woodham, MD, Mark Burbridge, MD, Mark Lytle, MD, Craig Kolasch, MD, Keesler Medical Center, Department of Surgery
- P207 HEALTH UTILITY DETERMINATION FOR TRANSVAGINAL AND TRANSGASTRIC CHOLECYSTECTOMY: HOW DO PATIENTS VALUE COMPLICATIONS OF NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY?** Benjamin K Poulouse, MD, Joseph A Trunzo, MD, Raymond P Onders, MD, Michael J Rosen, MD, Jeffrey L Ponsky, MD, Jeffrey M Marks, MD, University Hospitals Case Medical Center; Vanderbilt University Medical Center
- P208 THE USE OF A MODIFIED CYANOACRYLATE-BASED SYNTHETIC GLUE IN DIFFICULT LAPAROSCOPIC CHOLECYSTECTOMY CASES.** Andronikos Karasakalides, BA, Sofia Triantafyllidou, BA, Kostas Ligasis, BA, Marina Chatzopoulou, MD, Kostas Kapoutsis, Giannitsa General Hospital, Giannitsa, Greece
- P209 SALVAGE ENDOSCOPIC ANTEGRADE DILATION ON TIGHT OR COMPLETE COLOANAL ANASTOMOTIC STRICTURE VIA ILEOSTOMY** Norio Fukami, MD, John M Skibber, MD, George J Chang, MD, 1. Division of Gastroenterology and Hepatology, University of Colorado at Denver Health Sciences Center, Aurora, CO, USA 2. Department of Surgical Oncology, University of Texas MD Anderson Cancer Center, Houston, TX, USA.
- P210 PREDICTING MARGINAL ULCERS AFTER LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS** N Bhayani, MD, Judith Y Richardson, MD, Tolulope Oyeturji, MD, David Chang, PhD, Terrence M Fullum, MD, Howard University Hospital
- P211 "INADVERTENT VAGOTOMY": WHAT DOES THIS MEAN FOR THE PATIENT AND SURGEON?** Matt B Martin, MD, Kristen R Earle, MD, Central Carolina Surgery, PA; Moses H. Cone Hospital Systems
- P212 PREDICTORS OF MORTALITY IN LAPAROSCOPIC FOREGUT, HINDGUT AND END-ORGAN SURGERY** D C Trottier, MD, S Doucette, MSc, H Huynh, MD, C M Soto, MD, J Mamazza, MD, E Poulin, MD, R P Boushey, MD, University of Ottawa
- P213 COMPLICATIONS RELATED TO THE ACCESS-PORT IN 435 CASES OF LAPAROSCOPIC ADJUSTABLE GASTRIC BINDING.** Gustavo Franco, MD, Manish Singh, MD, Kuldeep Singh, MD, St. Agnes Hospital, Baltimore, MD.
- P214 RECTUS SHEATH FLAP CLOSURE OF PERSISTENT ENTEROCUTANEOUS FISTULA: A NOVEL APPROACH** Kalyana C Nandipai, MD, James Satterfield, MD, Kenneth Francis, MD, Shyam Allamaneni, MD, Kap-Jae Sung, MD, Mary Immaculate Hospital; New york Medical college

Education / Simulation

- P215 THE HEALTHY CULTURE OF COMPETITION** Caroline T Brandon, BA, Washington Hospital Center
- P216 CONCURRENT VALIDITY AND SKILL DECAY FOR THE LAP MENTOR LAPAROSCOPIC SURGICAL SIMULATOR** Stacy A. Cohen, BA, Martin P Edwards, BA, Amir, MD, Tel Aviv Sourasky Medical Center and the Sackler School of Medicine, Tel Aviv, Israel





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P217 HOW TO IMPROVE THE QUALITY OF ENDOSCOPIC SURGICAL SKILL QUALIFICATION IN JAPAN IN THE SECTION OF LAPAROSCOPIC CHOLECYSTECTOMY Sumio Matsumoto, PhD, Hiromi Tokumura, PhD, Yuichi Yamashita, PhD, Taizo Kimura, PhD, Toshiyuki Mori, PhD, Masaki Kitajima, PhD, Department of Surgery, Tokyo Medical Center

P218 PRE-OPERATIVE WARM-UP USING SIMULATORS. DURATION OF EFFECTIVENESS DECREASES OVER TIME. Richard Satava, MD, Sumeet Kadakia, MD, Kanav Kahol, PhD, Marshall Smith, MD, University of Washington, Arizona State Univ

P219 DEVELOPMENT OF A NEW COMPUTER AIDED DIAGNOSIS SYSTEM TO DETECT LYMPH NODES IN THE ABDOMEN: FURTHER UTILITY FOR SENTINEL-NODE NAVIGATED LAPAROSCOPIC SURGERY IN GASTROINTESTINAL CANCERS AND ITS EDUCATION. Mitsuo Shimada, MD, Nobuhiro Kurita, MD, Masanori Nishioka, MD, Kozo Yoshikawa, MD, *Fumiaki Masakiyo, PhD, *Mitsuru Kubo, PhD, *Noboru Niki, PhD, Departments of Surgery and Optical Science and Technology *

P220 ENDOSCOPIC SURGICAL SKILL QUALIFICATION SYSTEM IN JAPAN: FOUR YEARS OF EXPERIENCE IN THE DIGESTIVE FIELD T Kimura, MD, T Mori, MD, F Konishi, MD, M Kitajima, MD, The Japan Society for Endoscopic Surgery, Tokyo, Japan

P221 INTERN BOOT CAMP: ONE DAY MAKES A DIFFERENCE Marnelle Alexis, PhD, Aurora D Pryor, MD, Rebecca Prince-Petersen, MD, Danny O Jacobs, MD, Bryan M Clary, MD, Duke University Medical Center

P222 TEACHING LAPAROSCOPIC CHOLECYSTECTOMY IN DEVELOPING COUNTRIES – A SAFE, COST EFFECT, AND TIME-EFFICIENT MODEL Bob J Wu, MD, Stephanie Strauss, MD, Stephen Heneghan, MD, Craig Henson, MD, Randall S Zuckerman, Bassett Healthcare, Cooperstown, NY. Hospital of Saint Raphael, New Haven, CT

P223 DEFICIENCY OF KNOWLEDGE IN GENERAL SURGERY RESIDENTS ON SURGICAL STAPLING DEVICES: THE ROLE OF A FOCUSED INSTRUCTIONAL SESSION Ryan McColl, MD ^{Presenter Online}, Artan Reso, MD, Shahzeer Karmali, MD, Bradford Scott, MD, Mary J Brandt, MD, Francis Brunicardi, MD, Vadim Sherman, MD, Baylor College of Medicine

P224 LAPAROSCOPIC SKILLS ACQUISITION IN A SHORT TERM STRUCTURED TRAINING FOR LAPAROSCOPIC CHOLECYSTECTOMY IN A PHANTOM MODEL USING PORCINE GALL BLADDER Virinder K Bansal, MS, M C Misra, MS, H K Bhattacharjee, MS, V Jindak, MS, C Lal, BA, Minimally Invasive Surgery Training Centre, Department of Surgical Disciplines, All India Institute of Medical Sciences, New Delhi, India

P225 ASSESSMENT OF INTRACORPOREAL SUTURING SKILLS – A COMPARISON OF FOUR TOOLS USING THE FLS TASK MODEL Neil Orzech, MD, Vanessa Palter, MD, Rajesh Aggarwal, PhD, Allan Okrainec, MD, Teodor Grantcharov, PhD, 1. Division of General Surgery, University of Toronto, St. Michael's Hospital, Toronto, Canada. 2. Division of General Surgery, University Health Network, Toronto Western Hospital, Toronto, Canada. 3. Department of Surgery, Imperial College, London, UK

P226 RESIDENT PERCEPTIONS REGARDING CURRENT METHODS TO TEACH LAPAROSCOPIC SUTURING Vanessa Palter, MD, Neil Orzech, MD, Rajesh Aggarwal, MD, Allan Okrainec, MD, Teodor P Grantcharov, MD, Division of General Surgery, St. Michael's Hospital, University of Toronto, Ontario, Canada. Division of General Surgery, University Health Network, Toronto Western Hospital, Toronto, Canada. Department of Surgery, Imperial College, London, UK.

P227 THE ROLE OF AN ENDOSCOPIC SURGICAL SKILL QUALIFICATION HOLDER OF THE JAPAN SOCIETY FOR ENDOSCOPIC SURGERY ON EDUCATION OF LAPAROSCOPY-ASSISTED DISTAL GASTRECTOMY. Jun Higashijima, MD, Mitsuo Shimada, MD, Nobuhiro Kurita, MD, Takashi Iwata, MD, Masanori Nishioka, MD, Kozo Yoshikawa, MD, Tomohiko Miyatani, MD, Motoya Chikakiyo, MD, Toshihiro Nakao, MD, Masato Komatsu, MD, Department of Surgery, The University of Tokushima,

P228 CAN A NINTENDO WII BE CONSIDERED HOMEWORK AND DOES IT IMPROVE PERFORMANCE ON A SURGICAL SIMULATOR? Ari Bergman, MS ^{Presenter Online}, Dmitry Nepomnayshy, MD, Jill Zalieckas, MD, Robert Litchfield, Rebecca Liberman, MPH, Lee Sillin, MD, Lahey Clinic

P229 THE NEWLY DEVELOPED ENDOSCOPIC SURGICAL SKILL ASSESSMENT SYSTEM - EVALUATION OF SCOPE POSITION CHANGES TASK PERFORMANCE - Daisuke Sumitani, MD, Masazumi Okajima, PhD, Hiroyuki Egi, PhD, Masanori Yoshimitsu, PhD, Takao Hinoi, MD, Satoshi Ikeda, MD, Makoto Yoshida, MD, Yuji Takakura, MD, Haruka Takeda, MD, Yasuo Kawaguchi, MD, Manabu Shimomura, MD, Masakazu Tokunaga, MD, Tomohiro Kawahara, PhD, Takeshi Takaki, PhD, Hideki Ohdan, PhD, Department of Endoscopic Surgery and Surgical Science, Graduate School of Biomedical Sciences, Hiroshima University

P230 THE IMPACT OF MODELING ON LAPAROSCOPIC SKILL PERFORMANCE Giselle G Hamad, MD, Julio A Clavijo-Alvarez, MD, Sung W Cho, MD, University of Pittsburgh

P231 ER TO OR FOR ACUTE APPENDICITIS: BEFORE AND AFTER THE 80-HOUR WORKWEEK Raghd S Bitar, MD, Geoffrey P Kohn, MD, David W Overby, MD, Mark J Koruda, MD, Anthony A Meyer, MD, PhD, Timothy M Farrell, MD, The University of North Carolina at Chapel Hill, School of Medicine, Department of Surgery

P232 VALIDATION OF A VIRTUAL REALITY TRAINER FOR THE ENDOSTITCH DEVICE Constance Lee, MD, Sergei Kurenov, BS, Sukitti Punak, PhD, Juan C Cendan, MD, University of Florida College of Medicine

P233 TELE-MENTORING FOR ADVANCED ENDOSCOPIC SURGERY USING SOFT CADAVERS BETWEEN THAILAND AND JAPAN Kazuo Tanoue, MD, Satoshi Ieiri, MD, Kozo Konishi, MD, Yoshihiro Kakeji, MD, Yuichi Fujino, PhD, Yukihiro Ueda, Patpong Navicharern, MD, Pornarong Chotiwan, MD, Morimasa Tomikawa, MD, Makoto Hashizume, MD, Department of Advanced Medicine and Innovative Technology, Kyushu University Hospital,

P234 VENOUS AIR EMBOLISM: PREVENTING A LAPAROSCOPIC PHENOMENON? Jeffrey E Carter, MD, Thomas W Kendall, MD, Alexis D Smith, MD, Carl J Westcott, MD, Wake Forest University Baptist Medical Center

P235 COMPLETION OF A NOVEL VIRTUAL REALITY-BASED ADVANCED LAPAROSCOPIC CURRICULUM IMPROVES ADVANCED LAPAROSCOPIC SKILLS IN SENIOR RESIDENTS Lucian Panait, MD, Nancy J Hogle, MS, Dennis L Fowler, MD, Andrew J Duffy, MD, Saint Mary's Hospital, Waterbury, CT, Columbia University, College of Physicians and Surgeons, New York, NY, Yale University School of Medicine, New Haven, CT

P236 USE OF A LOW-COST, HIGH FIDELITY, LAPAROSCOPIC VENTRAL HERNIA SIMULATOR TO ASSESS INTRA-OPERATIVE DECISION MAKING Carla M Pugh, MD, Stephen Plachta, BS, Aurora D Pryor, MD, Departments of Surgery at Northwestern University, Chicago, IL and Duke University Medical Center, Durham, NC

P237 MINIMIZING THE LEARNING CURVE FOR LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR –THE FELLOWSHIP EFFECT. Gideon Sroka, MD, Liane S Feldman, MD, Alan Okrainec, MD, Pepa Kaneva, MSc, Raad Fayeze, MD, Lorenzo E Ferri, MD, Gerald M Fried, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery, McGill University, Montreal, Quebec, Canada.

P238 MIS TRAINING IN CANADA: A NATIONAL SURVEY OF GENERAL SURGERY RESIDENTS Alia P Qureshi, MD, Ashley Vergis A, MD, Carolina M Jimenez, BS, Jessica Green, BS, Aurora D Pryor, MD, Christopher M Schlachta, MD, Allan Okrainec, MD, 1. University of Toronto, Division of General Surgery, Toronto, ON, 2. University Health Network, Toronto Western Hospital, Toronto, ON Canada, 3. Duke University Medical Center, Durham, NC. 4. University of Western Ontario, Departments of Surgery

P239 DEVELOPMENT AND IMPLEMENTATION OF AN ADVANCED LAPAROSCOPIC SKILLS LAB Christine M Gresik, MD, Vidya Shankaran, MD, Piero Marco Fisichella, MD, Raymond Joehl, MD, Luke P Brewster, MD, Gerard Abood, MD, Loyola University, Stritch School of Medicine, Department of Surgery, Maywood, IL

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P240 WHAT IS THE COST ASSOCIATED WITH THE IMPLEMENTATION OF THE FLS-PROGRAM INTO A GENERAL SURGERY RESIDENCY? Phuong H Nguyen, MD, Ajita S Prabhu, MD, Yuliya Y Yurko, MD, Christina Acker, BS, Amy E Lincourt, PhD, B. Todd Heniford, MD, Dimitrios Stefanidis, MD, Carolinas Medical Center

P241 IS VIRTUAL REALITY WORTH IT? A COMPARISON OF BOX VERSUS VIRTUAL REALITY TRAINING Christopher J Myers, MD, Basil M Yurcisin, MD, Kfir Ben-David, MD, Juliet G Holder-Haynes, MD, Alexander Perez, MD, Rebecca Prince-Petersen, MD, Lindsey Sharp, MD, Alfonso Torquati, MD, Eric J DeMaria, MD, Aurora D Pryor, MD, Duke University

P242 IMPACT OF VIDEO-BASED TEACHING OF INTRACORPOREAL SUTURING ON LEARNERS' SELF-REPORTED CONFIDENCE LEVELS John T Paige, MD, Tong Yang, MD, Nicole Sharp, BS, Sheila W Chauvin, PhD, Louisiana State University Health Sciences Center

P243 IMPACT OF ADVANCED LAPAROSCOPY COURSES ON PRESENT SURGICAL PRACTICE Bhavin C Shah, MD, Matthew R Goede, MD, Rhonda J Prewitt, BS, Irene H Suh, MS, Corrigan McBride, MD, Dmitry Oleynikov, MD, Department Of Surgery, University of Nebraska Medical Center, Omaha, NE

P244 DEDICATED LAPAROSCOPIC SKILLS ONE MONTH ROTATION FOR GENERAL SURGERY INTERNS Ray I Gonzalez, Atul K Madan, MD, Jose M Martinez, MD, Danny Sleeman, MD, Diya I Alaadeen, MD, Emanuele Lo Menzo, MD, Alberto R Iglesias, MD, Alan S Livingstone, MD, Division of Laparoendoscopic and Bariatric Surgery, University of Miami Miller School of Medicine

P245 ADVANCES IN VIRTUAL REALITY FLS (FUNDAMENTALS OF LAPAROSCOPIC SKILLS) Henry Lin, MD, Ganesh Sankaranarayanan, PhD, Venkata S Arikatla, BS, Maureen Mulcare, BS, Likun Zhang, MSc, Suvranu De, PhD, Cao Caroline, PhD, Benjamin E Schneider, MD, Alexandre Derevianko, MD, Robert Lim, MD, David Fobert, BS, Steven D Schwaitsberg, MD, Daniel B Jones, MD, Beth Israel Deaconess Medical Center, Rensselaer Polytechnic Institute, Tufts University

P246 STRESS IMPAIRS THE PSYCHOMOTOR PERFORMANCE OF LAPAROSCOPIC NOVICES S Arora, BS, N Sevdalis, PhD, R Aggarwal, PhD, P Sirimanna, R Kneebone, PhD, A Darzi, PhD, Imperial College, London

P247 IMPROVING PATIENT OUTCOMES AND RESIDENT EDUCATION SIMULTANEOUSLY: INTRAOPERATIVE ENDOSCOPY FOR LAPAROSCOPIC GASTRIC BYPASS FIRST 100 PATIENTS IN A SINGLE CENTER EXPERIENCE Michael Kohlman, MD, Jeoffrey Slayden, MD, John Price, MD, G. Brent Sorensen, MD, University of Missouri, Kansas City

P248 TELEGRADING OF TECHNICAL SKILLS PORTION OF FUNDAMENTALS OF LAPAROSCOPIC SURGERY Ray I Gonzalez, Atul K Madan, MD, Leonardo Real, Diya I Alaadeen, MD, Alberto R Iglesias, MD, Emanuele Lo Menzo, MD, Jose M Martinez, MD, Division of Laparoendoscopic and Bariatric Surgery, University of Miami Miller School of Medicine

P249 A NOVEL AND PRECISE EVALUATION MODEL FOR PSYCHOMOTOR SKILLS IN ENDOSCOPIC SURGERY Satoshi Ieiri, MD, Kazuo Tanoue, MD, Kozo Konishi, MD, Yoshiro Kawabe, Takanori Nakatsuji, MD, Daisuke Yoshida, MD, Shohei Yamaguchi, MD, Go Aneagawa, MD, Kenoki Ohuchida, PhD, Hideo Uehara, MD, Naotaka Hashimoto, MD, Munenori Uemura, Takefumi Yasunaga, PhD, Jaesung Hong, PhD, Hajime Kenmotsu, Takahshi Maeda, MD, Makoto Hashizume, MD, Department of Advanced Medicine and Innovative Technology, Kyushu University Hospital

P250 REMOTE ROBOTIC TELEPRESENCE IS EFFICACIOUS IN THE MENTORING OF RESIDENTS AND STUDENTS IN THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY K S Blair, MD, J T Perry, MD, R K Lehmann, M I Haque, MD, K S Azarow, MD, R M Rush, MD, Department of Surgery and the Andersen Simulation Center, Madigan Army Medical Center, Tacoma, WA 98431

P251 LAPAROSCOPIC SKILL ACQUISITION WITH LAP SIM@VIRTUAL SIMULATORS: A COMPARATIVE STUDY Christian Villeda, MD, David Velázquez-Fernández, PhD, Patricio Santillán, MD, Miguel F Herrera, PhD, Juan P Pantoja, MD, Mauricio Sierra, MD, National Institute of Medical Sciences and Nutrition Salvador, Zuhirán.

P252 IMPACT OF TRAINING WITH AUTHORIZED TECHNICAL EXPERTS ON COLO-RECTAL LAPAROSCOPIC SKILLS; HANDS ON TRAINING AND STEP BY STEP TRAINING Takashi Iwata, MD, Mitsuo Shimada, MD, Toshihiro Nakao, MD, Tomohiko Miyatani, MD, Jun Higashijima, MD, Kozo Yoshikawa, MD, Masanori Nishioka, MD, Nobuhiro Kurita, MD, Dept. of Surgery, The Tokushima Univ.

P253 RANDOMIZED CONTROLLED TRIAL: COMPARING THE EFFECT OF TWO HIGH FIDELITY COMPUTER GAMES ON THE LEARNING CURVE IN LAPAROSCOPIC SURGERY Julian J Leong, MD, Alexander Hills, MD, Mariam Rana, MD, Daniel R Leff, MD, Peter J Brown, Thanos Athanasiou, MD, Ara W Darzi, MD, Department of Biosurgery and Surgical Technology, Imperial College London

P254 LEARNING CURVES IN LAPAROSCOPIC SURGERY – A SYSTEMATIC REVIEW Julian J Leong, MD, Melanie Armitage, MD, Ee Ling Heng, MD, Sanjay Purkayastha, MD, Daniel R Leff, MD, Thanos Athanasiou, MD, Ara W Darzi, MD, Department of Biosurgery and Surgical Technology, Imperial College London

Endolumenal / NOTES (also P546, P547)

P255 A NOVEL ACTIVE OVERTUBE FOR ENDOSCOPIC TREATMENT OF COLORECTAL TUMORS Kazuhiko Shinohara, MD, Gennai Yanagisawa, MSc, School of Bionics, Tokyo University of Technology

P256 HUMAN GALLBLADDER MEASUREMENTS AND IMPLICATIONS FOR NATURAL ORIFICE SURGERY Edward D Auyang, Edward S Chan, BA, Darren B van Beek, BS, Khashayar Vaziri, MD, Nathaniel J Soper, MD, Eric S Hungness, MD, Department of Surgery, Northwestern University

P257 SCARLESS ONE PORT TRANSUMBILICAL LAPAROSCOPIC SLEEVE GASTRECTOMY Fernando Arias, MD, Nubia Prada, MD, Hospital Universitario de la Fundación SantaFe de Bogota

P258 NATURAL ORIFICE SURGERY USING THE STOMAPHYX™ ENDOPLICATOR TO TREAT POUCH DILATATION AND GASTROGASTRIC FISTULA AFTER OPEN, NON-DIVIDED RYGB Melissa A deWolfe, DO, Curtis E Bower, MD, ECU Department of Surgery, Brody School of Medicine

P259 NOTES (NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY) INGUINAL HERNIA REPAIR: A SURVIVAL MODEL Danny A Sherwinter, MD, Maimonides Medical Center, Department of Minimally Invasive Surgery, Brooklyn, N.Y.

P260 TRANSVAGINAL ENDOSCOPIC TUBAL STERILIZATION – CASE REPORT Alcides J Branco Filho, MD, William Kondo, MD, Rafael W Noda, MD, Anibal W Branco, MD, Marlon Rangel, MD, Cruz Vermelha Hospital, Curitiba, Paraná, Brazil

P261 WHO'S AFRAID OF NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES)? Danny A Sherwinter, MD, Department of Minimally Invasive Surgery, Maimonides Medical Center, Brooklyn NY, USA

P262 INTRAOPERATIVE CARDIOPULMONARY EFFECTS OF NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) COMPARED TO TRADITIONAL SURGERY Danny A Sherwinter, MD, Department of Minimally Invasive Surgery, Maimonides Medical Center, Brooklyn NY, USA

P263 THE DEVELOPMENT AND TESTING OF NEW RIGID AND FLEXIBLE FIXATION STAPLERS FOR NOTES APPLICATIONS William Fox, BS, Sean Conlon, BS, Dave Griffith, BS, Greg Bakos, MS, Michelle T Lewis, BA, Kurt R Bally, BS, Suzanne Thompson, The NOTES Development Group, Ethicon Endo-Surgery, Cincinnati, Ohio

P264 TRANSVAGINAL DIAGNOSTIC PERITONEOSCOPY IN WOMEN WITH PELVIC PAIN Klaus Thaler, MD, Kelly M Sullivan, RN, Breton F Barrier, MD, Brent W Miedema, MD, University of Missouri

P265 ENDOSCOPIC MYOTOMY OF THE LOWER ESOPHAGEAL SPHINCTER—A MODEL FOR GASTROESOPHAGEAL REFLUX. E A Moran, MD, E Rajan, MD, J A Murray, MD, C J Gostout, MD, Mayo Clinic-Rochester, MN.





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P266 TRANSESOOPHAGEAL MEDIASTINAL LYMPH NODE

SAMPLING. E A Moran, MD, M J Levy, MD, E Rajan, MD, C J Gostout, MD, Mayo Clinic-Rochester, MN.

P267 MAGNETIC RETRACTION OF THE GALLBLADDER DURING NOTES TRANSVAGINAL CHOLECYSTECTOMY IN A PORCINE MODEL: A NOVEL TECHNIQUE

John R Romanelli (1), MD, David J Desilets (1), MD, Tyler E McLawhorn (2), BS, David B Earle (1), MD, (1) Baystate Medical Center, Tufts University School of Medicine, Springfield, MA and (2) Cook Endoscopy Inc., Winston-Salem, NC

P268 THE DIAGNOSTIC EFFICACY OF NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES): IS THERE A ROLE IN THE INTENSIVE CARE UNIT?

Joseph A Trunzo, MD, Benjamin K Poulouse, MD, Michael F McGee, MD, Mehrdad Nikfarjam, MD, Judy Jin, MD, Steve J Schomisch, BS, Raymond P Onders, MD, Alex Chaitoff, Amitabh Chak, MD, Jeffrey L Ponsky, MD, Jeffrey M Marks, MD, University Hospitals Case Medical Center

P269 PERORAL TRANSGASTRIC CHOLECYSTECTOMY: A CASE REPORT OF TWO HUMAN PATIENTS

Chinnusamy Palanivelu, MS, Pidigu Seshiyer Rajan, Ramakrishnan Parthasarathi, Palanisamy Senthilnathan, MS, GEM Hospital & Research Institute

P270 TRANSVAGINAL ENDOSCOPIC APPENDECTOMY IN HUMANS: AN UNIQUE APPROACH TO N.O.T.E.S - OUR INITIAL CASE SERIES

Chinnusamy Palanivelu, MS, Pidigu Seshiyer Rajan, MS, Ramakrishnan Parthasarathi, Palanisamy Senthilnathan, MS, GEM Hospital & Research Institute

P271 NATIONAL STUDY OF HIGHER SURGICAL TRAINEES AS ENDOSCOPISTS -

David Nasralla, MD, S Khan, MSc, B Soin, MSc, J Ramus, MSc, Department of General Surgery, Wexham Park Hospital, Slough, Berkshire, UK

P272 GASTROINTESTINAL BACTERIAL CLEARANCE LEVELIZER FOR NOTES USING A CLEANING UNIT AND A DIGITAL IMAGE ANALYZER WITH A CONFOCAL LASER MICROSCOPE

Takeshi Ohdaira, MD, Yoshikazu Yasuda, MD, Jichi Medical University Department of surgery

P273 COMPLETELY TRANSVAGINAL NOTES CHOLECYSTECTOMY IN A PORCINE MODEL USING NOVEL ENDOSCOPIC INSTRUMENTATION

Antonio O Castellvi, MD, Shou J Tang, MD, Deborah C Hogg, BS, Philip W Ho, BS, Lisa A Hollett, RN, Christopher O Olukoga, MD, Jeffery A Cadeddu, MD, Daniel J Scott, MD, Southwestern Center for Minimally Invasive Surgery, UT Southwestern Medical Center

P274 TRANSGASTRIC ENDOSCOPIC BLOODLESS LIVER RESECTION USING RADIOFREQUENCY THERMAL ENERGY. AN EXPERIMENTAL STUDY

Konstantinos G Tsalis, PhD, Emmanuil Christoforidis, PhD, Petros Ypsilandis, PhD, Konstantinos Blouhos, MD, Konstantinos Vasiliadis, PhD, Stavros Kalfadis, MD, Kristalia Moshota, Charalampos N Lazaridis, D' Surgical Department, Aristotle University of Thessaloniki Greece, Department of Experimental Surgery Demokritus University of Thrace Greece

P275 EVALUATION FOR DOUBLE BALLOON SEALING OF GASTRIC PERFORATION IN TRANSGASTRIC NOTES

Maki Sugimoto, MD, Veterans Affairs Palo Alto Health Care System, Stanford University, Teikyo University

P276 NOTES NEPHRECTOMY: SEARCHING FOR THE BEST PATH

Pierre Allemann, MD, Silvana Perretta, MD, Mitsuhiro Asakuma, MD, Bernard Dallemagne, MD, Jacques Marescaux, MD, IRCAD-EITS, University Louis Pasteur, Strasbourg, France

P277 TRANSGASTRIC ENDOSCOPIC PERITONEOSCOPY FOR EVALUATION OF THE ABDOMINAL WALL, ADHESIOLYSIS AND DIRECTION OF TROCAR PLACEMENT IN THE MORBIDLY OBESE

Peter N Nau, MD, Benjamin Yuh, BA, Joel Anderson, MD, Lynn Happel, MD, E. Christopher Ellison, MD, W. Scott Melvin, MD, Jeffrey Hazey, MD, Division of Minimally Invasive Surgery - Department of General Surgery, The Ohio State University School of Medicine, Columbus, OH USA

P278 NOVEL APPROACH TO NOTES GASTROTOMY CREATION USING THE ENDOSCOPIC CAP SUCTION TECHNIQUE

Denise W Gee, MD, Field F Willingham, MD, Brian G Turner, MD, Dae K Sohn, MD, Sevdenur Cizginer, MD, Yusuf Konuk, MD, Patricia Sylla, MD, William R Brugge, MD, David W Rattner, MD, Massachusetts General Hospital, Boston, MA, USA

P279 TOTAL TRANSGASTRIC APPENDECTOMY: A REALITY

John J Cullen, MD, Kari Thompson, MD, Bryan Sandler, MD, Adam Spivack, MD, Brian Wong, MD, Lauren Fischer, MD, Mark Talamini, MD, Santiago Horgan, MD, Department of Surgery, University of California, San Diego

P280 HYBRID TRANSVAGINAL NOTES SLEEVE GASTRECTOMY IN A PORCINE MODEL USING A MAGNETICALLY ANCHORED CAMERA AND NOVEL INSTRUMENTATION

Antonio O Castellvi, MD, Shou J Tang, MD, Richard Bergs, MS, Juan Paramo, BS, Deborah C Hogg, BS, Philip W Ho, BS, Lisa A Hollett, RN, Raul Fernandez, PhD, Jeffrey A Cadeddu, MD, Daniel J Scott, MD, Southwestern Center for Minimally Invasive Surgery, University of Texas Southwestern Medical Center

P281 DEVELOPMENT OF A PANCREATIC TUMOR ANIMAL MODEL AND ASSESSMENT OF FEASIBILITY OF NOTES™ TUMOR ENUCLEATION AS A MULTIDISCIPLINARY APPROACH - A NOSCART™-FUNDED PROJECT.

Kai Matthes, MD, Shyam J Thakkar, MD, Suck-Ho Lee, MD, Robert B Lim, MD, Johannes Janschek, MD, Alexandre Derevianko, MD, Stephanie B Jones, MD, Daniel B Jones, MD, Ram Chuttani, MD, Department of Surgery, Gastroenterology and Anesthesiology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

P282 NOTES TRANSGASTRIC CHOLECYSTECTOMY: ONE-YEAR FOLLOW-UP

Michael M Awad, MD, Peter M Denk, MD, Timothy Kennedy, MD, Michael B Ujiki, MD, Christy M Dunst, MD, Lee L Swanstrom, MD, Legacy Health Systems, Portland, Oregon, USA

P283 TRANSVAGINAL REPAIR OF A CHRONIC PORCINE VENTRAL HERNIA USING SYNTHETIC MESH.

Ben Powell, MD, Sharon Bachman, MD, J Astudillo, MD, Emanuel Sporn, MD, Brent Miedema, MD, Klaus Thaler, MD, University of Missouri

P284 INDICATIONS FOR NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY IN SURGICAL ONCOLOGY

Sascha S Chopra, MD, Karl Mrak, MD, Michael Huenerbein, MD, Department of General-, Visceral- and Transplantation Surgery, Charité Campus Virchow Clinic, University Medicine Berlin; Department of Surgery and Surgical Oncology, Charité Campus Buch, Universitätsmedizin Berlin, and Helios Hospital Berlin

P285 NOTES SPECIMEN RETRIEVAL USING NOVEL ENDOSCOPIC INSTRUMENTATION

Rohan A Joseph, MD, Michael A Donovan, MS, Matthew G Kaufman, BS, Nilson A Salas, MD, Patrick R Reardon, MD, Brian J Dunkin, MD, Department of Surgery, The Methodist Hospital, Houston- Texas

P286 FLEXIBLE ENDOSCOPIC SCISSORS: A COMPARATIVE STUDY

Rohan A Joseph, MD, Michael A Donovan, MS, Matthew G Kaufman, BS, Nilson A Salas, MD, Patrick R Reardon, MD, Brian J Dunkin, MD, Department of Surgery, The Methodist Hospital, Houston- Texas

P287 NOTES APPROACH TO ENDOSCOPIC GASTROPEXY: FEASIBILITY STUDY IN DOGS

Lynetta J Freeman, Mohammed Al-Haddad, MD, Emad Y Rahmani, MD, Toni Kwan, Cynthia Harris, MD, Don J Selzer, MD, Stuart Sherman, MD, Peter D Constable, 1Purdue University School of Veterinary Medicine, West Lafayette, IN, USA.; 2Department of Medicine, Division of Gastroenterology, Indiana University School of Medicine, Indianapolis, IN, USA.; 3Mafraq Hospital-SEHA, Abu Dhabi, UAE; 4Department of Surge

P288 GASTRIC BYPASS POUCH REVISION AND STOMA PLICATION: A NOVEL TECHNIQUE USING A NEW ENDOLUMINAL SUTURING DEVICE

Andrew S Wright, MD, Renato V Soares, MD, Martin I Montenovio, MD, Joo Ha Hwang, MD, Brant K Oelschlager, MD, University of Washington

P289 FUNCTIONAL AND COMPARATIVE EVALUATION OF FLEXIBLE MONOPOLAR ENDOSCOPIC SCISSORS.

E A Moran, MD, C J Gostout, MD, J Bingener, MD, Mayo Clinic-Rochester, MN.

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P290 NOVEL OVER-THE-SCOPE CLIP SYSTEM FOR NOTES

GASTROTOMY CLOSURE: AN EX VIVO COMPARISON

STUDY RP Voermans, BA, MI van Berge Henegouwen, BA, WA Bemelman, BA, C-N Ho, MSc, P Fockens, MD, 1 Dept. of Gastroenterology and Hepatology, 2Dept. of Surgery, Academic Medical Center, Amsterdam, the Netherlands

P291 CLINICAL FEASIBILITY OF A NEW COLONIC ACCESS DEVICE (MEGACHANNEL™) FOR INTERVENTIONAL PROCEDURES AT COLONOSCOPY: A PROSPECTIVE, MULTICENTER TRIAL

Gerd Silberhumer, MD, Arnulf Ferlitsch, MD, Wayne Noda, Tudor Birsan, MD, Nestor A Gomez, PhD, Gerhard Prager, PhD, Devendra Desai, PhD, Ajay Kumar, PhD, Guduru Rao, PhD, Christoph Gasche, PhD, Departments of Surgery, Gastroenterology and Hepatology and Medical University of Vienna, Austria; Minos Medical Inc. Irvine, CA; University of Guayaquil, Guayaquil, Ecuador; Hinduja Hospital, Mumbai, India; Indraprastha Apollo Hospital, New Delhi, India

P292 CLINICAL RESULTS OF ALTERNATIVE TECHNIQUE FOR N.O.T.E.S. TRANSVAGINAL CHOLECYSTECTOMY

Luiz DeCarli, Ricardo Zorron, Alcides J Branco, Fernando C Lima, Sergio R Pioneer, Marcos Tang, Jose I Sanseverino, Idilio Zamin, Rodrigo Seben, Andre Bigolin, Michel Gagner, Department of Surgery – Complexo Hospitalar Santa Casa de Porto Alegre- Brazil; Department of Surgery – Mount Sinai Medical Center- Miami; Department of Surgery, University Hospital Teresopolis HCTCO-FESO, Rio de Janeiro, Brazil

P293 TRANSGASTRIC ENDOSCOPIC PERITONEOSCOPY DOES NOT LEAD TO INCREASED RISK OF INFECTIOUS COMPLICATIONS

Joel B Anderson, MD, Bradley J Needleman, MD, Dean J Mikami, MD, Vimal K Narula, MD, Peter N Nau, MD, Rebecca Dettorre, Sebastian V Demyttenaere, MD, Brian J Winkleman, MD, W S Melvin, MD, Jeffrey W Hazey, MD, The Ohio State University Medical Center, Center for Minimally Invasive Surgery

P294 A SIMPLE AND EFFICIENT TECHNIQUE FOR NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) GASTROTOMY CLOSURE UTILIZING ENDOSCOPIC CLIPS AND LOOPS FACILITATED BY TEMPORARY TRANSFASCIAL SUTURES

Joseph A Trunzo, MD, Leandro T Cavazzola, MD, Michael F McGee, MD, Jamie Andrews, BS, Steve J Schomisch, BS, Jessica Bailey, BS, Young-Joon Lee, MD, Alex Chaitoff, Jeffrey L Ponsky, MD, Jeffrey M Marks, MD, University Hospitals Case Medical Center

P295 DEFINING THE HOST IMMUNE RESPONSE TO NOTES

Ward J Dunnican, MD, Vinay Sood, DO, **Warner Wang**, MD, T P Singh, MD, Susan Harrington, PhD, Amy Hahn, PhD, Ashar Ata, MPH, Karen Krause DVM, Ameer Mapara-Shah, MD, Albany Medical College

P296 NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) IN THE SETTING OF ACUTE ABDOMEN: Brian K Wong.

MD, Mark Talamini, MD, Garth Jacobsen, MD, Adam Spivak, MD, Kari Thompson, MD, Lauren Fischer, MD, Santiago Horgan, MD, University of California San Diego

Ergonomics / Instrumentation

P297 COMPARISON OF TWO DIFFERENT ENERGY-BASED VASCULAR SEALING SYSTEMS FOR THE HEMOSTASIS OF VARIOUS TYPES OF ARTERIES IN A PORCINE MODEL - EVALUATION OF LIGASURE FORCETRIAD -

Goutaro Katsuno, MD, Masaki Fukunaga, MD, Hidenori Tsumura, MD, Kazuyoshi Sugiyama, MD, Kunihiko Nagakari, MD, Masahiko Sugano, MD, Yoshifumi Ri, MD, Shuichi Sakamoto, MD, Masaru Suda, MD, Yoshito Iida, MD, Seiichirou Yoshikawa, MD, Masakazu Ouchi, MD, Yoshitomo Itou, MD, Yoshinori Hirasaki, MD, Kiichi Nagayasu, MD, Juntendo University Urayasu Hospital

P298 A NEW TECHNIQUE FOR FASCIA CLOSURE

Masahiro Ikeda, MD, Tadateru Takahashi, MD, Seiji Sadamoto, MD, Kazuhiro Toyota, MD, Satoshi Shibata, MD, Tamaki Nakatani, MD, Noriaki Tokumoto, MD, Koichi Akayama, MD, Yasufumi Saito, MD, Kazunori Uchida, MD, National Hospital Organization Higashihiroshima Medical Center, Higashihiroshima, Japan

P299 A PAIN IN THE NECK! THE RELATIONSHIP OF VIDEO

MONITORS TO SURGEON'S STRESS Gysung Lee, PhD, Nora Meenaghan, MD, David Dexter, MD, Tommy Lee, MD, F. Jacob Seagull, PhD, Carlos Godinez, MD, Adrian Park, MD, University of Maryland

P300 THE EFFECT OF TISSUE COMPRESSION ON STAPLE LINE

FAILURE S Myers, MD, W Rothermel, MD, E Dominguez, MD, O Ruiz, MD, J Hill, MD, M Durbin, MD, M Palasek, RN, C Noble, BS, Riverside Methodist Hospital, Columbus, Ohio

P301 BROAD-VIEW CAMERA SYSTEM FOR ENDOSCOPIC

SURGERY Tomohiro Kawahara, PhD, Masazumi Okajima, MD, Idaku Ishii, PhD, Takeshi Takaki, PhD, Daisuke Sumitani, MD, Makoto Yoshida, MD, Department of Endoscopic Surgery and Surgical Science, Graduate School of Biomedical Sciences, Hiroshima University

P302 SIMPLE TECHNIQUE OF LESS

Jyotsna S Kulkarni, MS, Sanjay B Kulkarni, MS, Ajit Dumawat, MS, Kulkarni Endo Surgery Institute, Pune, India

P303 EFFECT OF LAPAROSCOPIC SURGERY ON SURGEONS'

HEALTH Istvan Gal, PhD, Zoltan Szabo, PhD, Telki International Privat Hospital, Budapest-Telki, Hungary, M.O.E.T. Institute San Francisco, CA, USA

P304 COMPARATIVE ANALYSIS OF THE OPTICAL CHARACTERISTICS OF A FIXED-ANGLE, FLEXIBLE-TIP, AND VARIABLE-VIEW LAPAROSCOPE

Michael C Yip, BS, Eric D Jenkins, MD, Lora Melman, MD, Kathryn L Cook, Margaret M Frisella, RN, Brent D Matthews, MD, Department of Surgery, Section of Minimally Invasive Surgery, Washington University School of Medicine, St. Louis, Missouri

P305 USEFULNESS OF CO2 GAS CONDITIONER IN LAPAROSCOPIC

SURGERY Shuji Takiguchi, MD, Yoshiyuki Fujiwara, MD, Makoto Yamasaki, MD, Kiyokazu Nakajima, MD, Toshiro Nishida, MD, Mitsugu Sekimoto, MD, Masaki Mori, MD, Yuichirou Doki, MD, Dept. of Gastroenterological Surgery Osaka Univ.

P306 OPTIMIZED VESSEL SEALING UTILIZING TEMPERATURE

CONTROL Peter C Ng, MD, Yale D Podnos, MD, Linda S Oleson, James A Baker, SurgRx, Redwood City CA

Esophageal/Gastric Surgery (also P548, P549)

P307 THE COST OF ACHALASIA: QUANTIFYING THE EFFECT OF SYMPTOMATIC DISEASE ON PATIENT COST BURDEN, TREATMENT TIME AND DECREASED WORK PRODUCTIVITY

Rahima N Nenshi, MD, Julie Harnish, MSc, Stacey Steginsky, MSc, Binu Jacob, PhD, Paul Kortan, MD, Wayne Deitel, MD, Audrey Laporte, PhD, Gail Darling, MD, David R Urbach, MD, Department of Surgery, Toronto General Hospital

P308 LAPAROSCOPIC TOTAL GASTRECTOMY FOR CARDIA

CANCER WITH ESOPHAGEAL INVASION Tsukasa Oyama, MD, Takeshi Omori, MD, Katsuhide Yoshidome, MD, Masayuki Tori, MD, Shigeyuki Ueshima, MD, Masaaki Nakahara, MD, Hiroki Akamatsu, MD, Osaka Police Hospital

P309 LAPAROSCOPIC EXPERTISE INCREASES HOSPITAL VOLUME OF SURGICAL THERAPY FOR ACHALASIA

Brittany N Jones, William W Hope, MD, Charles J Dolce, MD, Amy E Lincourt, PhD, Timothy K Kuwada, MD, Kent W Kercher, MD, B. Todd Heniford, MD, Carolinas Medical Center

P310 INTRA-OPERATIVE OESOPHAGEAL MANOMETRY AS A

PREDICTOR OF POST-OPERATIVE DYSPHAGIA Mansoor A Khan, Elghellal Khaleel, Smythe Anne, Globe Jenny, Ackroyd Roger, Royal Hallamshire Hospital, Sheffield, UK

P311 OUR POUCH ROUX-Y RECONSTRUCTION TECHNIQUE AFTER

LAPAROSCOPICALLY ASSISTED TOTAL GASTRECTOMY Koji Hattori, PhD, Yukio Terashita, PhD, Ryouta Mori, PhD, Shinichiro Saito, MD, Nagoya Kyoritsu Hospital Nagoya-city Japan

P312 ONE YEAR SYMPTOM SCORES AFTER LAPAROSCOPIC ANTI-REFLUX SURGERY: IS THERE A LEARNING CURVE?

Kazuto Tsuboi, MD, Juliana Gazallo, MD, Fumiaki Yano, MD, Rudolf J Stadlhuber, MD, Sumeet K Mittal, MD, Department of Surgery, Creighton University Medical Center, Omaha, Nebraska, USA





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P313 MINIMALLY INVASIVE ESOPHAGECTOMY: INITIAL

EXPERIENCE Stephanie G Worrell, MS, Seemal Mumtaz, MD, Kazuto Tsuboi, PhD, Sumeet K Mittal, MD, Creighton University School of Medicine

P314 CLINICAL PROGNOSIS AFTER LAPAROSCOPIC ASSISTED GASTRECTOMY FOR 76 CASES WITH EARLY GASTRIC

CANCER Hiroshi Kawahira, MD, Hideki Hayashi, MD, Yoshihiro Nabeya, MD, Takashi Akai, MD, Takanori Nishimori, MD, Toshiyuki Natsume, MD, Hisahiro Matsubara, MD, Department of Esophago-Gastro-Intestinal Surgery, Chiba University Graduate School of Medicine

P315 LAPAROSCOPIC-ASSISTED DISTAL GASTRECTOMY FOR GASTRIC CANCER IN ELDERLY PATIENTS AGED 75 YEARS OR

OLDER Hidenori Fujii, MD, Yoshiyuki Kawakami, MD, Toshiharu Aotake, MD, Koji Doi, MD, Yuki Hirose, MD, Fukui red cross

P316 SUBMUCOSAL TUMORS AT THE GASTROESOPHAGEAL

JUNCTION: THE LAPAROSCOPIC APPROACH Raymond J. Gagliardi, MD, Almudena Moreno Elola-Olaso, MD, Jody J Johnson, DO, Amber Allen, MD, Center of Minimally Invasive Surgery, Department of General Surgery, University of Kentucky Medical Center, Lexington, Kentucky

P317 ROUX-EN-Y RECONSTRUCTION FOR FAILED

FUNDOPPLICATION Konstantinos I Makris, MD, Sumeet K Mittal, MD, Department of Surgery, Creighton University Medical Center

P318 THE TECHNIQUE SENTINEL LYMPH NODE BIOPSY IN LAPAROSCOPIC-ASSISTED DISTAL GASTRECTOMY AND

ASSESSMENT OF USEFULNESS COMPARED TO OPEN SURGERY Yasushi Rino, MD, Norio Yukawa, MD, Hitoshi Murakami, MD, Takashi Oshima, MD, Naoto Yamamoto, MD, Tsutomu Sato, Michiko Fukahori, Munetaka Masuda, Toshio Imada, Department of Surgery, Yokohama City University, School of Medicine

P319 COMPREHENSIVE SINGLE CENTER REVIEW OF IMPACT OF BODY MASS INDEX ON SYMPTOMATIC RESULTS OF LAPAROSCOPIC NISSEN FUNDOPPLICATION

Christopher S. McCullough, MD, Jon D Gabrielsen, MD, Iswanto Sucundy, MD, Nathan Lee, Audrey G Bolanowski, MD, Ravi J Chokshi, MD, Anthony T Petrick, MD, Geisinger Medical Center, Danville, PA

P320 LAPAROSCOPIC MANAGEMENT OF ACHALASIA:

MEDIUM-TERM OUTCOMES AFTER HELLER MYOTOMY AND FUNDOPPLICATION Sergio Diaz, MD, Jesus Vasquez, MD, Rogelio Matalillana, MD, Felipe Vanegas, MD, Maria C Arroyave, MD, Eugenia Lopez, MD, Ces University . Ces Clinic. Manuel Uribe Angel Hospital. Medellin, Colombia.

P321 LAPAROSCOPIC SURGERY FOR ACHALASIA; A

COMPARISON OF HELLER-TOUPET AND HELLER-DOR PROCEDURES Natsuya Katada, MD, Shinichi Sakuramoto, MD, Keishi Yamashita, MD, Shiro Kikuchi, MD, Masahiko Watanabe, MD, Department of Surgery, Kitasato University

P322 A NEW PROCEDURE FOR THE TREATMENT OF

GASTROESOPHAGEAL REFLUX DISEASE IN MORBIDLY OBESE PATIENTS Brian Binetti, MD, Tejinder P Singh, MD, Bernard Benedetto, MD, Ward Dunnican, MD, Bryan Bush, MD, Albany Medical Center, Albany, NY

P323 CLINICAL RESEARCH OF DIGESTIVE TRACT

RECONSTRUCTION PERFORMED WITH THE NICKEL-TITANIUM TEMPERATURE-DEPENDENT MEMORY-SHAPE DEVICE AFTER DISTAL GASTRECTOMY Xinxiang Li, MD, Shanjun Cai, MD, Jianxin Ye, MD, Zheng Shi, MD, Chengzhu Zheng, MD, Raul J Rosenthal, MD, Department of Colorectal Surgery, Fudan University Cancer Hospital

P324 LAPAROSCOPIC INTRAGASTRIC RESECTION OF GASTRIC MESENCHYMAL TUMOR LOCATED CLOSE TO THE ESOPHAGO-

GASTRIC JUNCTION Akihito Abe, PhD, Nobumi Tagaya, PhD, Masatsugu Tachibana, PhD, Keiichi Kubota, PhD, Second Department of Surgery, Dokkyo Medical University

P325 LAPAROSCOPIC-ASSISTED PANCREAS- AND SPLEEN-PRESERVING TOTAL GASTRECTOMY FOR GASTRIC CANCER AS COMPARED WITH OPEN TOTAL GASTRECTOMY

Shinichi Sakuramoto, MD, Shiro Kikuchi, MD, Nobue Futawatari, MD, Natsuya Katada, MD, Mitsuhiko Moriya, MD, Keishi Yamashita, MD, Masahiko Watanabe, MD, Kitasato University School of Medicine

P326 THE USE OF SMALL PORCINE BOWEL SUBMUCOSA MESH,

IN THE TREATMENT OF GASTROESOPHAGIC REFLUX. LONG TERM RESULTS Morris E Franklin, MD, Guillermo R Portillo, MD, Jeffrey L Glass, MD, John J Gonzalez, MD, Mike Renfrow, MD, Eduardo A Perez, Texas Endosurgery Institute

P327 ROBOT-ASSISTED LAPAROSCOPIC BELSEY FUNDOPLASTY

FOR GASTROESOPHAGEAL REFLUX Mohammed Kalan, MD, Farid Gharagozloo, MD, Barbara Tempesta, MS, Marc Margolis, MD, Andrew Nasser, MD, Claire Edwards, MD, Eric Strother, BS, Farzad Najam, MD, Washington Surgical Institute and Washington Institute Of Thoracic And Cardiovascular Surgery

P328 POSTERIOR PARTIAL FUNDOPLICATION PROVIDES

GOOD CONTROL OF REFLUX WITH A LOW INCIDENCE OF MECHANICAL COMPLICATIONS: A PROSPECTIVE REVIEW. M Almond, MD, M Emes, MD, M S Wadley, MD, Upper GI Unit, Department of Surgery, Worcestershire Royal Hospital, Worcester UK

P329 LAPAROSCOPIC NISSEN FUNDOPPLICATION WITH HIGHLY

SELECTIVE VAGOTOMY. A PILOT APPROACH FOR THE MANAGEMENT OF GASTROESOPHAGEAL REFLUX DISEASE. Niaz Selim, MD, Daniel Buckles, MD, Savio Reddymasu, MD, Richard McCallum, MD, UNIVERSITY OF KANSAS

P330 MOST LIKELY LEVEL OF IMPAIRED BOLUS TRANSIT

MEASURED BY MULTICHANNEL INTRALUMENAL IMPEDANCE Faiz Tuma, MD, Leena Khaitan, MD, University Hospitals Case Medical Center, Department of Surgery

P331 LIMITED RESECTION FOR EARLY ADENOCARCINOMA OF

THE ESOPHAGO-GASTRIC JUNCTION Joerg Theisen, MD, Marcus Feith, MD, Joerg-Ruediger Siewert, MD, Hubert Stein, MD, Dept. of Surgery, TU Munich, Munich, Germany

P334 ROBOT-ASSISTED THORACOSCOPIC HELLER MYOTOMY

FOR ACHALASIA Farid Gharagozloo, MD, Mohammed Kalan, MD, Marc Margolis, MD, Barbara Tempesta, MS, Andrew Nasser, MD, Eric Strother, BS, Farzad Najam, MD, Washington Institute Of Thoracic And Cardiovascular Surgery

P335 ROBOT-ASSISTED IVOR LEWIS ESOPHAGOGASTRECTOMY

FOR ESOPHAGEAL CANCER Andrew Nasser, MD, Mohammed Kalan, MD, Farid Gharagozloo, MD, Marc Margolis, MD, Eric Strother, BS, Faisal Al-Mufarrej, MD, Barbara Tempesta, MS, Farzad Najam, MD, Washington Institute Of Thoracic And Cardiovascular Surgery

P336 LAPAROSCOPIC STRATEGY FOR GASTRIC SUBMUCOSAL

TUMORS. Ken Hagiwara, MD, Minoru Matsuda, MD, Motoo Yamagata, MD, Shigeoki Hayashi, MD, Masashi Fujii, MD, Tadatoshi Takayama, MD, Department of gastrointestinal surgery, Nihon University, School of Medicine

P337 LAPAROSCOPIC TRANSLUMINAL EXCISION OF

GASTROESOPHAGEAL JUNCTION GIST TUMORS Francis E Rosato, Jr, MD, Karen A Chojnacki, MD, Ernest L Rosato, MD, Bernadette C Profeta, MD, David S Tichansky, MD, Thomas Jefferson University, Philadelphia, PA

P338 PHYSIOLOGY: THE KEY TO VALIDATING MANAGEMENT

TECHNIQUES IN GORD. Piriyah Sivagnanam, BS, Lee Hooper, PhD, Michael Rhodes, MD, Norfolk and Norwich University Hospital NHS Trust, Norfolk, UK

P339 USEFULNESS OF ULTRAFLEX STENTS SETTING FOR THE

MANAGEMENT OF TRACHEOBRONCHIAL STENOSIS IN ESOPHAGEAL CARCINOMA Yoshifumi Ikeda, MD, Junichi Takayama, MD, Hiroshi Takami, MD, Department of Surgery, Teikyo University School of Medicine

P340 THE RECURRENCE OF REFLUX ESOPHAGITIS AFTER

LAPAROSCOPIC FUNDOPLICATION FOR GASTROESOPHAGEAL REFLUX DISEASE Fumiaki Yano, MD, Kazuto Tsuboi, MD, Nobuo Omura, MD, Masato Hoshino, MD, Akira Matsumoto, MD, Hideyuki Kashiwagi, MD, Katsuhiko Yanaga, MD, Department of Surgery, Jikei University School of Medicine, Tokyo, Japan

P341 MICROSCOPIC FAT PROCESSING WITH HARVESTING OF

LYMPH NODES IN GASTRIC CANCER IMPROVES NODAL YIELD AND UPSTAGES N STATUS CJ Magee, MD, R Macadam, PhD, M Shrotri, MD, D Kerrigan, MD, Taylor W, University Hospital Alintree, UK

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P342 INFLUENCE OF AGE ON LONG-TERM SUBJECTIVE AND OBJECTIVE OUTCOMES OF LAPAROSCOPIC NISSEN FUNDOPLICATION. INITIAL EXPERIENCE FROM A SINGLE RURAL INSTITUTION Iswanto Sucandy, MD, Christopher Pfeifer, DO, Jon Gabrielsen, MD, Nathan, Anthony Petrick, MD, Geisinger Health System

P343 LONG-TERM SUBJECTIVE AND OBJECTIVE OUTCOMES OF LAPAROSCOPIC NISSEN FUNDOPLICATION WITH COLLIS GASTROPLASTY FOR SHORTENED ESOPHAGUS. INITIAL EXPERIENCE FROM A SINGLE RURAL INSTITUTION Iswanto Sucandy, MD, Christopher Pfeifer, DO, Jon Gabrielsen, MD, Nathan, Anthony Petrick, MD, Geisinger Health System

P345 ACCURACY OF THE ENDOFLIP™ FUNCTIONAL LUMEN IMAGING PROBE Fran Keating, BS, John ODea, PhD, Crospon, Galway, Ireland

P346 ANALYSIS OF FACTORS CONTRIBUTE TO LESS INVASIVENES OF LAPAROSCOPIC GASTRECTOMY COMPARED WITH CONVENTIONAL OPEN SURGERY FOR GASTRIC CANCER PATIENTS Natsume Toshiyuki, MD, Kawahira Hiroshi, MD, Hayashi Hideki, MD, Nabeya Yoshihiro, MD, Nishimori Takanori, MD, Akai Takashi, MD, Matsubara Hisahiro, MD, Matsushita Kazuyuki, MD, Nomura Fumio, MD, Department of Frontier Surgery, Chiba University Graduate School of Medicine

P347 GASTROINTESTINAL STENTING AS BRIDGE TO FUTURE SURGERY Michael W Cook, MD, Aziz Merchant, MD, Matthew Shane, MD, S. Scott Davis, MD, John F Sweeney, MD, Edward Lin, DO, Emory Endosurgery Unit, Emory University School of Medicine

P348 EVOLVING NATIONAL PRACTICE PATTERNS FOR MANAGEMENT OF PARAESOPHAGEAL HERNIA: A POPULATION BASED STUDY Thai H Pham, MD, Kyle A Perry, MD, Eugene Y Chang, MD, Brian S Diggs, PhD, John G Hunter, MD, Brett C Sheppard, MD, Oregon Health and Science University

P349 LOWER ESOPHAGEAL SPHINCTER PRESSURE CORRELATES WITH OUTCOMES OF LAPAROSCOPIC HELLER MYOTOMY IN PREVIOUSLY TREATED ACHALASIA Arman Kilic, BS, Arjun Pennathur, MD, James D Luketich, MD, Rodney J Landreneau, MD, Matthew J Schuchert, MD, The Heart, Lung, and Esophageal Surgery Institute, University of Pittsburgh Medical Center

P351 "Y" FUNDOPLICATION FOR GASTROESOPHAGEAL REFLUX DISEASE: EVALUATION OF 80 CONSECUTIVE CASES Jorge A Fernandez, MD, Iker Leon, MD, Gonzalo Vargas, MD, Alonso Lopez, MD, Hospital Español de Mexico

P352 ASSESSMENT OF GASTRIC CONDUIT ISCHEMIA FOLLOWING ESOPHAGECTOMY: THE ROLE OF CT-SCAN VS. EARLY ENDOSCOPY Arzu Oezcelik, MD, Farzaneh Banki, MD, Shahin Ayazi, MD, Emmanuele Abate, MD, Joerg Zehetner, MD, Weisheng Chen, Jeffrey A Hagen, Steven R DeMeester, John C Lipham, Tom R DeMeester, Department of Surgery, Keck School of Medicine, University of Southern California

P353 UPPER GI CONTRAST STUDY AS PREOPERATIVE PLANNING TOOL IN FUNDOPLICATION PATIENTS Jessica Evans, MD, David Earle, MD, Baystate Medical Center

P354 PREOPERATIVE ANGULATION OF THE DISTAL ESOPHAGUS AND OUTCOME AFTER HELLER MYOTOMY AND ANTERIOR FUNDOPLICATION FOR ACHALASIA Sharona B Ross, MD, Kellie M McFarlin, MD, Connor A Morton, BS, Sarah Eisen, BS, Alexander S Rosemurgy, MD, University of South Florida

P355 EVALUATION OF INTRAOPERATIVE STRATEGIES AND RECURRENCES AFTER LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR Ramy H Fouad, MD, Patrick Gatmaitan, MD, Joseph Talarico, MD, Ali Elhorr, MD, Philip Schauer, MD, Stacy Brethauer, MD, Matthew Kroh, MD, Bipan Chand, MD, Cleveland Clinic, Cleveland, OH

P356 ACHALASIA COMPLICATED BY EPIPHRENIC DIVERTICULUM IS WELL TREATED BY LAPAROSCOPIC DIVERTICULECTOMY, HELLER MYOTOMY, AND ANTERIOR FUNDOPLICATION Kellie M McFarlin, MD, Sharona B Ross, MD, Connor A Morton, BS, Emily Kramer, BS, Andrew Tanelus, Alexander S Rosemurgy, MD, University of South Florida

P357 USE OF LAPAROSCOPIC INTRA-CORPOREAL SUTURING IN ESOPHAGOJEJUNOSTOMY FOR RE-ESTABLISHING GASTROINTESTINAL CONTINUITY AFTER GASTRECTOMY: REPORT OF TWO CONSECUTIVE CASES Fariba Dayhim, MD, Timothy Oppermann, MD, Patrick Reardon, MD, Craig Fischer, MD, Brian Dunkin, MD, Shanda Blackmon, MD, Garth Davis, MD, Robert Davis, MD, The Methodist Hospital

P358 LYMPH NODE DISSECTION IN OPEN VERSUS LAPAROSCOPIC GASTRECTOMY FOR GASTRIC CANCER Ricardo Yañez, MD, Ricardo Funke, MD, Gustavo Pérez, MD, Camilo Boza, MD, Luis Ibáñez, MD, Fernando Pimentel, MD, Alex Escalona, MD, Department of Digestive Surgery. Faculty of Medicine. Pontificia Universidad Católica de Chile

P359 UPPER GI CANCER STAGING PRACTICES AMONG SURGEONS IN UK A Vats, K Nagpal, K Ahmed, M Jenkins, K Moorthy, Imperial College, UK

P360 OLD AGE DOES NOT AFFECT OUTCOMES OF LAPAROSCOPIC ESOPHAGOMYOTOMY AND DOR FUNDOPLICATION FOR ACHALASIA Jonathan T Carter, MD, Garrett R Roll, MD, Sandi W Ma, BA, Matthew P Sweet, MD, Rene M Ramirez, MD, Guilherme M Campos, MD, Marco G Patti, MD, Lawrence W Way, MD, University of California-San Francisco and University of Chicago

P361 THE IMPACT OF GASTRIC TIP NECROSIS ON CLINICAL OUTCOMES FOLLOWING ESOPHAGECTOMY. Matthew J Schuchert, MD, Ghulam Abbas, MD, Brian L Pettiford, MD, James R Landreneau, MPH, Stephen Spagnol, Marco Santana, Joshua P Landreneau, BS, Bilal Piracha, BS, Katie S Nason, MD, Arjun Pennathur, MD, Arman Kilic, MD, Alicia Clark-Oostdyk, Blair A Jobe, James D Luketich, Heart, Lung and Esophageal Surgery Institute; UPMC Health System

P362 UPDATED EXPERIENCE WITH MINIMALLY INVASIVE ESOPHAGECTOMY AT AN ACADEMIC INSTITUTION: COMPARISON BETWEEN OPEN AND LAPAROSCOPIC TRANSIATIAL APPROACHES Jooyeun Chung, MD, Amy Campfield, BA, Adam Berger, MD, Karen Chojnacki, MD, Francis E Rosato, Jr, MD, Bernadette Profeta, MD, Ernest Rosato, MD, Thomas Jefferson University Hospital

P363 COMPARATIVE ANALYSIS OF EFFECTIVENESS OF ENDOSCOPIC SURGICAL TECHNIQUES IN THE MANAGEMENT OF OESOPHAGEAL CANCER Kamal Nagpal, MS, D Yakoub, PhD, A Vats, K Ahmed, K Moorthy, MD, T Athanasiou, PhD, G Hanna, PhD, Department of Biosurgery & Surgical Technology, Imperial College, London

P364 PERITONEAL CYTOLOGY IN UPPER GI CANCERS- DILEMMA CONTINUES K Nagpal, A Vats, M Jenkins, K Ahmed, K Moorthy, Imperial College, UK

P365 ESOPHAGECTOMY IN THE ELDERLY: A COMPARISON BETWEEN MINIMALLY INVASIVE AND OPEN TECHNIQUES Thomas Fabian, MD, Jeremiah Martin, MD, Desmond D'Souza, MD, John Federico, MD, Alicia Mckelvey, MD, Hospital of saint Raphael

P366 LAPAROSCOPIC MANAGEMENT OF A DISLODGED PEG TUBE Peter V Cherian, Ravi J Chokshi, Derick J Christian, Saint Francis Medical Center

Flexible Endoscopy

P367 INFLAMMATORY MYOGLANDULAR POLYP OF THE RIGHT COLON IN A PATIENT WITH HEMATOCHESIA AND INTERMITTENT RECTAL PAIN. Courtney T Masse, BS, Izaskun M Iglesias, MD, Eduardo Smith Singares, MD, Rush University College of Medicine, Saint Anthony Hospital

P368 40TH ANNIVERSARY OF THE FIRST ENDOSCOPIC RETROGRADE PANCREATOGRAM Fredrick J Brody, MD, Todd A Ponsky, MD, Brian J Dunkin, MD, Khashayar Vaziri, MD, George Washington University Medical Center, Washington DC, Rainbow Babies and Children's Hospital, Cleveland OH, The Methodist Hospital, Houston TX

P369 ENDOSCOPIC TISSUE FUSION FOR WEIGHT REGAIN AFTER GASTRIC BYPASS: DOES IT HELP? M Bagloo, MD, JK Saunders, MD, M Parikh, MD, G Fielding, MD, C Ren, MD, J Cohen, MD, M Kurian, NYU School of Medicine



SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P370 DILATION OF ANASTOMOTIC STRICTURES AFTER

TRANSILIATL ESOPHAGECTOMIES Diya I Alaadeen, MD, Charles Y Ro, MD, Alberto R Iglesias, MD, Emanuele LoMenzo, MD, Atul K Madan, MD, Jose M Martinez, MD, Division of Laparoendoscopic Surgery, University of Miami Miller School of Medicine

P371 SINGLE INCISION EXPERIENCE AT SAN DIEGO: THE

EVOLUTION OF CLEAR IMAGING Garth Jacobsen, MD, Kari Thompson, MD, Adam Spivack, MD, Lauren Fischer, MD, Brian Wong, MD, John Cullen, MD, Mark Talamini, MD, Santiago Horgan, MD, Department of Surgery, University of California, San Diego

P372 ENDOSCOPIC ULTRASOUND-GUIDED GASTROSTOMY

AFTER ROUX-EN-Y GASTRIC BYPASS: A NOVEL APPROACH Natasha M Rueth, MD, Sayeed Ikramuddin, MD, Shawn S Groth, MD, Rafael Andrade, MD, Division of Thoracic and Foregut Surgery and Division of Gastrointestinal Surgery, Department of Surgery, University of Minnesota

P373 ESOPHAGEAL DILATATION FOR CORROSIVE STRICTURE OF THE ESOPHAGUS

Chadin Tharavej, Chulalongkorn University

P374 ACCESSING THE GASTRIC REMNANT AFTER ROUX-EN-Y

GASTRIC BYPASS J Zink, MD, J Talarico, MD, F Moustarah, MD, A Cha, MD, M Kroh, MD, S Brethauer, MD, P Schauer, MD, B Chand, MD, Bariatric and Metabolic Institute, The Cleveland Clinic

P375 THE PREDICTIVE VALUE OF PET/CT FINDINGS SUSPICIOUS FOR COLORECTAL CANCER IN PATIENTS WITH NON-

GASTROINTESTINAL MALIGNANCIES John S Beatty, MD, Hadyn T Williams, MD, Angela L Gucwa, MD, William T Parker, MD, Edward J Kruse, DO, Bruce V MacFadyen, MD, David S Lind, MD, James M McLoughlin, MD, Medical College of Georgia

P376 ESOPHAGEAL ULCERS AT A LARGE URBAN EMERGENCY

HOSPITAL: A SEVENTEEN YEAR EXPERIENCE Hale Wills, MD, Akiko Chino, MD, Takuji Yamasaki, MD, Choichi Sugawa, MD, Department of Surgery, Wayne State University, Detroit, MI 48201

P377 DUODENOSCOPE CHOICE IN PEDIATRIC ERCP

Jose M Martinez, MD, Diya I Alaadeen, MD, Oscar Aljure, MD, Emanuele LoMenzo, MD, Alberto R Iglesias, MD, Atul K Madan, MD, Division of Laparoendoscopic Surgery, University of Miami Miller School of Medicine

P378 SPLENIC INJURY AFTER THERAPEUTIC ERCP

Subramanian T Suppiah, BS, Zohreen Bheriani, BS, Carlos Ortega, MD, Izaskun M Iglesias, MD, Eduardo Smith Singares, MD, Rush University College of Medicine, Saint Anthony Hospital

P379 EFFICACY AND SAFETY IN PEDIATRIC ERCP BY A SURGICAL

ENDOSCOPIST Jose M Martinez, MD, Diya I Alaadeen, MD, Oscar Aljure, MD, Emanuele LoMenzo, MD, Alberto R Iglesias, MD, Atul K Madan, MD, Division of Laparoendoscopic Surgery, University of Miami Miller School of Medicine

P380 FEASIBILITY OF TRANSABDOMINAL DIAGNOSTIC

PERITONEOSCOPY USING A FLEXIBLE ENDOSCOPE Kevin M McGill, MD, Nikalesh Ippagunta, MD, Jawad Latif, MD, Konstantinos Rizas, MD, Julio A Teixeira, MD, St. Luke's-Roosevelt Hospital Center New York, NY

P381 FEASIBILITY OF DIAGNOSTIC PERITONEOSCOPY USING A FLEXIBLE ENDOSCOPE UNDER LOW PRESSURE

PNEUMOPERITONEUM Nikalesh Ippagunta, MD, Kevin McGill, MD, Jawad Latif, MD, Konstantinos Rizas, MD, Julio A Teixeira, MD, St Luke's Roosevelt Hospital Center New York NY

P382 CONTRIBUTION OF FLEXIBLE ENDOSCOPY IN TRAUMA

REIMBURSEMENT S Nijhawan, MD, R K Chung, MD, R Treat, MD, N A Ahmed, MD, Fairview Hospital (CCHS), Huron Hospital (CCHS)

P383 USE OF A NOVEL BEDSIDE ENDOSCOPY CART TO TEACH

SURGERY RESIDENTS Rohan Joseph, MD, Brian J Dunkin, MD, Rob Todd, MD, The Methodist Hospital, Houston, TX

P384 USE OF ENDOSCOPIC STENTS IN THE TREATMENT OF UPPER

GASTROINTESTINAL LEAKS FOLLOWING BARIATRIC SURGERY Diego Awruch, MD, Manoel Galvao, MD, Fernando Pimentel, MD, Almino Ramos, MD, Luis Ibáñez, MD, Alan Sharp, MD, Alex Escalona, MD, Department of Digestive Surgery, Faculty of Medicine, Pontificia Universidad Católica de Chile. Gastro-Obeso-Center. Sao Paulo. Brazil

P385 ENDOSCOPIC FINDINGS IN PATIENTS WITH UPPER GI

SYMPTOMS AFTER ROUX-EN-Y GASTRIC BYPASS Amy Cha, MD, Joseph Talarico, MD, Jill Zink, MD, Fady Moustarah, MD, Allen Mikhail, MD, Shaneeta Johnson, MD, Vasanth Stalin, MD, Matthew Kroh, MD, Stacy Brethauer, MD, Philip Schauer, MD, Bipan Chand, MD, Bariatric and Metabolic Institute, Cleveland Clinic Foundation

Hepatobiliary / Pancreatic Surgery

P386 LAPAROSCOPIC MANAGEMENT OF TYPE VI CHOLEDOCHAL

CYSTS Edward S Chan, BA, Edward D Auyang, MD, Eric S Hungness, MD, Department of Surgery, Northwestern University

P387 SINGLE PORT CHOLECYSTECTOMY

Brian Binetti, MD, Tejinder P Singh, MD, Ward Dunnican, MD, Dmitriy Yukhvid, BA, Albany Medical Center, Albany, NY

P388 LAPAROSCOPIC RIGHT PORTAL VEIN LIGATION FOR

METASTATIC LIVER TUMORS Hitoshi Inagaki, MD, Tsuyoshi Kurokawa, MD, Tadashi Yokoyama, MD, Nobuhiro Ito, MD, Manabu Kikuchi, MD, Yasuhisa Yokoyama, MD, Toshiaki Nonami, MD, Yokoyama Hospital for Gastroenterological Diseases

P389 PREOPERATIVE EVALUATION OF THE ACCESSORY HEPATIC

DUCTS IN THE CALOT TRIANGLE WITH THE 3-DIMENSIONAL CT IMAGE OF CHOLANGIOGRAM (3D-DIC-CT) TO AVOID ITS INJURY AT LAPAROSCOPIC CHOLECYSTECTOMY. Minoru Kakiara, MD, Eiichi Sugawara, MD, Yoshiki Kajiwara, MD, Yoshitaka Kiyota, MD, Toshimichi Takigawa, MD, Taichi Satoh, MD, Kiyoshi Nishiyama, MD, Nobuaki Kawarabayashi, MD, Kazuo Hatsuse, MD, Junji Yamamoto, MD, Department of Surgery, National Defense Medical College, Japan. 　

P390 USEFULNESS OF LAPAROSCOPIC HEPATECTOMY FOR

EXTRAHEPATIC PROTRUDING-TYPE HEPATOCELLULAR CARCINOMA Nobuhiro Ito, MD, Hitoshi Inagaki, MD, Tsuyoshi Kurokawa, MD, Toshiaki Nonami, MD, Department of Gastroenterological surgery, Aichi Medical University

P391 TRUE DAY CASE LAPAROSCOPIC CHOLECYSTECTOMY IN

A DGH: OUTCOMES AND FACTORS LEADING TO OVERNIGHT ADMISSION Zaher Toumi, MD, Sara White, BA, S Sharma, Kishore Pursnani, Central Manchester University Hospitals, Lancashire Teaching Hospitals

P392 COMPARISON OF LAPAROSCOPIC CBD EXPLORATION, ERCP

AND OPEN CHOLEDOCHOLITHOTOMY FOR LARGE CBD CALCULI Gurvinder S Jamu, MS, Jammu Hospital Jalandhar Punjab India

P393 TREATMENT OF LIVER TUMORS USING A NOVEL BIPOLAR

RADIOFREQUENCY ABLATION DEVICE Hisae Aoki, MD, Lawrence W Way, MD, Carlos U Corvera, MD, Department of Surgery, University of California, San Francisco

P394 LAPAROSCOPIC CHOLECYSTECTOMY IN SITUS INVERSUS

ABDOMINIS Michael A Sawyer, MD, Videoendoscopic Surgical Institute of Oklahoma, Comanche County Memorial Hospital, Lawton, Oklahoma

P395 ALTERNATIVE TREATMENT OF ACUTE PANCREATITIS

Alexey V Ligonenko, MD, Poltava State Stomatological Medical School, Ukraine

P396 PYLEPHLEBITIS FOLLOWING INFECTED

CHOLEDOCHOLITHIASIS, ENDOSCOPIC RETROGRADE CHOLANGIO-PANCREATOGRAPHY AND CHOLECYSTECTOMY. Eric A Wieman, MD, Anne Kobberman, MD, Robert Kenney, DO, Kelly Andresen, MD, Daniel Margolin, MD, 1) University of Kansas City Missouri 2) Saint Lukes Hospital, Kansas City

P397 RETROSPECTIVE ANALAYS OF 12 CASES POLYPS OF THE

GALL BLADDER Ibrahim M Cosgun, Mahir M Bagci, A.Cem M Gürgen, Türker M Bilgin, Etimesgut Asker Hastanesi

P398 ASSESSING THE POTENTIAL AND LIMITATIONS OF

LAPAROSCOPIC ULTRASOUND IN THE STAGING OF PANCREATIC CANCERS A Samee, MD, M Abu Hilal, MD, K Moorthy, MD, M Deakin, MD, MA Kazem, MD, CVN Cheruvu, MD, University Hospital of North Staffordshire

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P399 LAPAROSCOPIC MANAGEMENT OF PATIENTS WITH EARLY FORMS OF GALLBLADDER CANCER Xabier de Aretxabala, MD, Jorge Leon, MD, Ivan Roa, MD, Juan Hepp, MD, Fernando Maluenda, MD, Clinica Alemana Santiago Chile

P400 FLUORESCENT CHOLANGIOGRAPHY DURING LAPAROSCOPIC CHOLECYSTECTOMY BY INTRAVENOUS INJECTION OF INDOCYANINE GREEN Takeaki Ishizawa, MD, Arata Muraoka, MD, Masayoshi Ijichi, PhD, Koji Kusaka, PhD, Masayuki Shibasaki, PhD, Yasutsugu Bandai, PhD, Norihiro Kokudo, PhD, Department of Surgery, Central Hospital of Social Health Insurance

P401 ESTABLISHING ND:YAG LASER BASED LEFT LATERAL LIVER RESECTION: COMPARISON OF OPEN, LAPAROSCOPIC AND HAND ASSISTED APPROACH IN A PORCINE MODEL Sascha S Chopra, MD, Georg Wiltberger, Sven C Schmidt, MD, Ulf Teichgraeber, MD, Guido Schumacher, MD, Department of General-, Visceral- and Transplantation Surgery, Charité Campus Virchow Clinic, University Medicine Berlin; Department of Radiology, Charité Campus Mitte, University Medicine Berlin

P402 LAPAROSCOPIC TREATMENT OF INTRASPLENIC PANCREATIC PSEUDOCYST Emanuele Lo Menzo, MD, Alberto Iglesias, MD, Ann-Christine Brady, MD, Diya Alaadeen, MD, Jose M Martinez, Seth A Spector, MD, Atul K Madan, Miami VA Healthcare System & University of Miami, Miami, FL, USA

P403 CLINICAL OUTCOMES OF LAPAROSCOPIC PYLORUS PRESERVING PANCREATODUODENECTOMY (L-PPPD): COMPARISON OF LAPAROSCOPIC ASSISTED PPPD TO TOTALLY LAPAROSCOPIC PPPPD Song C Kim, MD, Duck J Han, MD, Kwan T Park, MD, Young H Kim, MD, Hae R Ha, RN, Hae R Seo, RN, Dept of Surgery, Ulsan University College of Medicine & Asan Medical Center

P404 LAPAROSCOPIC HEPATIC RESECTION FOR PATIENTS WITH HEPATOCELLULAR CARCINOMA: COMPARATIVE ANALYSIS OF SHORT-TERM RESULTS Satoru Imura, MD, Mitsuo Shimada, PhD, Yuji Morine, MD, Hirofumi Kanemura, MD, Hideaki Uchiyama, MD, Nobuhiro Kurita, MD, Hidenori Miyake, PhD, Department of Surgery, The University of Tokushima, Japan

P405 PROSPECTIVE EVALUATION OF THE ONCOLOGIC OUTCOME AFTER LAPAROSCOPIC RESECTION OF MALIGNANT LIVER TUMORS Gurkan Tellioglu, MD, John Fung, MD, Eren Berber, MD, Cleveland Clinic General Surgery

P406 LAPAROSCOPIC TREATMENT OF HYDATID CYST OF THE LIVER: A SINGLE INSTITUTIONAL EXPERIENCE Ibrahim A Salama, MD, Mahameed H Abdelrahman, MD, Elamir M Amir, MD, Department of Hepatobiliary Surgery1, Department of pathology 2, departement of parasitology 3National Liver Institute, Menophya University, Egypt

P407 INTRAPERITONEAL ROPIVACAINE WASHOUT FOR REDUCTION OF PAIN AFTER LAPAROSCOPIC CHOLECYSTECTOMY : A PROSPECTIVE RANDOMIZED STUDY In Taik Chang, MD, Jun Seok Park, MD, Beom Gyu Kim, MD, Yoo Shin Choi, MD, Hyun Kang, MD, Jin Yun Kim, MD, Sun Gyo Park, MD, Department of Surgery, Department of Anesthesiology and Pain Medicine, College of Medicine, Chung-Ang University

P408 COMPARATIVE CLINICAL ANALYSIS OF 111 CASES CONVERTED TO OPEN PROCEDURE DURING LAPAROSCOPIC CHOLECYSTECTOMY OF 2,523 CASES Beom Gyu Kim, MD, In Taik Chang, MD, Yoo Shin Choi, MD, Sung Jun Park, MD, Seong Jae Cha, MD, Jun Seok Park, MD, Department of Surgery, College of Medicine, Chung-Ang University

P409 LAPAROSCOPIC ROUX-EN-Y HEPATICO- OR CHOLEDOCH- JEJUNOSTOMY IN THE ERA OF LAPAROSCOPIC SURGERY Ho-Seong Han, MD, Yoo-Seok Yoon, MD, Jai Young Cho, MD, Department of the Surgery, Seoul National University Bundang Hospital

P410 LAPAROSCOPIC ASSISTED ANATOMICAL LIVER RESECTION UTILIZING THE HANGING TECHNIQUE Osamu Itano, MD, Naokazu Chiba, MD, Hideo Matsui, MD, Go Oshima, MD, Takeyuki Wada, MD, Hideki Ishikawa, MD, Yasumasa Koyama, MD, Yuko Kitagawa, MD, Endoscopic Surgery Center, Eiju General Hospital, Tokyo, Japan, Department of Surgery, Tokai University, Kanagawa, Japan, Department of Surgery, Keio University, School of Medicine, Tokyo, Japan

P411 MAGNETIC RESONANCE GUIDED LAPAROSCOPIC LIVER RESECTION IN A HIGH FIELD OPEN MR Sascha S Chopra, MD, Ioannis Papanikolaou, MD, Ivo Van der Voort, MD, Ulf Teichgraeber, MD, Sven C Schmidt, MD, Guido Schumacher, MD, Department of General-, Visceral- and Transplantation Surgery, Charité Campus Virchow Clinic, University Medicine Berlin; Department of Radiology, Charité Campus Mitte, University Medicine Berlin; Department of Gastroenterology, Charité Campus Virchow Cl

P412 IS LAPAROSCOPIC SURGERY AS SAFE AS OPEN RESECTION FOR LIVER TUMORS? Vanita Ahuja, MD, Ani Fleisig, MD, Partha Ray, MD, David Chang, PhD, Gagandeep Singh, MD, John Wayne Cancer Institute and Johns Hopkins Medical Institute

P413 COMPARISON OF LAPAROSCOPIC HEPATICOJEJUNOSTOMY AND OPEN HEPATICOJEJUNOSTOMY IN BENIGN EXTRA HEPATIC BILIARY TREE PATHOLOGIES Gurvinder Jamu, MS, Jammu Hospital, Jalandhar Punjab, INDIA

P414 CT-GUIDED VS. LAPAROSCOPIC RADIOFREQUENCY ABLATION (RFA): A COMPARISON OF MORBIDITY AND HOSPITAL COST Maria A Cassera, BS, Kevin W Potter, MD, Michael M Awad, MD PhD, Timothy J Kennedy, MD, Michael B Ujiki, MD, Paul D Hansen, MD, Providence Portland Medical Center, Liver and Pancreas Surgery Program, Portland, Oregon, USA.

P415 LAPAROSCOPIC TREATMENT FOR HEPATOLITHIASIS In Seok Choi, PhD, Jea Hyuck Lim, MD, Heyn Sik Min, MD, Dae Kyung Go, MD, Dae Sung Yoon, Won Jun Choi, Konyang University Hospital, Daejeon, Korea

P416 LAPAROSCOPIC CHOLEDOCHOTOMY IN PATIENTS WITH PREVIOUS OPEN CHOLEDOCHOTOMY Bac Hoang Nguyen, MD, Tuan Le Quan Anh, MD, Thinh Nguyen Huu, MD, University Medical Center Ho Chi Minh City VietNam

P417 ANALYSIS OF 9 CASES OF PANCREATICOBILIARY DUCTAL MALJUNCTION WITHOUT COMMON BILE DUCT DILATATION BASED ON INTRAOPERATIVE CHOLANGIOGRAPHY DURING LAPAROSCOPIC CHOLECYSTECTOMY Shoji Fukuyama, MD, Hiromi Tokumura, MD, Akihiro Yasumoto, MD, Hiroyuki Sasaki, MD, Naoki Matsumura, MD, Mitsuo Yamasaki, MD, Hiroaki Musha, MD, Kenichi Takahashi, MD, Takashi Toshima, MD, Yuji Funayama, MD, Tohoku Rosai Hospital, Department Of Surgery

P418 LAPAROSCOPIC APPROACH IN THE DISTAL PANCREATIC TUMOR SURGERY Emanuele Lezoche, MD, Alessandro M Paganini, MD, Giancarlo D'Ambrosio, Luciana Barchetti, MD, Pietro Ursi, MD, bernardina Fabiani, MD, Daniele Scoglio, MD, Domenico Vitolo, MD, Chirurgia Endolaparoscopica e Tecnologie Avanzate, Department of Surgery "Paride Stefanini", University of Rome "La Sapienza", Rome, Italy

P419 LAPAROSCOPIC CHOLECYSTECTOMY (LC) AND COMMON BILE DUCT EXPLORATION (CBDE) IN PATIENTS WITH A PREVIOUS GASTRIC RESECTION Emanuele Lezoche, MD, Alessandro M Paganini, PhD, Mario Guerrieri, MD, Ilenia Sarnari, MD, Giancarlo D'Ambrosio, MD, Luciana Barchetti, MD, Pietro Ursi, MD, Bernardina Fabiani, MD, Daniele Scoglio, MD, Department of General Surgery, Il Clinica Chirurgica, Università "La Sapienza", Rome *Azienda Ospedaliera Universitaria Ospedali Riuniti, Ancona, Italy

P420 COMPARISON OF OUTCOMES AFTER LAPROSCOPIC AND OPEN DISTAL PANCREATECTOMIES Benny Liliav, MD, Vijayasimha R Pothula, MD, Charles Choy, MD, Gene Coppa, MD, Staten Island University Hospital

P421 WHICH CASE OF PREOPERATIVE SUSPECTED GALLBLADDER CANCER IS MOST APPROPRIATE FOR LAPAROSCOPIC CHOLECYSTECTOMY ? Hiroyuki Katagiri, PhD, Maki Kitamura, MD, Mina Waraya, MD, Satoshi Hosoya, MD, Kenichiro Ishii, PhD, Yoshihito Takahashi, PhD, Kazunori Furuta, PhD, Masahiko Watanabe, PhD, Department of surgery, Kitasato university, School of medicine

P422 THE EFFECT OF COLECTOMY ON PANCREATIC INFECTIONS IN A MODEL OF EXPERIMENTALLY INDUCED ACUTE PANCREATITIS. Taner Yigit, MD, Rahman Senocak, MD, Ali Harlak, MD, Öner Mentes, MD, Abdullah Kilinc, MD, Armagan Günel, MD, Orhan Kozak, MD, Turgut Tufan, MD, Gülhane Military Medical Academy Dep. of General Surgery, Microbiology and Pathology





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P423 LAPAROSCOPIC AND ENDOSCOPIC MANAGEMENT OF

BILIARY ASCARIASIS ON A 2 YEAR OLD Vivencio Jose P Villafior, MD, Ray I Sarmiento, MD, Aldwin G Adigue, MD, Tawina I Gravela, MD, Vivencio V Villafior, MD, Dagupan Doctors Villafior Memorial Hospital/Delci

P424 LAPAROSCOPIC ENUCLEATION OF PANCREATIC TUMORS

Zahra Shafae, MD, Leaque Ahmed, MD, Brice Gayet, MD, Department of Digestive Diseases, Institut Mutualiste Montsouris and Department of Surgery, Columbia University Medical Center

P425 IN THE ERA OF NOTES, A COSMETIC AND SECURE

APPROACH TO LAPAROSCOPIC CHOLECYSTECTOMY. Carlos A Schiavon, MD, Patricia M Noujaim, MD, José Luis L Correa, MD, Ricardo V Cohen, MD, Baros Institute

P426 IMPACT OF LAPAROSCOPIC CHOLECYSTECTOMY ON

OPERATIVE TIME IN THE ELDERLY Marty Zdichavsky, MD, Yasser Bashin, MD, Stephan Coerper, MD, Gunnar Blumenstock, MD, Michael A Kramer, MD, Alfred Königsrainer, MD, Department of General, Visceral and Transplant Surgery, University Hospital Tübingen, Germany

P427 THE THERAPEUTIC USE OF LAPAROSCOPY IN THE

ICU Andronikos Karasakalides, MD, Kostas Kapoutsis, MD, Sofia Triantafillidou, MD, Dimitris Lagonidis, MD, Christina Mpoumpourea, MD, Kostas Ligasis, MD, Giannitsa General Hospital, Giannitsa, Greece

P428 THE USE OF INTRAOPERATIVE CHOLANGIOGRAPHY IN

PATIENTS WITH EMPYEMA OF THE GALLBLADDER Andronikos Karasakalides, MD, Kostas Kapoutsis, MD, Sofia Triantafillidou, MD, Giannitsa General Hospital, Giannitsa, Greece

P429 TECHNIQUE FOR LAPAROSCOPIC-ASSISTED FORMAL RIGHT

HEPATECTOMY, DECONSTRUCTED Edward Lin, DO, Aziz M Merchant, MD, Michael W Cook, MD, John R Galloway, MD, John F Sweeney, MD, Juan M Sarmiento, MD, Emory Endosurgery Unit, Division of Gastrointestinal & General Surgery, Emory University School of Medicine

P430 COMPARISON OF SPLEEN PRESERVING LAPAROSCOPIC

DISTAL PANCREATECTOMY WITH EN BLOC LAPAROSCOPIC DISTAL PANCREATECTOMY: 55 VS 90 CASES Kwan Tae Park, PhD, Song Chul Kim, PhD, Young Hoon Kim, MD, Duck Jong Han, PhD, Dept. of Surgery, Asan Medical Center, College of Medicine Ulsan University

P431 LAPAROSCOPIC LIVER RESECTION AND THE USE OF

TORSIONAL ULTRASOUND DISSECTORS FOR PARENCHYMAL LIVER DISSECTION Mohamed Abu Hilal, BS, Peter J Swan, BS, M W Zuccharo, BS, T Scibelli, BS, Neil W Pearce, BS, Hepatobiliary and Pancreatic Surgical Unit, Southampton General Hospital, UK

P432 LAPAROSCOPIC LIVER RESECTION FOR LOCALIZED

PRIMARY INTRAHEPATIC BILE DUCT DILATATION Ibrahim Dagher, PhD, Papa Saloum Diop, MD, Alessio Carloni, MD, Panagiotis Lainas, MD, Dominique Franco, PhD, 1. Department of General Surgery, Antoine Bécère Hospital, AP-HP, Clamart, F-92140, France; 2. Univ Paris-Sud, Orsay, F-91405

P433 LAPAROSCOPIC CENTRAL PANCREATECTOMY FOR

PANCREATIC BODY LESIONS: REPORT OF 6 CASES INCLUDING TOTALLY INTRACORPOREAL TECHNIQUE Kwan Tae Park, PhD, Song Chul Kim, PhD, Young Hoon Kim, MD, Duck Jong Han, PhD, Dept. of Surgery, Asan Medical Center, College of Medicine Ulsan University

P434 CLIPLESS MINILAPAROSCOPIC CHOLECYSTECTOMY: A

COMPARATIVE COST STUDY FOR A MINIMALLY INVASIVE AND COST EFFECTIVE PROCEDURE. Gustavo L Carvalho, PhD, Marco A Cesário, MD, José Sérgio N Silva, Pedro Paulo C de Albuquerque, Raphael M Coelho, Frederico W Silva, MD, Faculdade De Ciências Médicas Da Universidade De Pernambuco (Fcm/Upe), Clínica Cirúrgica Videolaparoscópica Gustavo Carvalho And Unidade De Pesquisa Clínica Do Hospital Universitário Oswaldo Cruz - Unipeclin, Recife - Pe, Brazil.

P435 ROBOT-ASSISTED BILIARY RECONSTRUCTION - SHORT-

TERM OUTCOMES WITH MINIMALLY-INVASIVE ROUX-EN-Y HEPATICOJEJUNOSTOMY Mark S Choh, MD, Alexandra B Roginsky, MD, Francesco M Bianco, MD, Enrique F Elli, MD, Pier C Giulianotti, MD, University of Illinois-Chicago

P436 SINGLE PORT ACCESS (SPATM) CHOLECYSTECTOMY:

PRESERVATION OF THE CRITICAL VIEW Erica R Podolsky, MD, Andrew S Wu, MD, Paul G Curcillo, II, MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

P437 LAPAROSCOPIC ENUCLEATION OF PANCREAS TAIL OR

HEAD LESION: REPORT OF 13 CASES Kwan Tae Park, PhD, Song Chul Kim, PhD, Young Hoon Kim, MD, Duck Jong Han, PhD, Soo Kyoung Jung, PhD, Dept. of Surgery, Asan Medical Center, College of Medicine Ulsan University

P438 SINGLE PORT ACCESS (SPA) CHOLECYSTECTOMY:

A COMPARISON TO STANDARD MULTIPORT CHOLECYSTECTOMY Erica R Podolsky, MD, Andrew S Wu, MD, Steven J Rottman, MD, Paul G Curcillo, II, MD, Department of Surgery, Drexel University, College of Medicine, Philadelphia, PA

P439 MICROWAVE ABLATION WITH 915 MHZ VS 2.45 GHZ.

WHAT IS THE DIFFERENCE? Edward W Kubek, MD, Michael C Meadows, MD, Stephen M Smeaton, MD, John B Martinie, MD, David A Iannitti, MD, Srikanth Padma, MD, Carolinas Medical Center, Charlotte, NC

P440 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY:

SHORT-TERM OUTCOMES Dennis Eschete, MD, Nitin Mishra, MD, Matthew Ostrowitz, MD, Eugene Rubach, MD, Gary Gecelter, MD, George Denoto, MD, North Shore Long Island Jewish Health System, Manhasset NY

P441 ARE WE FOLLOWING GUIDELINES FOR THE MANAGEMENT

OF ACUTE PANCREATITIS? Kamal Nagpal, MS, Andy Haggerty, Jim Tiernan, Doncaster & Bassetlaw NHS Trust, Doncaster, UK

P442 LAPAROSCOPIC COMMON BILE DUCT

EXPLORATION(LCBDE) IN CBD STONES In Seok Choi, PhD, Nak Song Sung, MD, Dae Kyung Ko, MD, Heyn Sik Min, MD, Dae Sung Yoon, MD, Won Jun Choi, MD, Konyang University Hospital, Daejeon, Korea

P443 LAPAROSCOPIC HEPATECTOMY

In Seok Choi, PhD, Jea Hyuck Lim, MD, Dae Kyung Ko, MD, Heyn Sik Min, MD, Dae Sung Yoon, Won Jun Choi, MD, Konyang University Hospital, Daejeon, Korea

P444 2MM LAPAROSCOPIC CHOLECYSTECTOMY: THE CORRECT

FIRST STEP BEFORE ADVANCING TO NOTES Timothy Oppermann, MD, Fariba Dayhim, MD, Brian Dunkin, MD, Garth Davis, MD, Robert Davis, MD, Patrick Reardon, MD, Department of Surgery, The Methodist Hospital, Houston, TX

P445 LESSONS LEARNED IN SINGLE INCISION LAPAROSCOPIC

CHOLECYSTECTOMY Linda Szczurek, DO, Mark Salcone, DO, Seema Dhorajia, DO, Larry Cohen, DO, Marc Neff, University of Medicine and Dentistry of New Jersey SOM

Hernia Surgery

P447 THE COMBINED LAPAROSCOPIC APPROACH TO

INCARCERATED INGUINAL HERNIA Aviad Hoffman, MD, Eyal Leshem, MD, Oded Zmora, MD, Moshe Shabtai, MD, Amarm Ayalon, MD, Danny Rosin, MD, Sheba Medical Center, Tel Hashomer, Israel

P448 EXPERIENCE WITH THE GORE ABSORBABLE PLUG IN

LAPAROSCOPIC INGUINAL HERNIA REPAIR Carl A Weiss III MD, PhD, Auburn Memorial Hospital

P449 LAPAROSCOPIC REPAIR OF POSTEROLATERAL TRAUMATIC

LUMBAR HERNIA, "IT'S WORTH THE WAIT!" Joey M George, MD, Thomas J Schroepel, MD, Louis J Magnotti, MD, Timothy C Fabian, MD, Martin A Croce, MD, University of Tennessee Health Science Center

P450 PROSPECTIVE RANDOMIZED COMPARISON OF

CONVENTIONAL LIGTENSTEIN VERSUS SELF-ADHESIVE MESH REPAIR FOR INGUINAL HERNIA. Ziya A Anadol, MD, Ekmel Tezel, MD, Gazi University School of Medicine Department of Surgery

P451 MINIMALLY INVASIVE TENSION FREE REPAIR OF

EPIGASTRIC HERNIAS WITH DIASTASIS RECTI Prasanta K Raj, MD, Samuel Bae, MD, Fairview Hospital-a Cleveland Clinic Hospital

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P453 IS PROPHYLACTIC LAPAROSCOPIC TOTAL

EXTRAPERITONEAL INGUINAL HERNIA REPAIR ON CONTRALATERAL SIDE JUSTIFIED: A COMPARATIVE STUDY OF BILATERAL TO UNILATERAL REPAIR IN 1754 HERNIAS Mohamed Ismail, MS, Pankaj Garg, MS, Moulana Hospital, Perianthalamanna, Kerala, India; MM Institute of Medical Sciences and Research, Mullana, Haryana, India; Fortis Super- Specialty Hospital, Mohali, Punjab, India

P454 LAPAROSCOPIC VENTRAL HERNIA REPAIR HAS AN ADVANTAGE OF DETECTING OCCULT HERNIA DEFECTS

Hitoshi Idani, MD, Hiroshi Sasaki, MD, Takashi Yoshioka, MD, Shinya Asami, MD, Shinichiro Kubo, MD, Yohei Kurose, MD, Hiroki Nojima, MD, Masahiko Muro, MD, Tetsumasa Yamashita, MD, Masataka Hirata, MD, Kenjiro Kumano, MD, Hitoshi Kin, MD, Department of Surgery Fukuyama City Hospital, Department of Surgery Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences

P455 A NOVEL TECHNIQUE FOR BIOMATERIAL REPAIR OF HIATAL HERNIAS

Brian Binetti, MD, Tejinder P Singh, MD, Ward Dunnican, MD, Albany Medical Center, Albany, NY

P456 TRANSABDOMINAL PRE-PERITONEAL LAPAROSCOPIC HERNIA REPAIR ALLOWS DIAGNOSIS AND APPROPRIATE TREATMENT OF OCCULT BILATERAL HERNIAS

D van Dellen, MD, H Jones, MD, M S Wadley, MD, Department of Surgery, Worcestershire Royal Hospital, Worcester UK

P457 TEP REPAIR OF A BILATERAL OBTURATOR HERNIA

Marco Maricevich, MD, James Butterworth, MD, Renata Maricevich, MD, David Farley, MD, Mayo Clinic - Rochester, MN

P458 IS IT NECESSARY TO DO EXPLORATION OF THE RIGHT SIDE DURING TEP REPAIR FOR THE LEFT INGUINAL HERNIA?

Choon Sik Chung, MD, Jeong Eun Lee, MD, Yong Geul Joh, MD, Dong Keun Lee, MD, Department of Surgery, Hansol Hospital

P459 IS UNILATERAL LAPAROSCOPIC TEP INGUINAL HERNIA REPAIR A JOB HALF DONE? A CASE IN FAVOR OF BILATERAL REPAIRS.

Pawanindra Lal, MD, Prejesh Philips, MD, Jagdish Chander, MD, V K Ramteke, MD, Department of Surgery, Maulana Azad Medical College, New Delhi, India.

P460 COMPARATIVE ANALYSIS OF FREESTANDING AMBULATORY SURGERY CENTER UTILIZATION FOR INGUINAL HERNIA REPAIR

Rachel C Forbes, MD, Michael D Holzman, MD, Kenneth W Sharp, MD, Willie V Melvin, MD, Jeffrey M Marks, MD, Michael J Rosen, MD, Benjamin K Poulos, MD, Vanderbilt University Medical Center; University Hospitals Case Medical Center

P461 LAPAROSCOPIC TOTALLY EXTRAPERITONEAL HERNIA REPAIR VERSUS OPEN HERNIA REPAIR: COMPARISON OF PERIOPERATIVE OUTCOMES

Hang Joo Cho, MD, Kee Hwan Kim, MD, Ji Il Kim, MD, Chang Hyeok An, MD, Jeong Soo Kim, Seung Jin Yoo, Keun Woo Lim, Department of surgery, Uijongbu St. Mary's Hospital, The Catholic University of Korea.

P462 FEASIBILITY AND POTENTIAL ADVANTAGES OF TRANSPOROUS MESH FIXATION BY A LAPAROSCOPIC SPRAY SYSTEM (LSS) IN INGUINAL HERNIA REPAIR

René H Fortelny, MD, Alexander H Petter Puchner, MD, Karl S Glaser, MD, Heinz Redl, PhD, II. Department of General Surgery, Wilhelminenspital, Vienna, Austria, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology,

P463 LAPAROSCOPIC REPAIR OF INCISIONAL HERNIAS FOLLOWING RENAL TRANSPLANTATION

Rafik A El-Sabrou, MD, Kerri E Buch, MS, Khalid M Butt, MD, New York Medical College, Mount Sinai Medical Center, New York

P464 THE IMPACT OF DIFFERENT COMMERCIALLY AVAILABLE ANTIADHESIVE BARRIERS IN EXPERIMENTAL IPOM HERNIA REPAIR USING A POLYPROPYLENE MESH

Alexander H Petter-Puchner, MD, Simone Gruber-Blum, MD, Julian Brand, René H Fortelny, MD, Heinz Redl, PhD, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna

P465 COULD TOTAL EXTRAPERITONEAL HERNIA REPAIR DONE UNDER SPINAL ANESTHESIA WITHOUT FIXATION OF MESH BE RECOMMENDED AS THE FIRST LINE PROCEDURE FOR UNILATERAL INGUINAL HERNIAS?

Pankaj Garg, MS, Shanemeet Singh, MD, Mohamed Ismail, MS, 1. MM Institute of Medical Sciences and Research, Mullana, Haryana, India. 2. Fortis Super Specialty Hospital, Mohali, Punjab, India. 3. Moulana Hospital, Perianthalamanna, Kerala, India

P466 FLEXIBLE ENDOSCOPIC SUB-RECTAL SHEATH TUNNELING ALLOWING INTRAPERITONEAL VISUALIZATION DURING SINGLE INCISION VENTRAL HERNIA MESH REPAIR

Nikalesh Ippagunta, MD, Jawad M Latif, MD, Kevin McGill, MD, James J McGinty, MD, Avinash Burra, MS, Contastinos Rizas, MD, Faiz Y Bhora, MD, George J Todd, MD, Scott J Belsley, MD, St Luke's Roosevelt Hospital Centre

P467 ABDOMINAL HERNIAS: CAN WE DETERMINE DEFECT SIZE?

Dennis Eschete, MD, Karl LeBlanc, MD, Surgeons Group of Baton Rouge, Baton Rouge, La 70808

P468 NATIONWIDE TRENDS IN INCISIONAL HERNIAS IN THE ERA OF LAPAROSCOPIC SURGERY

Usama Qumsieh, MD, Marek Rudnicki, MD, Wendy Weller, PhD, Advocate Illinois Masonic Medical Center, Albany School of public health

P469 TECHNIQUE AND OUTCOMES FOR PATIENTS REQUIRING LAPAROSCOPIC SURGERY AFTER LARGE VENTRAL HERNIA REPAIRS

Atif Iqbal, MD, Archana Ramaswamy, MD, Bruce Ramshaw, MD, Department of General Surgery, University of Missouri Columbia, Columbia, MO

P470 LAPAROSCOPIC INCISIONAL HERNIA REPAIR IN ORTHOTOPIC LIVER TRANSPLANT PATIENTS

Janine N Pettiford, MD, John Sweeney, MD, Behnoud Beroukhim, BS, Vadim Sherman, MD, Baylor College of Medicine

P471 PRESENTATION, DEMOGRAPHICS, AND SURGICAL MANAGEMENT OF BOCHDALEK HERNIAS IN ADULTS.

John D Horton, MD, John C Coleman, MD, Jason M Johnson, DO, William Beaumont Army Medical Center

P472 VENTRAL HERNIA REPAIR IN PATIENTS WITH CIRRHOSIS.

Carlos G Martinez, MD, Afshin Eslami, MD, Huseyin Kadikoy, BS, Vadim Sherman, MD, Baylor College of Medicine, Michael E. DeBakey Department of Surgery, Houston, TX

P473 HISTOLOGIC AND IMMUNOHISTOCHEMICAL EVALUATION OF HUMAN ACELLULAR DERMAL MATRICES

David J Dexter, MD, D L Hamlin, J S Roth, University of Maryland Medical Center

P474 LAPAROSCOPIC PARAESOPHAGEAL HERNIA REPAIR: AN EIGHT YEAR EXPERIENCE

Jennifer E Keller, MD, Suman Medda, Michael H Raymond, Dimitrios Stefanidis, MD, Kent W Kercher, MD, B. Todd Heniford, MD, Division of GI and Minimally Invasive Surgery, Carolinas Medical Center, Charlotte, NC

P475 PREOPERATIVE PAIN DOES NOT PREDICT POSTOPERATIVE PAIN IN INGUINAL AND VENTRAL HERNIA REPAIR

Ajita S Prabhu, MD, S Bringman, MD, B J Ramshaw, MD, T Divilio, MD, D Simpkins, MD, C Romanowski, MD, AE Lincourt, PhD, BT Heniford, MD, Carolinas Medical Center

Minimally Invasive Other

P476 THE ROLE OF MINI-INVASIVE SURGERY IN MANAGEMENT OF ACUTE CHOLANGITIS AND OTHER COMPLICATIONS OF GALLSTONE DISEASE

Viktor N Chernov, PhD, Abdulkadir Yakubu, MD, Rinat S Tinchurin, PhD, Rostov State Medical University

P477 OUTCOMES OF A HYBRID TECHNIQUE FOR VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS) PULMONARY RESECTION IN A COMMUNITY-BASED PRACTICE

Roger H Kim, MD, Kazuaki Takabe, MD, Charles G Lockhart, MD, Virginia Commonwealth University, Richmond, VA, VCU Massey Cancer Center, Richmond, VA, Chippenham and Johnston-Willis Medical Center, Richmond, VA

P478 APPENDECTOMY TRENDS LEAD TO ONE MAIN ROAD: LAPAROSCOPY

Luke J Hofmann, DO, Sukhyung Lee, MD, James N Elder, MD, John P Schriver, MD, William Beaumont Army Medical Center





SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

- P479 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY (SILC) STEP BY STEP: REFINING THE TECHNIQUE** A Kandeel, MD, A Meguid, MD, A Hawasli, MD, St John Hospital & Medical Center, Detroit, Michigan
- P480 TIME FOR A SERIOUS LOOK AT SAFE AND EFFECTIVE MANEUVERS OF OPEN SURGERY. HARMONIZATION WITH OPEN SURGERY.** Shahram Nazari, MD, Semira Mousavi Khosroshahi, MD, H.Reza Sarie, MD, Afshin Amini, Erfan Hospital
- P481 TRANSUMBILICAL LAPAROSCOPIC UROLOGIC SURGERY – ARE SPECIAL DEVICES STRICTLY NECESSARY?** Anibal W Branco, MD, Alcides J Branco Filho, MD, William Kondo, MD, Luciano C Stunitz, MD, Cruz Vermelha Hospital, Curitiba, Paraná, Brazil
- P482 MDCT NAVIGATION FOR LAPAROSCOPIC APPENDECTOMY VIA A SINGLE UMBILICAL INCISION** Keiichi Fujino, MD, Minoru Kakihara, MD, Atsuki Noji, Tamio Yamasaki, MD, Hidekazu Yano, MD, Tonami Sato, MD, Hiroyuki Kobayashi, MD, Seiji Kado, MD, Nobuo Kugai, MD, Department of general medicine, National Defense Medical College, Japan
- P483 “INVISIBLE CHOLECYSTECTOMY” INITIAL EXPERIENCE OF HYBRID CHOLECYSTECTOMY** Carlos Alexandre G Fonseca, MD, Josemberg Marins, PhD, Manoel Galvão, MD, Instituto de Endoscopia de Natal, UFPE, Gastro Obeso Center-
- P484 A RIGID ACCESS PORT FOR TRANSUMBILICAL SURGERY** Stuart I Brown, PhD, Timothy G Frank, PhD, James L Gove, James D Martin, Ian Rutherford, Leslie Kelly, Alfred Cuschieri, MD, IMSat University of Dundee
- P485 HALS NEPHRECTOMY AND DISTAL PANCREATECTOMY: APPROACH FOR DONOR BENEFITS IN SIMULTANEOUS PANCREAS AND KIDNEY TRANSPLANT** Naotake Akutsu, MD, Michihiro Maruyama, MD, Chikara Iwashita, MD, Kazunori Otsuki, MD, Taihei Ito, MD, Kenichi Saigo, MD, Takashi Kenmochi, MD, Department of Surgery, Chiba-East National Hospital, National Hospital Organization (NHO)
- P486 LAPAROSCOPIC SURGERY FOR SPLENIC ARTERY ANEURYSM -REPORT OF A CASE-** Atsushi Iida, MD, Kei Honda, MD, Akio Yamaguchi, MD, First Department of Surgery, University of Fukui
- P487 CONSECUTIVE CASE SERIES OF SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY** Katie Love, MD, Curtis E Bower, MD, ECU Department of Surgery, Brody School of Medicine
- P488 INCIDENTAL GALLBLADDER CANCER AFTER LAPAROSCOPIC CHOLECYSTECTOMY AND THE NEED OF A COMPLETE STAGING** Thorsten O Goetze, PhD, Vittorio Paolucci, Ketteler- Clinic Department of Surgery
- P489 THE PERFORATION OF THE GALLBLADDER IN CASES OF INCIDENTAL GALLBLADDER CANCER- INDICATION FOR THE USE OF RETRIEVAL BAGS?** Thorsten O Goetze, PhD, Vittorio Paolucci, PhD, Ketteler- Clinic Department of Surgery
- P490 LAPAROSCOPIC SINGLE-ACCESS APPENDECTOMY** Dimitrios Tsakayannis, MD, Andreas Kiriakopoulos, MD, Dimitrios Linos, MD, Department of Surgery, Hygeia Hospital, Athens, Greece
- P491 ENDOSCOPIC AXILLARY SURGERY** Jiri Vokurka, PhD, Jitka Vokurkova, PhD, Michal Kaspar, MD, Tomas Paseka, MD, Stanislav Krejsta, MD, Surgical Dept. Hospital Boskovice, St. Anna's Faculty Hospital, Masaryk University Brno
- P492 NEEDLESCOPIC LUNG BIOPSY IN INTERSTITIAL LUNG DISEASE USING TWO-LUNG VENTILATION ANESTHESIA WITH LOW TIDAL VOLUME** Hyun Koo Kim, MD, Doo Young Kang, MD, Heezoo Kim, MD, Young Ho Choi, MD, Sang Ho Lim, MD, College of Medicine, Korea University Guro Hospital
- P493 ROLE OF VIDEO-ASSISTED THORACOSCOPIC ANATOMICAL LUNG RESECTIONS** Masahide Murasugi, PhD, Masato Kanzaki, PhD, Naoko Wachi, MD, Tamami Isaka, PhD, Toshio Shimizu, PhD, Toyohide Ikeda, PhD, Kunihiro Oyama, PhD, Takamasa Onuki, PhD, Sumio Nitta, PhD, Tokyo Women's Medical University, Department of Surgery, Chest Institute, Tokyo, JAPAN

- P494 THE TREATMENT OF URACHAL REMNANTS BY LAPAROSCOPIC ASSISTANT OPERATION** Li GuiBin, MD, Chen YuFeng, MS, Qiu Yun, MD, The 5th Central Hospital of TianJin China
- P495 3D VISION ENHANCES TASK PERFORMANCE INDEPENDENT OF THE SURGICAL METHOD** Oliver J Wagner, MD, Monika E Hagen, MD, A Kurmann, MD, Philipp Morel, PhD, Daniel Candinas, PhD, Stephan A Vorburger, MSc, Division of Digestive Surgery, University Hospital Geneva and Department of Visceral and Transplantation Surgery, Inselspital, University Hospital Bern, Switzerland
- P496 LAPAROSCOPIC INTRAOPERATIVE HYPERTHERMIC CHEMOPERFUSION FOLLOWING RADICAL TOTAL GASTRECTOMY: A NOVEL TECHNIQUE** Naresh K Ahuja, MD, Swati Patel, MD, Ramesh Ramanathan, MD, Departement of Surgery, University of Pittsburgh, Pittsburgh, PA
- P497 FINANCIAL IMPACT OF LAPAROSCOPIC SURGERY AT A HIGH-VOLUME ACADEMIC CENTER** Guillaume Martel, MD, Husein Moloo, MD, Gino Picciano, MS, Robin P Boushey, MD, Eric C Poulin, MD, Joseph Mamazza, MD, The Ottawa Hospital, University of Ottawa, Ottawa, ON, Canada
- P498 LAPAROSCOPIC REPAIR OF BLUNT DIAPHRAGM INJURY** Dustin W Smith, MD, Todd Nickloes, DO, Rob Wilmoth, MD, Department of Surgery, University of Tennessee Graduate School of Medicine
- P499 LAPAROSCOPIC REPOSITIONING OF VENTRICULOPERITONEAL SHUNT DUE TO CEREBROSPINAL FLUID PSEUDOCYST: A CASE SERIES IN ADOLESCENTS** T P Mayfield, MD, B A Hiser, MD, I Igbaseimokumo, MD, S L Bachman, MD, University of Missouri-Columbia, Columbia, MO, USA
- P500 FEASIBILITY AND EFFICACY OF OPTIMAL PERITONEAL DIALYSIS CATHETER PLACEMENT USING A LAPAROSCOPIC TECHNIQUE** Adrian G Dan, MD, Brian Lenczewski, MD, Sean Rines, Steven Schultz, BS, John Zografakis, MD, Akron City Hospital - Summa Health System - NorthEastern Ohio Universities College of Medicine
- P501 NEEDLE INGESTION : LAPAROSCOPIC AND ENDOSCOPIC TAILORED APPROACH** Hang Joo Cho, MD, Kee Hwan Kim, MD, Ji Il Kim, MD, Chang Hyeok An, MD, Jeong Soo Kim, MD, Seung Jin Yoo, MD, Keun Woo Lim, MD, Department of Surgery, Uijongbu St. Mary Hospital, The Catholic University of Korea.
- P502 OPERATIVE RISK FACTORS INFLUENCING EARLY MORTALITY IN LAPAROSCOPIC REPAIR FOR PERFORATED PEPTIC ULCERS** Dennis Wong, MD, Simon Wong, MD, Wing Tai Siu, MD, Michael Li, MD, Department of Surgery, Pamela Youde Nethersole Eastern Hospital
- P503 LAPAROSCOPIC ASSISTED EXCISION OF RETROPERITONEAL FILARIAL LYMPHANGECTASIA PRESENTED WITH BILATERAL GROIN SWELLING** Hijran Mahdi, MD, Al-Khor Hospital, Hmc, Qatar
- P504 LAPAROSCOPIC TREATMENT OF CHRONIC SMALL BOWEL INTUSSUSCEPTION DUE TO MECKEL'S DIVERTICULUM IN AN ADULT MALE** Daniel M Alterman, MD, Matthew L Mancini, MD, The University of Tennessee Graduate School of Medicine
- P505 CHOLANGIOSCOPIC LASER LITHOTRIPSY FOR COMPLETE ENCRUSTATION OF THE EXTRA-HEPATIC BILIARY TREE BY 15-YEAR RETAINED BILIARY STENT** Steven P Bowers, MD, David Thiel, MD, Susanne Preissler, BS, Steven Lange, MD, Anthony Adelson, MD, Mayo Clinic, Florida
- P506 LAPAROSCOPIC SURGERY IN A RURAL COMMUNITY IN GUATEMALA** J Pfluke, MD, J Love, DO, S Nicholson, MD, R Stewart, MD, M Corneille, MD, Department of Surgery, University of Texas Health Sciences Center, San Antonio, TX
- P507 NOT FOLLOWING THE TREND: SLOW GROWTH OF COMPLEX LAPAROSCOPIC PROCEDURES IN THE UNITED STATES** Anand Singla, BA, Sing Chau Ng, MS, Nicholas G Csikesz, James Hart, BA, Richard A Perugini, MD, Demetrius E Litwin, MD, Jennifer F Tseng, MD, Shimul A Shah, MD, Department of Surgery, Surgical Outcomes Analysis & Research, University of Massachusetts Medical School, Worcester, MA

SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P508 DIRECT ACCESS TO THE ABDOMINAL CAVITY AND AVOIDANCE OF FACIAL CLOSURE WITH BLADELESS OPTICAL TROCAR SYSTEM Ismail H Ozerhan, MD, Onur C Kutlu, MD, Yusuf Peker, MD, Sadettin Cetiner, MD, Turgut Tufan, MD, Gulhane Medical Academy Department of General Surgery Ankara Turkey, Etimesgut 600 Bed Army Hospital Ankara Turkey

P509 ENDOSCOPIC VERSUS OPEN HARVESTING TECHNIQUES IN PIG FLAP MODELS Alexandru Blidisel, PhD, Lucian Jiga, PhD, Alexandru Nistor, MD, Vlad Dornean, MD, Mihai Ionac, PhD, University Of Medicine and Pharmacy from Timisoara

P510 OPTIONS AND TECHNICAL SOLUTIONS IN SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY Alberto R Iglesias, MD, Atul K Madan, MD, Jose M Martinez, MD, Emanuele Lo Menzo, MD, Diya I Alaadeen, MD, Division of Laparoendoscopic Surgery, Department of Surgery, University of Miami

P511 LAPAROSCOPIC RESECTION FOR DUODENAL CARCINOID Jan Dostalík, MD, Petra Gunkova, Lubomir Martinek, Igor Gunka, Libor Machytka, Miloslav Mazur, Teaching Hospital Ostrava

P512 A NOVEL APPROACH TO LAPAROSCOPIC-ASSISTED TRANSGASTRIC ERCP AFTER ROUX EN Y GASTRIC BYPASS Larissa E Coleman, MD, Lily Chang, MD, Virginia Mason Medical Center, Seattle, WA, USA

P513 INITIAL CLINICAL ASSESSMENT OF UROLOGICAL LAPAROSCOPIC SINGLE-SITE (LESS) SURGERY Fernando J Kim, MD, Wilson R Molina, MD, Mario Chammas, MD, Ernest E Moore, MD, Division of Urology, Denver Health Medical Center and University of Colorado Health Sciences Center

P514 A NOVEL TECHNIQUE FOR LAPAROSCOPIC PLACEMENT OF LUMBOPERITONEAL SHUNTS Vikram Attaluri, MD, Christopher Lebeis, BS, Christopher Iannotti, MD, Mark Luciano, MD, Steve Rosenblatt, MD, Cleveland Clinic

P515 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY USING CONVENTIONAL INSTRUMENTS: A COMPARISON WITH THE GOLD STANDARD Scott R Philipp, MD, Brent Miedema, MD, Klaus Thaler, MD, Department of Surgery, University of Missouri - Columbia, Columbia, MO, USA

P516 SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY (SILC): INITIAL EXPERIENCE WITH CRITICAL VIEW TECHNIQUE AND ROUTINE INTRAOPERATIVE CHOLANGIOGRAPHY Steven E Hodgett, MD, Brent D Matthews, MD, Steven M Strasberg, MD, L Michael Brunt, MD, Department of Surgery and Institute for Minimally Invasive Surgery, Washington University School of Medicine, St. Louis, MO

P517 A TERTIARY CENTRE EXPERIENCE IN LAPAROSCOPIC REPAIR OF PRIMAY AND RECURRENT HIATUS HERNIA IN 1125 CASES Mr. Ali A Warsi, MD, Christopher P Armstrong, MD, Frenchay Hospital, Bristol, U.K.

P518 A NOVEL MINIMAL ACCESS SURGERY PROTOTYPE FOR RAPID DIAGNOSIS OF APPENDICITIS IN THE EMERGENCY ROOM Juan D Hernandez, MD, Agudelo Natalia, MS, De Francisco Santiago, Espinosa Andres, Gonzalez Jaime, MS, Arango Rafael, MS, Cardenas marcela, MS, Universidad de los Andes

P519 SINGLE INCISION TRANSUMBILICAL LAPAROSCOPIC APPENDECTOMY Alan A Saber, MD, Mohamed H Elgamal, MD, Department of Surgery, Michigan State University, Kalamazoo, Michigan

P520 EMERGENT LAPAROSCOPIC SURGERY FOR PERFORATED ULCERS AND PERITONITIS: A CASE REVIEW Andrew C Eppstein, MD, Prakash Gatta, MD, Lisa R Martin Hawver, MD, Timothy J Broderick, MD, University of Cincinnati

Robotics

P521 COMPARING THE LEARNING CURVES OF MINIMALLY INVASIVE BILIARY-ENTERIC ANASTOMOSIS USING LAPAROSCOPY OR ROBOT ASSISTANCE Shiva Jayaraman, MD, Ibrahim Al-Ghamdi, MD, Firas Z El-Deen, MD, Douglas Quan, MD, Christopher M Schlachta, MD, CSTAR (Canadian Surgical Technologies & Advanced Robotics), Lawson Research Institute, University of Western Ontario, London, Ontario, Canada

P522 FUNDAMENTAL SURGICAL SKILLS WERE RETAINED THREE MONTHS AFTER COMPLETION OF OUR ROBOTIC SURGERY TRAINING PROGRAM Irene H Suh, MS, Ka-Chun Siu, PhD, Mukul Mukherjee, PhD, Eric Monk, BA, Bhavin C Shah, MD, Dmitry Oleynikov, MD, Nick Stergiou, PhD, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, NE, USA, Department of Surgery, University of Nebraska Medical Center, Omaha, NE, USA, College of Public Health, University of Nebraska Medical Center, Omaha, NE, USA

P523 THE HUGE HIATAL HERNIAS. CAN THE ROBOT HELP? Niazy Selim, MD, University Of Kansas

P524 MULTIPURPOSE SURGICAL ROBOT AS A LAPAROSCOPE ASSISTANT Carl A Nelson, PhD, Xiaoli Zhang, MS, Bhavin C Shah, MD, Matthew R Goede, MD, Dmitry Oleynikov, MD, University of Nebraska-Lincoln, University of Nebraska Medical Center

P525 SIMULTANEOUS ROBOTIC-ASSISTED PREPERITONEAL INGUINAL HERNIOPLASTY AND PROSTATECTOMY S S Vijan, MD, J C Barreto, MD, I Frank, MD, M T Gettman, MD, M L Kendrick, MD, Mayo Clinic

P526 LAPAROSCOPIC ROBOT-ASSISTED PANCREATIC CYSTGASTROSTOMY: SURGICAL TECHNIQUE AND SHORT-TERM OUTCOMES Mark S Choh, MD, Fabio Sbrana, MD, Francesco M Bianco, MD, Enrique F Elli, MD, Pier C Giulianotti, MD, University of Illinois-Chicago

P527 LAPAROSCOPIC ROBOT ASSISTED DISTAL PANCREATECTOMY IN AN HIV + PATIENT FOR MUCINOUS CYSTIC NEOPLASM WITH OVARIAN STRUMA: A CASE REPORT Alexandra B Roginsky, MD, Mark S Choh, MD, Francesco M Bianco, MD, Enrique F Elli, MD, Fabio Sbrana, MD, Piero C Giulianotti, MD, University of Illinois at Chicago

P528 ANTERIOR MINITHORACOTOMY AS A SAFETY MEASURE IN ROBOTIC LUNG RESECTION Francesco M Bianco, MD, Kendra Grubb, MD, Enrique F Elli, MD, Mark S Choh, MD, Sunil Prasad, MD, Pier C Giulianotti, MD, University of Illinois-Chicago

Solid Organ Removal

P529 MINIMALLY-INVASIVE ADRENALECTOMY: A COMPARISON OF SURGICAL APPROACHES AND PATIENT OUTCOMES Stacey Woodruff, MD, Shelby Holt, MD, William Snyder, MD, Fiemu Nwariaku, MD, UT Southwestern Medical Center

P530 EFFICACY OF HAND-ASSISTED LAPAROSCOPIC SPLENECTOMY FOR PORTAL HYPERTENSION PATIENTS WITH THROMBOCYTOPENIA Michiya Kobayashi, MD, Hiroyuki Kitagawa, MD, Tsutomu Namikawa, MD, Ken Okamoto, MD, Ken Dabanaka, MD, Hiromichi Maeda, MD, Takehiro Okabayashi, MD, Kazuhiro Hanazaki, MD, Koji Oba, MS, Department of Human Health and Medical Sciences, Hospital Administration Section, Kochi Medical School

P531 OUTPATIENT LAPAROSCOPIC HYSTERECTOMY WITH SAME DAY DISCHARGE, A CASE SERIES R B Rosenfield, MD, The Pearl Women's Center

P532 LAPAROSCOPIC MANAGEMENT OF LARGE ADRENAL TUMORS Vered Avidan-Noy, MD, Petachia Reissman, MD, Department of surgery, Shaare-Zedek medical center, Jerusalem.

P533 IMMEDIATE OUTCOME AFTE 350 LAPAROSCOPIC SPLENECTOMIES (LS). A SINGLE TEAM 15 YEARS EXPERIENCE EM Targarona, PhD, C Balague, PhD, MC Martinez, MD, L Pallares, MD, MP Hernandez, MD, M Trias, PhD, Serv. Surgery, Hospital Santpau, UAB

P534 HAND-ASSISTED LAPAROSCOPIC SPLENECTOMY COMPARED TO CONVENTIONAL LAPAROSCOPIC SPLENECTOMY Abdulmalik Altaf, MD, James Ellsmere, MD, Jaap Bonjer, MD, Dennis Klassen, MD, Department of Surgery, Dalhousie University

P535 HOSPITAL EXPERIENCE, BODY IMAGE, AND COSMESIS AFTER LAPAROSCOPIC OR OPEN SPLENECTOMY AE Canda, MD, I Sucullu, MD, Y Ozsoy, MD, Al Filiz, MD, Y Kurt, MD, S Demirbas, MD, I Inan, MD, Department of Surgery, Manisa State Hospital and Gulhane Military Medical Acedemy, Haydarpasa Training Hospital, TURKEY; University of Geneva, SWITZERLAND.



SAGES 2009 Poster Listing

Full abstract texts available in the SAGES Electronic Meeting Guide

P536 BILATERAL LAPAROSCOPIC TRANSPERITONEAL

ADRENALECTOMY Nobumi Tagaya, PhD, Takayuki Kosuge, MD, Akihito Abe, PhD, Masatsugu Tachibana, PhD, Keiichi Kubota, PhD, Second Department of Surgery, Dokkyo Medical University

P537 FROM START TO FINISH: 117 CONSECUTIVE LAPAROSCOPIC

ADRENALECTOMIES Sebastian V Demyttenaere, MD, Peter N Nau, MD, Jason C Roland, MD, P Bittenbender, MD, Peter Muscarella, MD, W. Scott Melvin, MD, E. Christopher Ellison, MD, The Ohio State University Medical Centre

P538 SHORT-STAY LAPAROSCOPIC RADICAL NEPHRECTOMY IN

A COMMUNITY HOSPITAL SETTING Benny Liliav, MD, Frederick L Sabido, MD, Michael V Eisenbraun, PA-C, Michael A Savino, MD, Gene F Coppa, MD, Department of Surgery, Staten Island University Hospital, 475 Seaview Avenue, Staten Island, NY 10305

P539 A CASE OF ANOMALOUS SYSTEMIC ARTERIAL SUPPLY TO

NORMAL BASAL SEGMENT OF THE LEFT LOWER LOBE Kenji Minami, MD, Ken Hirohata, MD, Takuya Iwasaki, MD, Satoshi Hara, MD, Department of Surgery, Kinki University School of Medicine

P540 MINIMALLY INVASIVE ADRENALECTOMY: OUR EXPERIENCE

IN 40 PATIENTS. Jesus Vasquez, MD, Sergio Diaz, MD, Juan P Toro, MD, University of Antioquia in Medellin, Colombia.

P541 LAPAROSCOPIC SPLENECTOMY IN HEMATOLOGIC

MALIGNANCIES ¹Roberta Gelmini, MD, ²Fabrizio Romano, MD, ¹Chiara Franzoni, MD, ²Gaia Piacentini, MD, ¹Anna Gambini, MD, ²Cristina Penati, MD, ¹Massimo Saviano, MD, ¹Franco Uggeri, MD, ¹Department of Surgery, Policlinico of Modena University of Modena and Reggio Emilia ²Department of Surgery, San Gerardo Hospital II University of Milan – Bicocca

P542 SHOULD HAND ASSISTANCE BE USED FOR MID-SIZED

SPLEENS? Matthew R Goede, MD, Bhavin C Shah, MD, Irene H Suh, MS, Stacy J Putney, Corrigan McBride, MD, Aaron R Sasson, MD, Dmitry Oleynikov, MD, University of Nebraska Medical Center, Omaha, NE

P543 OPEN OR LAPAROSCOPIC RESECTION OF

PARAGANGLIOMA? A COMPARISON TO ADRENAL PHEOCHROMOCYTOMA IN THE LAPAROSCOPIC ERA Trudie A Goers, MD, Michael Abdo, Jeffrey F Moley, MD, Brent D Matthews, MD, L Michael Brunt, MD, Department of Surgery and Institute for Minimally Invasive Surgery Washington University in Saint Louis

P544 LAPAROSCOPIC VERSUS OPEN SPLENECTOMY FOR

HEMATOLOGIC DISEASES - A 10-YEAR, SINGLE-CENTER EXPERIENCE Gordon G Wisbach, MD, Heidi L Fitzgerald, MD, Roger Lis, David C Brooks, MD, Ali Tavakkoli-zadeh, MD, Brigham & Women's Hospital

P545 TWO FOR ONE: A CRH AND ACTH SECRETING

PHEOCHROMOCYTOMA Ekai K Hsu, MD, Colin Parsons, MD, Jonathan Pierce, MD, Department of Surgery, UC Davis Medical Center, Sacramento, CA.

Endolumenal / NOTES

P546 TRANSVAGINAL MINILAPAROSCOPIC-ASSISTED

RECTOSIGMOID RESECTION Marat Khaikin, MD, Moshe Shabtai, MD, Oded Zmora, MD, Danny Rosin, MD, Amram Ayalon, MD, Department of General Surgery and Transplantation, Chaim Sheba Medical Center, Tel-Hashomer, Israel

P547 ENDOLUMINAL ASSISTANCE DURING MINIMALLY

INVASIVE ESOPHAGECTOMY FOR ESOPHAGEAL CANCER Y Izumi, MD, A Miura, MD, T Kato, MD, M Miyamoto, MD, T Miyatani, MD, F Watanabe, MD, K Iwasaki, Tokyo Metropolitan Cancer and Infectious Disease Center, Komagome Hospital

Esophageal / Gastric Surgery

P548 USEFULNESS OF BALLOON PUSH-OUT METHOD DURING

THORACOSCOPIC ENUCLEATION OF LEIOMYOMA OF THE ESOPHAGUS T Miyatani, MD, Y Izumi, MD, A Miura, MD, T Kato, MD, M Miyamoto, MD, Tokyo Metropolitan Cancer and Infectious Disease Center, Komagome Hospital

P549 A CASE OF MUCOSA ASSOCIATED LYMPHOID

TISSUE(MALT) LYMPHOMA OF THE ESOPHAGUS, TREATED BY ENDOSCOPIC MUCOSAL RESECTION K Iwasaki, MD, Y Izumi, MD, A Miura, MD, T Kato, MD, M Miyamoto, MD, J Fujiwara, MD, K Monma, PhD, N Nakano, MD, T Hijima, MD, T Nemoto, MD, N Funada, MD, Tokyo Metropolitan Cancer and Infectious Disease Center, Komagome Hospital

Colorectal / Intestinal Surgery

P550 CAN THE MORBIDLY OBESE BENEFIT FROM LAPAROSCOPIC

COLORECTAL RESECTION? Timothy A Jessie, MD, Pokala R Kiran, MD, Daniel Geisler, MD, Victor W Fazio, MD, Cleveland Clinic Foundation

Emerging Technology Oral Abstracts

ET01

A SENSOR-EMBEDDED BODY SUPPORT SYSTEM FOR REAL-TIME MONITORING OF LOCAL OVERLOAD DURING STEEP BODY POSITIONING.

Tsunekazu Mizushima MD, Kiyokazu Nakajima MD, Yutaka Hata* PhD, Mitsugu Sekimoto MD, Toshiro Nishida MD, Yuichiro Doki MD, Masakai Mori MD, Osaka University Graduate School of Medicine, Osaka, and *University of Hyogo Graduate School of Engineering, Hyogo, Japan

Background and Purpose: Postoperative nerve damages have been known as rare but serious consequence following laparoscopic surgery. Inappropriate body strapping and/or prolonged steep body positioning have been considered responsible, however, its precaution has yet to be established. The objective was to assess feasibility of real-time, semi-quantitative monitoring of local overload using sensor-embedded body support system.

The Prototype: The prototype is a shoulder/lateral support which has multiple pressure-sensitive sensors on its contact surface, enabling real-time measurement of local pressures while strapping the patient body on the operating table. The pressure profile is shown as 2-D color tile images and/or 3-D polygon images using dedicated software package.

The Pilot Study: Six healthy male volunteers were involved in the pilot study. The subject was placed supine on a standard rotatable operating table (MOT8100, Mizuho, Japan) with their arms spread at 90 degrees. The shoulders were fixed with the prototype device and the subject was placed in steep Trendelenburg's position (25 degrees). The local pressure at the shoulder was continuously recorded, with any clinical symptoms suggestive of postoperative nerve damages e.g. pain, palsy at any part of upper extremities/shoulders/neck.

Preliminary Results: 1) The local pressure at the shoulder chronologically increased during the steep Trendelenburg's position (max 0.44 kg/cm²). 2) All subjects complained shoulder pain in 8.3 minutes on median. The symptom was temporary and completely resolved as Trendelenburg was released.

Future Directions: A real-time, semi-quantitative monitoring of local overload is feasible with sensor-embedded body support system. The device is handy and easy to install. Further preclinical investigation, including evaluation of any correlation between nervous symptoms and subject's body height/weight, is needed to optimize sensing threshold and to set cut-off values.

ET02

INTRAOPERATIVE IMMUNOPHOTODETECTION IN PATIENTS WITH COLON CANCER, MHGM van der Pas MD, DL van der Peet PhD, MA Cuesta PhD, F Cailler PhD, A Pèlerin PhD, M Gutowski PhD, V Garambois PhD, GAMS van Dongen PhD, WJHJ Meijerink PhD, Department of surgery, VU University Medical Center, Amsterdam. Department of nuclear medicine, VU University Medical Center Amsterdam. Institut de Recherche en Cancerologie de Montpellier

Objective: assessing the technique of immunophotodetection (IPD) in patients with colon cancer. Description of the technology and application: Prognosis is often influenced by radical first surgery. One way to improve surgical performance is providing the surgeon with intraoperative detection and diagnostic methods for cancer eradication. IPD is a technology involving fluorescent dye-labelled monoclonal antibodies (MAbs) directed against tumor-associated antigens. Carcinoembryonic antigen (CEA) is a preferential target antigen since it is expressed in almost all tumors (>95%), it is available at high antigenic density on the cell surface. Several studies concerning MAb-dye conjugates and their biodistribution, as well as its capacity to detect very small tumor masses have been published. The results in mouse studies are encouraging with a sensitivity of 90.7%, a specificity of 97.2%, a positive predictive value of 94.7%, and a negative predictive value of 94.9% (Gutowski et al, 2001). Tumor nodules with a mass < 1 mg and a diameter < 1 mm could be detected. The biggest limitation of this technique up to now has been the absence of an intraoperative device for IPD. With the development of a new near-infrared laparoscope (Olympus Corp., Tokyo, Japan) dyes with wavelengths in the near-infrared region can be excited and visualized. In cooperation with the group in Montpellier a feasibility study is planned for this year using a new clinical grade conjugate developed by the group of A. Pèlerin. This conjugate labelled with a dye and a radioisotope will be pre-operatively i.v. administered. Radioactivity measurements will be used to validate the specificity of tumor localization by the conjugate. Future directions: IPD may provide the possibility for intraoperative optical biopsy and local radical resection. The

development of new fluorescent dyes has been accelerated over the past year. In the future we may have the opportunity to use a whole arsenal of monoclonal dye conjugates directed against different kinds of tumor-associated antigens.

ET03

CATHETER-BASED OPTICAL COHERENCE TOMOGRAPHY FOR OPTICAL BIOPSY OF COLONIC WALL AND MESENTERIC SENTINEL NODES BY NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES), Ronan A Cahill, M Asakuma, Joe

Trunzo, Jeff Marks, Bernard Dallemagne, Jacques Marescaux, Nancy Tresser, EISRI, Dublin, Ireland; IRCAD/EITS, Strasbourg, France; Case Medical Center Cleveland, USA; Imalux Corporation, Cleveland, USA.

The requirement for nodal staging currently mandates en bloc radical mesenteric dissection as gold standard in every patient undergoing intended curative operation for colon cancer. Sentinel node biopsy may provide the means of supplementing the oncological providence of intraluminal resective techniques [as well as, potentially, resection by single port laparoscopy and NOTES-hybrid approaches] so that proven node negative patients could undergo localized resection of the primary lesion as their sole, definitive intervention. A means of in vivo "optical biopsy" would greatly facilitate this.

Optical Coherence Tomography (OCT) provides real time cross-sectional images from tissue specimens with resolutions approaching that of conventional histology [c. 2-5µm] by employing very short wave near-infrared light with precise interferometric detection capability. It has been proven in ex vivo analysis of lymph nodes of being capable of imaging single nuclei and so is considered to have the potential to detect micrometastases. OCT is already in clinical use in a catheter-base format in ophthalmology, dermatology, cardiology, neurology, gynecology and intraluminal gastroenterology. Its use however in the peritoneal cavity for locoregional colon cancer staging analysis is novel.

We have deployed a commercially available probe [NIRIS™, Imalux Corporation, Cleveland OH, USA] via the working channel of a standard gastroscope used as a NOTES peritoneoscope in a porcine model. By this means, we obtained high resolution real-time images of the colon wall (potentially useful for T-staging) as well as mesenteric nodes [in particular, sentinel nodes identified by lymphatic mapping]. OCT probe provided in situ optical delineation to a depth of 2mm thus visualizing both the outer two-thirds of the colonic wall as well as the subcapsular sinus of lymph nodes [the site of tumor cell clustering in c. 80% of nodes with metastases in patients with early stage colon cancer].

Clinical studies assessing the utility of the OCT probe in T and N staging of colon cancer are ongoing and correlative patient images will be shown.

ET04

MEASURING CHANGES IN GASTRIC CONDUIT PERFUSION DURING MINIMALLY INVASIVE ESOPHAGECTOMY (MIE) USING OPTICAL FIBER SPECTROSCOPY, Kyle A Perry MD, C K Enestvedt MD, Dan Gareau PhD, Thai H Pham MD, Frederic Truffer PhD, James P

Dolan MD, Steven L Jacques PhD, John G Hunter MD, Oregon Health & Science University, Portland, Oregon, USA

OBJECTIVE: A rapid and reliable method of assessing changes in gastric conduit perfusion is needed to investigate the pathophysiology of MIE associated anastomotic complications. Spectral analysis can determine oxygen (O₂) saturation in blood by measuring spectral shifts between unbound and oxygen bound hemoglobin molecules. Optical fiber spectroscopy has accurately assessed tissue oxygenation and blood content using this principle in an animal model of esophagogastronomy. This study used OFS to examine intra-operative changes in gastric conduit perfusion during MIE.

METHODS: Seven patients underwent MIE with gastric pullup reconstruction. OFS probes measured tissue blood content and oxygen saturation near the tip of the gastric conduit. White light is delivered to the tissue by one fiber while a second fiber collects the diffuse light reflection. A spectrometer records the reflectance spectra which identify the oxy and deoxy-hemoglobin components. The resulting ratio yields the tissue oxygen saturation. Readings were taken at baseline, after gastric mobilization and devascularization, and after gastric pull-up. An average of 15 measurements at each time point were compared using the paired t-test.

RESULTS: Tissue blood content (TBC) increased by an average of 51% (p=0.436) after gastric pullup. Mean tissue O₂ saturation at baseline was 78 ± 19% compared to 60 ± 24% after gastric devascularization





Emerging Technology Oral Abstracts

($p=0.169$) and $47 \pm 25\%$ following gastric pull-up ($p=0.070$). The change in tissue oxygen saturation after gastric pullup for individual patients ranged from a 5% increase to 75% decrease.

CONCLUSIONS: Intraoperative OFS demonstrates a wide range of alterations in gastric conduit perfusion during esophageal replacement. The relationship of these changes to the subsequent development of anastomotic complications is still unknown. OFS provides a valuable tool to examine these relationships, and may prove useful for evaluating strategies designed to improve gastric conduit perfusion including ischemic preconditioning and augmentation of conduit arterial inflow.

ET05

THE EVALUATION OF A NEW BIPOLAR RADIOFREQUENCY ABLATION DEVICE IN EX-VIVO BOVINE LIVER, Michael Tsinberg MD, Eren Berber MD, Gurkan Tellioglu MD, Allan Siperstein MD, Cleveland Clinic

Background: Most of the current radiofrequency ablation (RFA) technology uses monopolar energy, where energy is transmitted using a single electrode and disperse through a grounding pad. In the bipolar principle, energy flow moves between two electrodes, both placed within tissue to be ablated. This should in theory enable to create more efficient ablation. The aim of this study was to investigate a new bipolar device and to determine reproducible ablation parameters.

Methods: Ex-vivo bovine liver was used on the benchtop for the experiments. A new prototype ("Angiodynamics") RFA generator with bipolar probes connected in two pairs, forming the boundaries of the cube. Temperature probe with six thermocouples was used for temperature measurement inside the lesion. Software was using impedance between electrodes as a measure of completion of the ablation zone. Each electrode had port for infusion of normal saline for maintenance of thermal conductivity. That flow as well as generators power were adjusted manually. Seven ex-vivo bovine livers were used in our benchtop series. Four to six ablation zones were created in each liver. Different algorithms were used for various power settings as well as saline flow rates to achieve ablated lesion. The liver was serially sectioned for measurement of the ablation zone and for evaluation of the lesion shape.

Results: Thirty two lesions were created in seven sessions. Power was adjusted between 25 and 80 Watts and saline flow rate between 0.1 and 0.7 cc/min. The most efficient algorithm to create reproducible ablation zone was starting ablation at 60 W and gradually tapering the power while increasing saline infusion flow rate. With this algorithm, a 5 cm in diameter spherical ablation zone was created in 8.9 ± 2.3 min. The other algorithms used for ablation were not able to create complete and spherical zones of ablation.

Conclusion: To our knowledge, this is the first systematic assessment of bipolar RF technology on the benchtop. In this study we were able to determine an efficient and constant algorithm for the creation of spherical and reproducible ablation zones. With optimization of ablation algorithm and improvement of probe design, bipolar RFA technology will be in transition to clinical use in the future.

ET06

TEMPORARY GASTRIC ELECTRICAL STIMULATION IN CHILDREN AND ADOLESCENTS WITH INTRACTABLE GASTROPARSIS / NAUSEA AND VOMITING, Saleem Islam MD, Christopher Jolley MD, Thomas L Abell MD, Shamaila Waseem MD, University of Florida and University of Mississippi Medical center

Background: Patients with severe gastroparesis (GP) or intractable nausea and vomiting (NV) have very limited options for therapy. At present there are no good medications or diets that are helpful. Gastric electrical stimulation (GES) is a potentially effective therapy for these patients. We describe the use of temporary endoscopic GES in children to determine the effectiveness of therapy before permanent implantation.

Methods: Under anesthesia, patients have an epicardial pacing lead implanted via endoscopic approach in the mucosa, or have fetal scalp electrodes modified and attached to the mucosa via and existing gastrostomy site under endoscopic vision. These leads are then attached to a modified Enterra® GES and stimulation is started at varying parameters. Response is monitored on the basis of clinical symptoms (modified gastroparesis cardinal index and quality of life scores), as well as radionuclide gastric emptying tests.

Results: This approach has been utilized in over 20 children to date. The response to the temporary stimulation is used to decide who will progress to permanent GES implantation. Data on these patients

including the responses and results will be presented.

Conclusion: Temporary GES works well in children and adolescents with severe GP and intractable NV. It allows selection of a group of patients who will respond to the permanent device and have durable relief of symptoms. Our experience represents the only series of pediatric patients with this specially modified technology.

ET07

EVALUATION OF A NEW TISSUE APPROXIMATION AND FASTENING DEVICE IN LAPAROSCOPIC PLICATION

GASTROPLASTY FOR OBESITY, Barry H Rabin PhD, Peter S Harris, Ninh T Nguyen MD, Longevity Surgical, Inc., University of California, Irvine Medical Center

Background: Despite proven benefits, less than 2% of potential obesity surgery candidates are treated with gastric bypass and adjustable gastric banding due to the high risk of complications and high cost. The Laparoscopic Plication Gastroplasty (LPG) promises to be a simple, safe, repeatable and reversible "sleeve-type" gastric volume reduction procedure. LPG offers efficacy comparable to sleeve gastrectomy but without cutting or perforating the stomach, reducing risk of bleeding and infection. LPG has already been performed in humans by laparoscopic suturing, with promising initial results. This study evaluated the potential of a new soft tissue approximation and fastening device to reduce the complexity and time needed to perform LPG.

Methods: Explant and acute pig studies were conducted with an experimental single-use prototype (LapProx™, Longevity Surgical, Inc.). Invaginated folds were created from the exterior surface of the stomach, producing plications projecting into the GI space. Plications were fastened entirely extragastrically using stainless steel (SS) staples designed to hold for >14 days post-op, after which serosa-to-serosa bonding is expected to provide long-term durability.

Results: Video from live surgery shows freeing the greater curvature with an ultrasonic scalpel, then using the device to reconfigure the stomach into a "sleeve" by placing 22 fasteners in 2-3 layers. This resulted in >80% volume reduction with no cutting of stomach tissue, no transgastric penetrations, and minimal bleeding. Operating time excluding preparation was ~30 minutes. Endoscopic evaluation showed no potential GI blockages. Stomach insufflation confirmed no transgastric perforation, and no staples failed under load.

Conclusions: The LapProx™ tissue approximation and fastening device offers convenient one-handed tissue manipulation combined with proven SS staple technology. The device allows LPG to be performed safely, quickly and effectively with conventional laparoscopic skills and minimal specialized training. Successful device commercialization will enable LPG as a safe, efficacious, and readily adoptable procedure. Single-incision, outpatient surgery will also be possible, meeting the need for a solution having few complications and low cost.

ET08

EARLY RESULTS OF SLENDURA™ ANTI-OBESITY PROCEDURE IN

PORCINE MODEL, C. Paul Swain MD, Brian S Kelleher BS, Monika Hagen MD, Oliver J Wagner MD, Santiago Horgan MD, Imperial College London, University of California - San Diego, EndoMorphix (San Diego)

BACKGROUND: Gastric bypass and gastric banding are becoming more common options for obese patients. However, gastric bypass has a significant complication rate and requires non-reversible modification of the stomach and intestines. Gastric banding, while safer and less invasive than bypass, still requires surgery for implantation and removal of the band. A non-surgical, transesophageal approach to gastric restriction is therefore desirable, especially if easily reversible. The Slendura procedure is reversible and designed to be accomplished transorally with flexible endoscopic tools. The procedure involves the creation of a partition in the stomach, configured to mimic the size and shape of a typical gastric bypass pouch. A tubular extension of the pouch is also formed, which follows the lesser curve and functions as a restrictive outlet to the pouch.

OBJECTIVE: This study is intended to determine if a similar partition is well tolerated in the porcine model and if it will remain intact for at least 90 days.

MATERIALS & METHODS: Partitions were created in three male Yorkshire swine, ranging from 40 - 45 kg. Partitions were formed by apposing the anterior and posterior wall of the porcine stomach, at a location approximately 3 cm from the outer edge of the greater curvature, in the body of the stomach. Care was taken to avoid the short gastric vessels. The partitions were 8 cm long and consisted

Emerging Technology Oral Abstracts

of an array of closely-spaced, self-cinching plications made of polypropylene material. A guide frame was used to ensure uniform spacing and consistent transmural placement of the plications. Swine were kept on liquid diet for ten days post-operatively, and then converted to a normal diet including solid food.

RESULTS: The three swine tolerated the procedure well. Gastroscopy during post-operative Week 6 revealed intact, full-length partitions. No sign of plication pull-out was visible. The gastroscope was able to easily enter and traverse the neo-lumen formed between the partition and the greater curvature.

CONCLUSION: The results suggest that the procedure may produce a durable partition suitable as an anti-obesity procedure in humans. This study will continue with another gastroscopy at 60 days, and necropsy at 90 days. Further study is warranted.

ET09

A NOVEL ENDOSCOPIC REVERSIBLE BARIATRIC DEVICE: ANIMAL RESULTS AND INITIAL HUMAN CLINICAL EXPERIENCE, James Foote MD, Randal Baker MD, Jorge Trevino MD, Paul Kemmeter MD, Fred Walburn PhD, Peter Freswick BS, Grand Health Partners, Grand Rapids MI, Sentinel Group, Grand Rapids MI, Hospital Galenia, Cancun Mexico

Background: In the US alone there are nearly 100 million overweight, obese and morbidly obese individuals. Of the 23 million morbidly obese patients in the United States, approximately 1% undergoes conventional weight loss surgery. Diet, exercise, and medications produce minimal weight loss at best and most regain or exceed baseline weight within 5 years. The typical result is decreased metabolism, constant hunger, depression which results in a high failure rate. Additionally many bariatric patients experience weight regain over time due to difficulty in achieving continued satiety. As a result there is a critical need for a non-invasive, reversible, safe device that can deliver effective satiety and result in weight loss.

Description: The Full Sense™ is a reversible bariatric device, deployed and removed endoscopically. It incorporates an esophageal component and a gastric disk connected by a strut. It is designed to induce satiety and fullness in the absence of food by placing pressure on the distal esophagus and cardia of the stomach.

Clinical Animal Results: In four separate studies, animals lost approximately 23% of their body weight whereas controls gained 3% in 28 days.

Clinical Human Results: The device was endoscopically placed in 3 female patients (mean BMI of 44.0, mean age of 38 years), and secured via laparoscopic assistance. Patients lost an average of 28% of their excess body weight in 46 days. The devices were removed endoscopically. There was no device migration, no ulcers and no compromise of the GE junction. Inflammation, which was present at the time of explantation was confirmed resolved at three week post operative follow up endoscopy. The patients were required to record their satiety levels daily using a standardized satiety scale. All patients recorded increased satiety with The Full Sense™ Device in place than after removal.

Conclusions: The Full Sense™ Device has been shown to be an effective endoscopically placed and removable bariatric treatment in pre-clinical and clinical studies.

ET10

A NOVEL TECHNIQUE OF KNOTLESS SUTURE FOR MESH

FIXATION, Pavlos Papasavas MD, Paul Joyner MD, Raymond McKay MD, George Sikora, Raymond Bojarski BA, Darren Tishler MD, Orlando Kirton MD, Hartford Hospital

Background: Mesh fixation with transfascial sutures is associated with suture site pain that occasionally may become chronic. This may be due to nerve entrapment or inflammatory reaction. We compared the inflammatory response of a new knotless suture device (KSD) with conventional suturing. The KSD creates a bloom construct using electrically generated heat. In addition, we compared mesh fixation between the two techniques.

Methods: Three New Zealand white rabbits underwent midline laparotomy under general anesthesia. Two 3x3 cm pieces of PTFE mesh were secured to the abdominal wall with four transfascial #0 coated braided polyester sutures each, using a fascia suture passer and tying three square knots. Two 3x3 cm pieces of PTFE mesh were secured to the other side of the abdominal wall with four transfascial #0 coated braided polyester sutures each, using a fascia suture passer and the KSD. The midline and skin were closed and the rabbits were monitored for infection or other complications. At 8 weeks postoperatively, one animal was euthanized and the pieces of mesh were retrieved en block with the abdominal wall.

A microscopic validated scoring system was used to determine the overall bioreactivity rating based on necrosis, inflammation, presence of polymorphonuclear leukocytes, macrophages, lymphocytes, plasma cells, giant cells, fibroplasia, fibrosis, fatty infiltration, and the relative size of involved area. At 16 weeks postoperatively, the other two animals were euthanized. Half of the blocks of mesh/abdominal wall were evaluated for bioreactivity and half were tested in a load to failure method with an Imada tensiometer to record peak values. Comparisons between the 2 groups were made with Student's t-test.

Results: At 8 weeks, the mean bioreactivity rate was 4.8 (range 4-5.5) for the KSD group and 7.1 for the control group (range 5-10.5). Of the 11 parameters that comprise the rating scale, fibrosis, fibroplasia and relative size of involved area were statistically significant. At 16 weeks, the mean bioreactivity rate was 5.3 (range 4-5.6) for the KSD group and 6.1 for the control group (range 5-7); the difference was not statistically significant. The load to failure for the KSD group averaged 19.8N (range 17-25.2N) and 12.7N (4.1-30N) for the control group (p=0.06). Although there was no statistically significant difference between the biomechanics of the two techniques, the knots created with the KSD were more consistent compared with the hand-tied knots (SD: 2.9 vs. SD: 9.5). The mode of failure was at the level of the bloom construct for 75% of the KSD knots. The hand-tied knots pulled through the tissue in 100% of tissue specimens.

Conclusion: The knotless suture technique when applied to mesh fixation is associated with less fibrosis and fibroplasia, in the early postoperative period. This difference is attenuated with time and it is most likely contributed to the smaller amount of suture material. There is a trend for stronger mesh fixation and more consistent knots with the knotless suture technique. Further testing is required to examine if there is any clinical significance.

ET11

BIPA - A NOVEL INTRALUMINAL DEVICE TO PREPARE THE RECTUM FOR DIVISION AND ANASTOMOSIS, Marc I Brand MD, Rush University Medical Center

OBJECTIVE: Dividing the rectum and preparing it for anastomosis during laparoscopic bowel surgery remains a major challenge to the advancement of laparoscopic surgery involving the rectum. Currently, this is usually done using laparoscopic linear staplers. Several firings of the stapler with intersecting staple lines placed at an angle across the rectum are used. The shape of the pelvis and angles of access to the rectum from the abdomen are largely responsible for this difficulty. In dividing the rectum and preparing it for anastomosis, it is necessary to complete 3 tasks; 1) close the proximal side of the line of resection, 2) prepare the distal side of the line of resection for use of a circular stapler, and 3) divide the rectum.

DESCRIPTION OF TECHNOLOGY: BIPA is a novel device which simultaneously places two pursestring sutures around the circumference of the bowel, from within the lumen of the bowel. The device uses a transanal approach to gain access to the rectum, which avoids the challenges of the shape of the pelvis and angles of access to the rectum. The proximal pursestring suture is used to close the specimen side of the line of resection, while the distal pursestring suture prepares the rectum for anastomosis using a circular stapler. Placement of both pursestring sutures with a single device enables the surgeon to divide the rectum between the two sutures, without damaging either one, while the device is still in place. **RESULTS:** A prototype of BIPA has been constructed and tested in animal intestine. Simultaneous intraluminal pursestring placement was successful using BIPA.

CONCLUSION/FUTURE DIRECTION: Simultaneous intraluminal pursestring placement using an automated device is feasible in an ex vivo animal model. BIPA will be tested in fresh human rectal specimens to demonstrate feasibility in human tissue and in animal survival studies to evaluate the integrity of an anastomosis facilitated by BIPA. If successful, BIPA will greatly improve the ability to divide the rectum laparoscopically. Further, the use of a pursestring suture on the rectal stump allows for transanal instrument access to the abdomen as well as transanal specimen removal, facilitating the development of NOTES.

ET12

VIRTUAL ENDOSCOPY PROCESSED FROM ACTUAL ENDOSCOPIC IMAGE FOR COLON, Takuro Ishii, Tatsuo Igarashi MD, Satoki Zenbutsu, Masashi Sekine, Toshiya Nakaguchi PhD, Yukio Naya MD, Harufumi Makino MD, Research Center for Frontier Medical Engineering, Chiba University, Chiba, Japan.

Objectives: Endoscope is widely used both in diagnosis and in



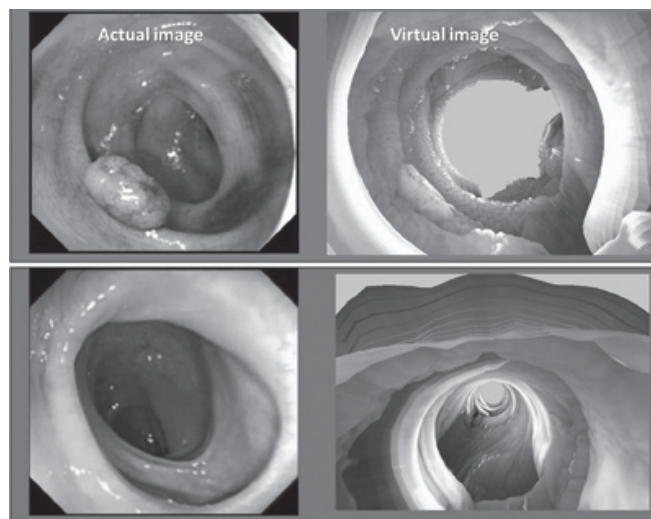


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2009

Emerging Technology Oral Abstracts

surgical procedure in hollow organs including colon. It may be useful to watch lesions in multiple angle of view. Virtual colonoscopy offers fly-by image of luminal cavity, opened image, and lesions observed from various view points. On the contrary, actual colonoscopy can display peep-through image only. In SAGES2008, we presented a method of processing opened 3D images of colon from endoscopic video image. Since this method scans 3D structure of luminal surface continuously, it is possible to reconstruct tubular structure of the colon in the virtual space. The virtual colonoscopy processed from actual colonoscopy displays luminal surface from some angle and cutting plane like virtual colonoscopy processed from CT or MRI. We developed the algorithm and tested using colonoscopic video images. Materials and Methods: Previously, we developed software that works on Windows-based PC, and extracts 3D information of objects in the surface of luminal cavity from endoscopic video image. Further we made a software that reconstruct 3D tubular structure from the 3D information of actual video image. The software is designed to display fly-by image, rotated image with cutting plane, and half-pipe image. Twelve video files of colonoscopy, and one video files of porcine colonoscopy driven by stepping motor are used to process virtual image. Results: Virtual image can be processed in every video files tested. In porcine model, lesions are depicted precisely and quantitatively. In human colonoscopic image, lesions such as polyps and cancer can be depicted and observed from various points of view automatically and instantly. The 3D structure of folds and lesions are almost compatible to the original video image.



Conclusions: Virtual endoscopy from actual endoscopic image is possible and will add persuading information to clinical practice.

ET13

BENEFITS OF "REPEAT BACK" WITHIN A COMPUTER-BASED INFORMED CONSENT PROGRAM

Aaron S Fink MD, Allan V Prochazka MD, William G Henderson PhD, Debra H Bartenfeld MS, Carsie Nyirenda MPH, Kamal Itani MD, Alexandra L Webb MD, Melissa M Bottrell PhD, Atlanta, Houston, Boston, Denver, Portland, Pittsburgh and Tampa VAMCs

Objectives: Patient comprehension of informed consent (IC) is limited. Asking patients to Repeat Back (RB) key points from the consent has been proposed as a means to improve comprehension. In this study, we tested RB's effectiveness on IC comprehension.

Methods: Patients scheduled for elective surgeries [total hip arthroplasty (n=136), carotid endarterectomy (n=175), laparoscopic cholecystectomy (n=176) or radical prostatectomy (n=75)] at 7 VA Medical Centers were enrolled. IC was obtained using iMedConsent, the VA's computer-based IC platform. Patients were randomized to RB (a module added to the iMedConsent package) or standard iMedConsent (no RB). In the RB group the consent could not be completed until the surgeon received satisfactory responses to the RB questions. Patient reading ability was measured with the REALM. Comprehension was tested immediately after the IC discussion using procedure-specific questionnaires (23-26 items, score range 0-100 % correct). Provider satisfaction (+/- RB) and patient satisfaction with decision making were measured using 5 point Likert scales (5 best). Time stamps in the iMedConsent program estimated the time spent completing the IC process (+/- RB). Statistical comparisons of groups

were performed using t-tests and Chi Square tests.

Results: 562 patients (273 RB and 289 no RB) were enrolled; 92% were male and 88% had at least a high school education. The mean age was 61.8±10.8 and mean REALM 62.4±6.3 indicating high school reading ability level. In the RB group, providers spent 4.4 minutes longer (13.6 RB vs. 9.2 minutes no RB, p=0.001) obtaining IC. The mean comprehension score was significantly higher in the RB group (71% RB vs. 68% noRB, p=0.0311). The greatest effect was in the carotid endarterectomy group (mean comprehension 73% RB vs. 68% noRB, p=0.018). Quality of decision making was rated similarly (4.74 RB vs. 4.75 no RB, p=0.83). Providers were neutral to slightly favorable in their rating of RB (3.45).

Implications: RB implemented within an electronic informed consent system improved patient comprehension. The additional time required was acceptable to providers. RB should be considered as a standard enhancement to surgical informed consent.

ET14

IMEDIC: AN IMMERSIVE MEDICAL ENVIRONMENT FOR

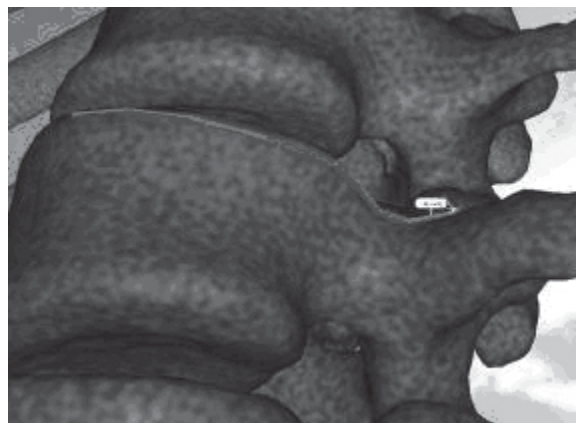
DISTRIBUTED INTUITIVE CONSULTATION, F J Seagull PhD, Peter Miller BS, Ivan George, Adrian Park MD, Paul K Mlyniec BS, University of Maryland, Digital ArtForms, Inc

Objective: We are applying and validating a novel, natively three-dimensional two-handed interface (THI) to the visualization and manipulation of 2D and 3D clinical images. The target of the current phase is to build a prototype of a broadly-applicable immersive and distributed 3D medical multimedia environment for use in diagnosis, planning, and education. This system will serve as the foundation for subspecialty application to be identified through future work.

Description and method of use: The iMedic platform uses two hand-held tracked button controllers (3D mice) that allow users to reach into space to manipulate data, tools, and space itself. Users fluidly scale themselves with simple hand gestures to explore the finest recesses of the data. The technology will be briefly demonstrated. A virtual toolbox floats over the users hand as a means of accessing a variety of tools and data. Remote users are presented as Avatars in tele-collaborative sessions.

Preliminary results: A head-to-head comparison of the THI to a traditional keyboard-and-mouse interface (KMI) showed equivalency in navigation, visual search, and measurement tasks between the two interfaces in 22 novice medical student users with less than 30 minutes of practice. These novice users rated the KMI as simpler to learn, but preferred using the THI. Case-study data suggest that for users with more experience (>3 hours) with both THI and KMI, iMedic affords better performance, as well as stronger preferences toward the THI.

Conclusions/Future directions: This initial iteration of the THI will be further refined with additional features including a 3D Whiteboard capability that allows users to communicate via mark-up of the space and tissue depicted therein. Volumetric rendering, embedded video and a more robust set of data sources, to include X-ray, ultrasound, CT, MRI, PET and DICOM video will be introduced to the environment. A second phase of formal testing is in progress, to compare the iMedic interface to other devices such as 3D wand manipulators, to examine the effects of stereoscopic displays on learning, and to determine the effectiveness of iMedic for remote tele-consultation and surgical planning.



Emerging Technology Oral Abstracts

ET15

REVERSE 3D HD IN ENDOSCOPIC SURGERY., Emanuele Lezoche MD, Alessandro M Paganini PhD, Romeo Croci MSc, Giancarlo D'Ambrosio MD, Pietro Ursi MD, Giovanni Lezoche MD, Sante Capitano MD, Luciana Barchetti MD, Bernardina Fabiani MD, Daniele Scoglio MD, Emanuela Capalbo MD, Paola Campenni MD, Chirurgia Endolaparoscopica e Tecnologie Avanzate, Department of Surgery "Paride Stefanini", University of Rome "La Sapienza", Rome, Italy.

Background: This paper describes a new video station that is able to digitalize and visualize a signal coming from any video source, even a full HD one.

Methods: The video station may reverse the signal coming from a non-full HD source, to a full HD one and it may visualize the above signal in 3D. It is fully compatible with any endoscopic video source. The station visualizes the video images in 3D and at the same time it records them in full HD 3D format. Any video recorded in 2D may be viewed in 3D. Any video that was captured in 3D may be viewed in 2D. The real innovation lies in the fact that the video source is single channelled also for 3D videos. This is made possible by a software interface having an artificial intelligence of 256.000 software neurons that monitors the depth of visual angle Alfa in real time and automatically corrects it. The 3D vision may be obtained using any video monitor that is currently available, including autostereoscopic monitors, which reproduce a 3D vision even without using any type of special glasses. The new video station uses an artificial intelligence to obtain an intelligent rendering, bringing it to full HD 2D and to full HD 3D, even when the signal is a simple PAL 768 per 576.

Conclusion: This new video station improves image resolution and depth perception in endoscopic surgery increasing safety, and it may be employed using any endoscopic video source without the need to change it.

ET16

ENDOSCOPIC SUBMUCOSAL DISSECTION USING A THROUGH-SCOPE INTUITIVELY CONTROLLED ROBOTICS-ENHANCED MANIPULATOR SYSTEM, KH Ho MD, SJ Phee PhD, SC Low PhD, VA Huynh PhD, AP Kencana PhD, K Yang PhD, JBY So PhD, SC Chung MD, Davide Lomanto MD, Minimally Invasive Surgical Centre, Dept Surgery and Department of Medicine, National University of Singapore and School of Mechanical & Aerospace Engineering, Nanyang Technological University, Singapore

Performing endoscopic submucosal dissection (ESD) with standard endoscopic equipments is technically challenging due to the limited degrees of freedom. We recently devised a highly dexterous robotics-enhanced endosurgical system and in this study we want to evaluate the feasibility of using the robotic system in ESD vs the conventional endoscopy. The system consists of a master controller, a telesurgical workstation, and a slave robotic manipulator through an array of sensors with 2 manipulators holding a grasper and a cautery hook. The master is attached to the wrist and fingers of the operator through an array of sensors and joints. The slave comprise 2 manipulators holding a grasper and a mono-polar diathermy hook respectively, which are separately inserted through the endoscope 2 operating channels. Movements of the operator are detected by the sensors and actuated into force signals driving the manipulators via a tendon-sheath mechanism. Conventional endoscopy ESD was compared to Robotic ESD in 5 Erlangen porcine stomach models and subsequently in 5 live pigs. 20 mm gastric lesions were marked with needle knife and then a solution of 0.04% indigo carmine was injected submucosally. Dissection was carried out either using the robotics-controlled grasper and hook or the conventional IT knife. Resection time, grasper and hook efficacy grade, completeness of resection, and presence of procedure-related perforation were recorded. In the Erlangen models, a total of 15 lesions located at the cardia, antrum, or body of the stomach were successfully resected by the robotics system. The mean size of the resected specimens was 37.4 x 26.5 mm. Mean resection time was 23.9 min (8-48). No difference between resection times and locations. In the live pigs, the robotics system took an average 16.2 min (3-29) to complete the ESD while took a mean of 18.6 min (9-34 min) using conventional endoscopy with no difference in size. There was no case of perforation. ESD is feasible and safe using the robotics-enhanced endosurgical system.

ET17

IMTN INTERNATIONAL MULTICENTER TRIAL ON CLINICAL N.O.T.E.S.: INITIAL RESULTS OF 250 CASES, Zorron R, Palanivelu C, Galvao M, Ramos A, Branco A, Sousa LH, Burghart J, Gellert K, Decarli L, Rajan PS, Forgione A, Pugliese R, Salinas G, Ayrosa P, Campos JM, Balashanmugan S T, Boza C, Avila D F, Cuesta A N, Jategaonkar A P, Ranagrajan M, Parthasarathi R, Senthilnathan P, Prasad M, Mueller V, Corcione F, Dep of Surgery- University Hospital Teresopolis, Rio de Janeiro; Hospital Santa Casa Porto Alegre- Brazil; Gastrobeso Center São Paulo; GEM Hospital India, Coimbatore; Ilcam Granda Hospital, Milan, Itália; Sana Clinical Center Berlin, Germany

Objectives: Clinical applications of Transgastric and Transvaginal NOTES are still limited in the literature. A prospective Multicenter trial (IMTN) was initiated to understand safety and feasibility of flexible natural orifice surgery in clinical set, and results were evaluated.

Methods: IRB approval was obtained at the institutions for NOTES clinical trials. Results of 250 cases in 7 countries were evaluated for transgastric and transvaginal NOTES for cholecystectomy (162), appendectomy (29), nephrectomy (3), sleeve gastrectomy (5), cancer staging (5), gynecologic procedures (10) and others, using flexible endoscopy. Transvaginal and transgastric access were mainly used. Dissection was accomplished with endoscopic instruments, and limited use of laparoscopy.

Results: Operative time is longer for totally NOTES procedures. Complications occurred in 12% (27), most frequent intraoperative bleeding from cystic or appendicular artery injury (12), 2 biliary leaks, one needing revision by laparoscopy. NOTES-related complications were vaginal laceration (1), dispareunia (2), high IAP (2), peritonitis with S. faecalis (1), and bleeding of epiploic vessels at gastric opening (1). There were no deaths in the casuistic.

Conclusions: Different techniques and indications for natural orifice surgery were safely performed by the centers using available technology. Evolution of technology is expected to spread NOTES for clinical applications.

ET18

NATURAL ORIFICE TRANSGASTRIC ENDOSCOPIC LIVER WEDGE RESECTION USING AN ENDOSCOPIC CONTROLLED ROBOTICS-ENHANCED MANIPULATOR SYSTEM, D Lomanto MD, Ho KY MD, Phee SJ PhD, Low SC PhD, Kencana AP MD, Yang K PhD, Sydney S Chung, Minimally Invasive Surgical Centre, Dept Surgery and Department of Medicine, National University of Singapore and School of Mechanical & Aerospace Engineering, Nanyang Technological University, Singapore

The parallelism of standard endoscopic fixtures limits the degree of freedom for surgical maneuvers during Natural Orifice Transluminal Endoscopic Surgery (NOTES). This study explored the feasibility of adapting an intuitively-controlled robotics-enhanced endosurgical system we previously developed to facilitate surgical procedure in NOTES. The system consists of a master controller, a telesurgical workstation, and a slave robotic manipulator through an array of sensors with 2 manipulators holding a grasper and a cautery hook. These are separately inserted through the operating channels of a 2-channel endoscope. Movements of the operator are detected by the sensors and actuated into force signals driving the manipulators via a tendon-sheath mechanism. After IACUC approval, surgical procedures were performed in 3 pigs. The peritoneal cavity was entered through a 10mm transgastric incision using a hook. Then the liver was visualized by retroflexing the endoscope at a 45 degrees angle. Segmental hepatectomy was performed using the robotic grasper and hook. Hemostasis was achieved with the hook. After the procedure, the gastrotomy site was left open and the animal was euthanized. The 3 transgastric segmental hepatectomy were successfully performed using the robotics endosurgical system with no laparoscopic assistance. The entire operation was completed in 8.5 min (range: 6-11). The robotics-controlled grasper was able to effectively grab and retract the liver tissue while the other robotic manipulator holding the hook dissected the liver at the desired plane. Robotic coordination of the two end-effectors was precise and triangulation of the two arms was achieved with ease. This study demonstrated for the first time the through-the-scope robotics-enhanced endosurgical system could effectively mitigate the technical constraints normally encountered in NOTES procedures. With it, the triangulation of surgical tools and manipulation of tissue become easy and the entire operation could be successfully accomplished without the need of laparoscopic assistance.



Emerging Technology Oral Abstracts

ET19

A NEW NOTES TOOLBOX: FLEXIBLE INSTRUMENTS FOR TRANSLUMENAL SURGERY, Melina C Vassiliou MD, Daniel von Renteln MD, Daniel T McKenna MD, Per-Ola Park MD, Paul Swain MD, Richard I Rothstein MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH; Imperial College, London, United Kingdom; Sahlgrenska University Hospital, Goteborg, Sweden

Objective: One of the major limitations to the development of safe NOTES procedures is the need for adequate endoscopic devices. The goal of this report is to describe our experience with a NOTES toolbox (Ethicon Endo-Surgery, Inc, Cincinnati, OH) in a porcine model and to highlight some of the most effective instruments. **Description and methods:** We have used the new toolbox to develop and perform transgastric NOTES procedures in 35 pigs. We have focused primarily on 2 procedures: ligation of the inferior epigastric vessels (3-4mm in size), and gastrojejunostomy. Epigastric vessel ligation (EVL) is performed in patients prior to breast reconstruction to improve vascularization of the flap. The NOTES gastrojejunostomy is designed for eventual bypass of malignant duodenal obstruction. The toolbox includes: steerable flex trocar, hook knife (HK), Maryland dissector (MD), BELA bipolar forceps, specimen retrieval bag, tissue apposition system (TAS), and several articulating instruments. All procedures were performed transgastrically using a double channel endoscope (Olympus, 2T160). The MD is a flexible, rotatable 3.7mm instrument. It is slightly curved and closely resembles its laparoscopic counterpart. The 3.7mm BELA is used with an ERBE VIO 300D generator and, in pigs, has been shown to seal vessels up to 5mm with minimal lateral spread. The monopolar HK has a 2.8mm shaft and is fully rotatable. The 2.8mm TAS system consists of a hollow-bore needle tag applier and knotting device for the 3-0 prolene t-tags. **Results:** The MD is extremely robust and can be used to perform fine dissection. We used it to skeletonize the epigastric vessels, to create windows in the mesentery and to dilate small bowel incisions. The BELA was applied to numerous epigastric vessels and excellent hemostasis was achieved in all cases. The peritoneum overlying the epigastric vessels was incised with the HK, which was also used to create jejunal enterotomies. The HK allowed for meticulous, safe and well-controlled dissection. All of the gastrotomies for EVL were closed using TAS, which was also used to suture the gastrojejunal anastomoses. This suturing system is simple to operate and very versatile. **Conclusions:** This new toolbox provides robust, yet flexible tools to perform basic surgical techniques such as precise dissection, hemostasis and suturing. The devices are effective, reliable and greatly expand the capabilities of the endoscope. Though not yet indicated for transluminal use in humans, the Ethicon toolbox is a significant improvement over standard endoscopic instruments and will serve as an excellent foundation for future innovations.

ET20

MINIMALLY INVASIVE SURGERY USING MAGNETICALLY LEVITATED PLATFORMS. A CHANGE OF CONCEPT FOR A SUPERIOR VIEW AND APPROACH TO THE SURGICAL FIELD, Yoav Mintz MD, Martin Simon PhD, Department of Surgery, Hadassah-Hebrew University Medical Center, Jerusalem, Israel, Department of Physics and Astronomy, University of California Los Angeles, CA, USA

Objective: Minimally invasive surgery requires insertion of long instruments through access ports in the abdominal wall or through natural orifices. In either case these instruments have a significant movement restriction due to their ports of entry. Although robotic and articulating laparoscopic instruments enable more degrees of freedom to the tip of the instrument, the hinge created by the port of entry does not allow moving the whole instrument shaft sideways. Due to this hinge restriction the surgeon continuously compromises on the viewing angle and the angle of instruments towards the target. Our aim was to develop a surgical platform that would levitate in the peritoneal cavity without any movement restriction, hence allowing the best necessary view and the best angle of operation regardless to its insertion port.

Description of the technology: a special configuration of permanent and electromagnets was developed. This configuration creates a magnetic field that enables another magnetic platform to be stably suspended in air up to 18 cm away from the system. The levitated platform is remotely controlled and can be moved in all three axes. It can be configured to be in several shapes and sizes, it can harbor a wireless camera, power source and more.

Preliminary results: Magnetic platforms in several shapes and sizes were levitated at 14-18 cm gaps from the system. Stable levitation was achieved and the platform could be moved around in space. A prototype levitator was positioned above an abdominal wall of a live animal model with pneumoperitoneum and a platform was stably levitated inside the peritoneal cavity. The levitation was not affected by the laparoscopic instruments and laparoscope.

Conclusions/Future directions: Magnetic fields can be generated from the outside of the abdomen and effectively create stable levitation inside the peritoneal cavity. Having a platform maneuvered around in the peritoneal cavity without any movement restriction is a change of concept. This breakthrough technology can allow acquisition of video images from any angle to convey the best view available for the surgeon. It can deliver the independent image required for single port surgery and NOTES as well as for standard laparoscopy. Surgical tools could probably be mounted on this platform as well and remotely operated allowing the surgeon to see and operate from the best possible approach to the operating field.

Emerging Technology Poster Listing

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ETP01 APPLICATION OF PER-ORAL CIRCULAR STAPLER

ANVIL (ORVIL-TM) TO ESOPHAGOJEJUNOSTOMY AFTER LAPAROSCOPIC GASTRECTOMY IN PATIENTS WITH GASTRIC CANCER Kyoichi Takaori, MD, Y Kadokawa, MD, S Nakajima, MD, A Kawabe, MD, T Yamamoto, MD, Department of Surgery, Kyoto University and Department of Surgery, Asahi University Murakami Memorial Hospital

ETP02 THE EFFECT OF AN ENDOSCOPICALLY PLACED DUODENAL RESTRICTOR ON WEIGHT CHANGES IN A PORCINE MODEL

Alex Escalona, MD, Keith S Gersin, MD, Lee Kaplan, MD, Manoel Galvao Neto, MD, Hospital Universidad Catolica, Santiago Chile; Carolinas Medical Center, Charlotte, NC; Massachusetts General Hospital, Boston, MA; Gastro Obeso Center, Sao Paulo, Brazil

ETP03 EVALUATING SINGLE PORT LAPAROSCOPY USING THE FUNDAMENTALS OF LAPAROSCOPIC SURGERY (FLS) SIMULATOR

Gideon Sroka, MD, Liane S Feldman, MD, Pepa Kaneva, MSc, Gerald M Fried, MD, Steinberg-Bernstein Centre for Minimally Invasive Surgery, McGill University, Montreal, Quebec, Canada.

ETP04 HARNESSING SIMULATION TECHNOLOGY TO TEACH ABDOMINAL AORTIC ANEURYSM IN THE TEAM SETTING

Mayank K Mittal, MD, Daniel A Hashimoto, BA, Olugbenga Okusanya, BA, Peter R McCombs, MD, Andrew S Resnick, MD, Noel N Williams, MD, Kristoffel R Dumon, MD, Penn Clinical Simulation Center, Penn Surgery, University of Pennsylvania School of Medicine

ETP05 COMPARISON OF TIME AND SAFETY BETWEEN THE BIPOLAR INCIRCLE CLASSIC AND MONARCH RFA ELECTRODE

Cherif Boutros, MD, Bing Yi, MD, N J Espot, MD, Ponnandai Somasundar, MD, Roger Williams Medical Center

ETP06 NEW INSTRUMENTATION IMPROVES ENDOSCOPIC

CHOLECYSTECTOMY R C Austin, MD, C A Mosse, P Swain, MD, K Bally, Colchester General Hospital, UK; Imperial College, London, UK; University College, London, UK; The NOTES Development Group, Ethicon Endo-Surgery, Inc. USA

ETP07 PERCUTANEOUS ENDOSCOPIC-GUIDED LASER LITHOTRIPSY FOR CHOLEDOCHOLITHIASIS AFTER

PANCREATICOUDUODENECTOMY Emanuele Lo Menzo, MD, Seth A Spector, MD, Bruce Kava, MD, Jose M Martinez, MD, Alberto Iglesias, MD, Diya Alaadeen, MD, Atul K Madan, MD, Miami VA Healthcare System, University of Miami, Miami, FL.

ETP08 NEW TECHNIQUE OF CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC) IN PATIENTS WITH LIMITED PERITONEAL SURFACE MALIGNANCIES BY LAPAROSCOPIC APPROACH

M Singh, MD, G Franco, MD, A Averbach, MD, J Esquivel, MD, Saint Agnes Hospital, Baltimore, MD

ETP09 INCISIONLESS ENDO-LAPAROSCOPIC COLECTOMY FOR

LEFT-SIDED COLONIC TUMOURS Hester, Yui Shan Cheung, MD, Alex, Lik Hang Leung, MD, Chi Chiu Chung, MD, Dennis, Chung Kei Ng, MD, Michael, Ka Wah Li, MD, Pamela Youde Nethersole Eastern Hospital

ETP10 HEMORRHOIDECTOMY USING A NEWLY OPERATING

ANOSCOPE DEVICE: A CASE REPORT Manjunath Haridas, MD, Brad Champagne, MD, Case Medical Centre

ETP11 THE SAFETY OF A BIPOLAR SEALANT AND CUTTING

DEVICE (ENSEAL) FOR LAPAROSCOPIC COLON AND RECTAL SURGERY Ponnandai Somasundar, MD, Cherif Boutros, MD, Bing Yi, MD, N J Espot, Roger Williams Medical Center

ETP12 OUR POUCH ROUX-Y RECONSTRUCTION TECHNIQUE

AFTER LAPAROSCOPICALLY ASSISTED TOTAL GASTRECTOMY Koji Hattori, MD, Yukio Terashita, MD, Ryouta Mori, MD, Shinichiro Saito, MD, Nagoya Kyoritsu Hospital Nagoya-city Japan

ETP13 GASTRIC IMBRICATION AS A WEIGHT LOSS PROCEDURE

Raghid S Bitar, MD, Geoffrey P Kohn, MD, Timothy M Farrell, MD, University of North Carolina

ETP14 CO2 LASER ENERGY FOR FLEXIBLE LAPAROSCOPIC DEVICES. THE FUTURE TOOL FOR NOTES AND SINGLE

PORT SURGERY. Yoav Mintz, MD, Abed Khalileh, MD, Roee Khen, PhD, Avraham Schlager, MD, Ram Elazary, MD, Reuven M Lewinsky, MD, Hadassah-Hebrew University Medical Center, Jerusalem, Israel. Lumenis Ltd., Yokneam, Israel

ETP15 INITIAL EXPERIENCE WITH TRANSORAL FUNDOPLICATION FOR FAILED LAPAROSCOPIC FUNDOPLICATION

Reginald Bell, MD, Katherine D Freeman NP, MSN, MS, Swedish Medical Center

ETP16 MINIMALLY INVASIVE VIDEO-ASSISTED

PARATHYROIDECTOMY Youben Fan, MD, Bomin Guo, BA, Qi Zhang, DO, Department of Surgery, Sixth People's Hospital, Shanghai Jiaotong University

ETP17 LAPAROSCOPIC GASTRIC BANDING WITHOUT VISIBLE

SCAR Roberto M Tacchino, MD, Francesco Greco, MD, Daniele Matera, MD, Dept of General Surgery - Catholic University of Sacred Heart Rome

ETP18 EARLY EXPERIENCE WITH A NEW SYNTHETIC BIO-

ABSORBABLE FASCIAL REINFORCEMENT: A REPORT OF ELEVEN CASES. Marc Singer, MD, Bastian Domajnko, MD, Nathalie Mantilla, MD, Jose Cintron, MD, Herand Abcarian, MD, University of Illinois at Chicago

ETP19 WATER FILLED ENDOSCOPIC SURGERY (WAFLES): FIRST

EXPERIENCE IN ANIMAL MODEL. Tatsuo Igarashi, MD, Yukio Naya, MD, Yoshihiro Shimomura, PhD, Tadashi Yamaguchi, PhD, Harufumi Makino, MD, Research Center for Frontier Medical Engineering, Chiba University.

ETP20 THE APPLICATION OF MULTIPLE ARTICULATING

DEVICES(MAD) IN NOTES CHOLECYSTECTOMY Rebekah S Kim, MD, Nikalesh Ippagunta, MD, Jawad Latif, MD, John Afthinos, MD, Kevin McGill, MD, Teixeira A Julio, MD, St. Luke's-Roosevelt Hospital Center New York, NY

ETP21 DISSECTION TECHNIQUES FOR NOTES

CHOLECYSTECTOMY WITH THE FLEXIBLE ENDOSCOPE Kevin M McGill, MD, Nikalesh Ippagunta, MD, Julio Teixeira, MD, St. Luke's-Roosevelt Hospital Center

ETP22 EXPERIENCE WITH ENSEAL VESSEL-SEALING DEVICE IN

LAPAROSCOPIC COLECTOMY Francisco Quinteros, MD, Marc Singer, MD, Jose Cintron, MD, Slawomir Marecik, MD, Leela Prasad, MD, John Park, MD, Herand Abcarian, MD, University of Illinois at Chicago

ETP23 THE USE OF A NOVEL OPERATIVE LAPAROSCOPE IN

SINGLE SITE SURGERY Todd A Ponsky, MD, Robert Parry, MD, Jennifer Diluciano, RN, Scott Boulanger, MD, Rainbow Babies and Children's Hospital

ETP24 LIVER RETRACTION IN SINGLE PORT SURGERY

Don J Selzer, MD, Indiana University School of Medicine

ETP25 SINGLE TROCAR-LIKE LOW COST PORTABLE DEVICE FOR

ABDOMINAL PAIN ASSESSMENT AND TREATMENT Juan D Hernandez, MD, Natalia Agudelo, MSc, Santiago DeFrancisco, Andres F Espinosa, Jaime Gonzalez, MS, Rafael Arango, MS, Marcela Cárdenas, MS, Universidad de los Andes

ETP26 ADVANCES IN EDUCATOR-ORIGINATED SURGICAL

SIMULATIONS USING TIPS Young In Yeo, BS, Sergei Kurenov, MS, Jorg Peters, PhD, Juan C Cendan, MD, University of Florida, Departments of Computer Information and Sciences Engineering and Surgery

ETP27 SINGLE SITE LAPAROSCOPIC ADJUSTABLE GASTRIC

BANDING TECHNIQUE THROUGH A NOVEL MULTIACCESS DEVICE Esteban Varela, MD, VA North Texas Health Care System

ETP28 SINGLE SITE LAPAROSCOPIC SLEEVE GASTRECTOMY

TECHNIQUE THROUGH A NOVEL MULTIACCESS DEVICE Esteban Varela, MD, VA North Texas Health Care System

ETP29 LAPARO-ENDOSCOPIC SINGLE SITE SURGICAL REPAIR OF

VENTRAL ABDOMINAL HERNIA M. Jawad Latif, MD, Nikalesh Ippagunta, MD, Scott J Belsley, MD, Julio A Teixeira, MD, George J, James J McGinty, MD, St. Luke's Roosevelt Hospital Center, Columbia University College of Physicians & Surgeons

ETP30 LAPAROSCOPIC TRANSGASTRIC ESOPHAGEAL

MUCOSECTOMY WITH SIMULTANEOUS ESOPHAGEAL STENTING: A PORCINE MODEL AS A POTENTIAL NOVEL THERAPY IN THE MANAGEMENT OF ESOPHAGEAL MUCOSAL ABNORMALITIES. Natasha M Rueth, MD, Michael Maddaus, MD, Shawn S Groth, MD, Jonathan D'Cunha, MD, Rafael Andrade, MD, University of Minnesota Department of Surgery, Division of Thoracic and Foregut Surgery

ETP31 INITIAL RESULTS OF VERTICAL GASTRIC PLICATION FOR

SEVERE OBESITY Stacy A Brethauer, MD, Jason Harris, PhD, Bipan Chand, MD, Tomasz Rogula, MD, Matthew Kroh, MD, Philip R Schauer, MD, Cleveland Clinic, Cleveland, Ohio

ETP32 PROSPECTIVE RANDOMIZED TRIAL OF INTRAPERITONEAL BUPIVACAINE VERSUS WATER USING THE INSUFLOW DEVICE

TO REDUCE PAIN IN LAPAROSCOPIC CHOLECYSTECTOMY Peter W Zimmer, MD, Michael J McCann, MD, Penrose-St. Francis, Colorado Springs



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- ETP33 NOTES-ASSISTED TRASVAGINAL SPLENECTOMY: THE NEXT STEP FOR THE MINIMAL INVASIVE APPROACH TO THE SPLEEN** EM Targarona, MD, C Gomez, MD, R Rovira, MD, JC Pernas, MD, C Balague, MD, C Guarner, MD, P Pares, MD, S Sainz, MD, M Trias, MD, Service of Surgery, Digestive Pathology, Gynecology and Radiology. Hospital de Sant Pau, UAB, Barcelona, Spain
- ETP34 CONTROL OF HIGH OUTPUT ENTERO-ATMOSPHERIC FISTULA BY REINFORCEMENT WITH BIOLOGICAL GRAFT** Christian Massier, MD, Mark Janzen, MD, Cleveland Clinic Huron Hospital
- ETP35 A NOVEL APPROACH TO COLORECTAL ANASTOMOTIC STENOSIS AND VAGINAL FISTULA WITH INTRALUMINAL STAPLING** Mark Kadowaki, MD, Maui Medical Group
- ETP36 SINGLE INCISION LAPAROSCOPIC APPENDECTOMY WITH STANDARD INSTRUMENTATION** Mark Kadowaki, MD, Maui Medical Group
- ETP37 MODIFIED NISSEN FUNDUPLICATION** Jose L Ibarrola, MD, Juan J Gonzalez, MD, Gilberto Gonzalez, MD, Mauricio Rodriguez, MD, Hospital Angeles del Pedregal
- ETP38 USE OF ENDOFLIP TOOL FOR LAPBAND ADJUSTMENT** John O'Dea, PhD, David Nolan, BS, Paul R Burton, MD, Crospon, CORE
- ETP39 LOCAL RESECTION AND LYMPHATIC BASIN DISSECTION USING SENTINEL NODE NAVIGATION SURGERY** Hitoshi Murakami, MD, Yasushi Rino, PhD, Norio Yukawa, PhD, Nobuhiro Sugano, MD, Hitoshi Matsuura, MD, Toshio Imada, PhD, Department of Surgery, Yokohama City University, School of Medicine
- ETP40 HAND INSTRUMENTS WITH A PRE-BENT SHAFT ARE SUITABLE FOR LESS SURGERY** Ralf Kleemann, PhD, Philippe Hall, PhD, Olympus Winter & Ibe
- ETP41 EX VIVO COMPARISON OF CURRENT COLOTOMY CLOSURE MODALITIES FOR NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES)** Rogier P Voermans, MD, Floor Vergouwe, BA, Paul Fockens, PhD, Mark I van Berge Henegouwen, PhD, 1 Dept. of Gastroenterology and Hepatology, 2Dept. of Surgery, Academic Medical Center, Amsterdam, the Netherlands
- ETP42 IMPROVED IMPLANT BIOCOMPATIBILITY WITH HYDRATED POLYURETHANE** Michael Milbocker[^], PhD, Dix Poppas^{^*}, MD, Richard Vazquez^{***}, MD, [^]Promethean Surgical Devices, Inc, East Hartford, CT; ^{*}New York-Presbyterian/Weill Cornell, NY, NY; ^{**}Northwestern University Medical School, Chicago, Illinois
- ETP43 NEW ERGONOMICS AND NEW OPPORTUNITIES FOR SINGLE PORT SURGERY** Stuart I Brown, PhD, Timothy G Frank, PhD, James L Gove, James D Martin, Ian Rutherford, Alfred Cuschieri, IMSaT University of Dundee
- ETP44 TRACTION ASSISTED ENDOSCOPIC SUBMUCOSAL DISSECTION USING A NEW DEFLECTING GRASPER** Suck-Ho Lee, MD, Kai Matthes, MD, Alexandre Y Derevianko, MD, Daniel B Jones, MD, Ram Chuttani, MD, Beth Israel Deconess Medical Center
- ETP45 TUMOR SPECIFIC NON-INVASIVE RADIOFREQUENCY THERMAL THERAPY USING ANTIBODY LABELED GOLD NANOPARTICLES** Evan S Glazer, MD, Christine Moran, Paul Cherukuri, PhD, Steven A Curley, MD, The University of Texas M.D. Anderson Cancer Center
- ETP46 STEREO ENDOSCOPY AS A 3-D MEASUREMENT TOOL** Matthew Field, BS, George Landon, PhD, Duncan Clarke, PhD, Adrian Park, MD, W. Brent Seales, PhD, University of Kentucky, Lexington, KY USA; University of Maryland Medical Center, Baltimore, MD USA; Fremont Associates, Camden, SC USA
- ETP47 A SURGEON CONTROLLED HYDRAULICALLY ACTIVATED LAPAROSCOPIC CAMERA CONTROLLER (CARDINALHEALTH, V-MUELLER DIVISION)** Ronald H Clements, MD, Kishore Yellumahanthi, MD, Section of Gastrointestinal Surgery, Department of Surgery, The University of Alabama at Birmingham
- ETP48 MICROLAPAROSCOPY AS AN EMERGING TECHNOLOGY** Chandra Hassan, MD, Keith Zuccala, MD, Danbury Hospital
- ETP49 USE OF A FLEXIBLE, RETICULATING, THERMAL TISSUE SEALING DEVICE FOR SINGLE INCISION SPLENECTOMY** Todd A Ponsky, MD, Robert Parry, MD, Jeffrey W Carter, MD, Yagnik Pandya, MD, Scott Boulanger, MD, Rainbow Babies and Children's Hospital
- ETP50 BENCH TESTING AND BIOREACTIVITY OF A NOVEL TECHNIQUE OF KNOTLESS SUTURE DEVICE** Pavlos Papasavas, MD, Paul Joyner, MD, Raymond McKay, MD, George Sikora, Raymond Bojarski, BA, Darren Tishler, MD, Orlando Kirton, MD, Hartford Hospital
- ETP51 HIDDEN MARKOV MODELS AND IDENTIFICATION OF SURGICAL FLIGHT-PATH DEVIATION WITH THE DAVINCI ROBOT** Avinash Burra, MS, Jesse Lingeman, MS, Kuri Gill, MS, Anupam Burra, MS, Nikalesh Ippagunta, MD, Jawad Latif, MD, Faiz Bhora, MD, George Todd, MD, Scott Belsley, MD, Dept. of Surgery, St. Luke's-Roosevelt Hospital Center, New York, NY
- ETP52 LAPAROSCOPIC DISTAL PANCREATECTOMY: USE OF RADIOFREQUENCY ASSISTED DISSECTOR - 0% LEAK RATE** Ravi J Chokshi, MD, Joseph A Blansfield, MD, Iswanto Sucandy, MD, David G Sheldon, MD, Geisinger Medical Center
- ETP53 UTILITY OF BIOSPONGEL THAT ENABLES A CLEAN ENVIRONMENT OF TRANSRECTAL ROUTE FOR NOTES BY NANO TECHNOLOGY** Takeshi Ohdaira, MD, Yoshikazu Yasuda, MD, Jichi Medical University
- ETP54 OPERATIVE EXPERIENCE WITH A HANDS-FREE POINTING SYSTEM THAT ALLOWS VISUAL COMMUNICATION BETWEEN LAPAROSCOPIC SURGEONS** Daniel Shen^{*}, MSc, James Wall^{*}, MD, Wei Gu^{*}, BS, Thomas Krummel, MD, Madhulika Varma, MD, Stanford University, University of California, San Francisco
- ETP55 A SPECIALLY DEvised ENDONEEDLE KIT FOR LAPAROSCOPIC REPAIR OF INDIRECT INGUINAL HERNIA.** Masao Endo, MD, Michinobu Ono, MD, Miwako Nakano, MD, Yukio Kawashima, Norman Shane Johnson, Shoichi Yoshida, Daisuke Yabara, Saitama City Hospital, TSK Laboratory JAPAN
- ETP56 LAPAROSCOPIC PARTIAL SPLENECTOMY WITH USE OF BIPOLAR RADIOFREQUENCY ABLATION TECHNOLOGY** Zahra Shafae, MD, Bruto Randone, MD, Brice Gayet, MD, Department of Digestive Surgery, Institut Mutualiste Montsouris
- ETP57 INTRAOPERATIVE BILIARY STENTING IN PARTIAL COMMON BILE DUCT INJURY** Prasanta K Raj, MD, Subhasis Misra, MD, Eugene Hauck, MD, Fairview Hospital, Cleveland Clinic Health System
- ETP58 A NOVEL GASTROINTESTINAL STENT TECHNOLOGY** Joseph A Talarico, MD, Amy I Cha, MD, Fady Moustarah, MD, Matthew Kroh, MD, Bipan Chand, MD, Cleveland Clinic Foundation
- ETP59 EARLY EXPERIENCE OF LAPAROSCOPIC-ASSISTED NATURAL ORIFICE SURGERY: A TRANSVAGINAL APPROACH** Jaime E Sanchez, MD, Beth R Krieger, MD, Jorge E Marcet, MD, University of South Florida, Division of Colon and Rectal Surgery
- ETP60 THE KARL STORZ ANUBIS PLATFORM** Bernard Dallemagne, MD, Silvana Perretta, MD, Didier Mutter, MD, Joël Leroy, MD, Jeff Melanson, Sabine Summerer, Martin Leonhard, PhD, Jacques Marescaux, MD, IRCAD-EITS, University Louis Pasteur, Strasbourg, France - Karl Storz, Tuttlingen, Germany
- ETP61 BRONCHOSCOPY GUIDED TRACHEOSTOMY - A HYBRID MODEL PROVIDING AIRWAY TRAINING FOR RESIDENTS** Mayank K Mittal, MD, Scott W Cowen, MD, Kristoffel R Dumon, MD, Daniel A Hashimoto, BA, Olugbenga Okusanya, BA, Andrew S Resnick, MD, Noel N Williams, MD, Department of Surgery, Penn Clinical Simulation Center, University of Pennsylvania School of Medicine
- ETP62 LOW FIDELITY SIMULATION MODEL FOR PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) TUBE PLACEMENT** Mayank K Mittal, MD, Noel N Williams, MD, Keith A Kreitz, MD, Olugbenga Okusanya, BA, Daniel A Hashimoto, BA, Andrew S Resnick, MD, Kristoffel R Dumon, MD, Department of Surgery, Penn Clinical Simulation Center, University of Pennsylvania School of Medicine
- ETP63 VIDEO LAPAROSCOPES EQUIPPED WITH A BENDING SECTION ARE SUITABLE FOR LESS SURGERY** Ralf Kleemann, PhD, Philippe Hall, Olympus Winter & Ibe
- ETP64 ENDOFLIP: A NOVEL DEVICE FOR ACCURATE MEASUREMENT OF GASTRIC POUCH VOLUME AND GASTRIC POUCH REDUCTION** Brian J Winkleman, MD, Peter N Nau, MD, Dean J Mikami, MD, The Ohio State University
- ETP65 HIGH GRADE SURGICAL SKILLS ACQUIRED WITH ENDOSCOPIC SURGERY SIMULATOR TRAINING** Jose D Lozada Leon, MD, Armando Contreras Arellano, MD, Sanatorio Santa Monica, Cuernavaca, Mor., Mexico

Emerging Technology Poster Listing

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ETP66 TWO TROCAR SINGLE INCISION CHOLECYSTECTOMY USING STANDARD GENERAL SURGERY INSTRUMENTS Prakash Gatta, MD, University of Cincinnati

ETP67 ISIS: A VIRTUAL REALITY ENVIRONMENT FOR LAPAROSCOPIC SURGICAL PLANNING USING SIMULATED TROCARS AND LAPAROSCOPE Jung Leng Foo, PhD, Eliot Winer, PhD, Thom Lobe, MD, Iowa State University & Blank Children's Hospital

ETP68 SEMI-DISPOSABLE GUIDED LAPAROSCOPE POSITIONING SYSTEM WITH EMBEDDED TRACKING SOFTWARE PRELIMINARY RESULTS Amir Szold, MD, Ibrahim Matter, MD, Moti Sholev, MSc, Tel Aviv Sourasky Medical Center, Tel Aviv, Bnai Zion Medical Center, Haifa, and MST Ltd., Israel

ETP69 NOVEL USE OF FIBRIN GLUE ABLATION POST LAPAROSCOPIC PARTIAL NEPHRECTOMY John C Coleman, MD, Debora K Moore, MD, Robert G Moore, MD, William Beaumont Army Medical Center, V.A. Medical Center Shreveport, LA, LSU Medical Center, Shreveport, LA

ETP70 ELECTROSPUN, NANO-FIBER, DUAL-SIDED MESH FOR INTRA-ABDOMINAL REPAIR OF VENTRAL HERNIA: A PORCINE STUDY Amir Szold, MD, Elisha Martinez, PhD, Department of Surgery B, Tel Aviv Sourasky Medical Center, and Nicast Ltd., Lod Israel

ETP71 SILS™ PORT: ACCESS DEVICE TO FACILITATE LAPAROSCOPIC SURGERY THROUGH A SINGLE INCISION Gene A Stellon, BS, Caren L Necio, BS, Paul D Richard, MS, Elias Hartoumbekis, BS, Covidien

ETP72 DEVELOPMENT OF A VIRTUAL SIMULATOR FOR HIATAL HERNIA REPAIR USING THE COVIDIEN/AUTOSUTURE™ ENDOSTITCH™ DEVICE. Sukitti Punak, PhD, Sergei Kurenov, MSc, Jorg Peters, PhD, Juan C Cendan, MD, University of Florida, Colleges of Medicine and Computer Information and Engineering Science.

ETP73 USE OF AN ABSORBANT OXYGEN DRESSING TO MANAGE WOUND MOISTURE LEVELS AND TO ELEVATE THE OXYGEN TENSION OF THE WOUND ENVIRONMENT Bruce L Gibbins, PhD, Roger Massengale, David F Roe, PhD, Alan P Dine, BS, I-Flow Corporation

ETP74 SINGLE INCISION LAPAROSCOPIC GASTRIC BYPASS: FROM ANIMAL MODEL TO HUMAN EXPERIENCE: Jenny Choi, MD, Daniel J Rosen, MD, Luca Milone, MD, Nancy Hogle, MS, Marc Bessler, MD, Columbia University College of Physicians and Surgeons

ETP75 SINGLE PORT ACCESS RIGHT HEMICOLECTOMY THROUGH A GELPORT: A PRELIMINARY REPORT OF 3 CASES Howard S Kaufman, MD, Juliette M Zelada, MD, Huntington Hospital, Pasadena, CA, USC Department of Surgery, Los Angeles, CA

ETP76 HOSPITAL LED PUBLIC-PRIVATE PARTNERSHIPS: THE DEVELOPMENT OF MEDICAL GRADE BROADBAND NETWORKS J Frost, BA, C A Weiss III MD, PhD, Auburn Memorial Hospital

ETP77 VIRTUAL WORLDS ARE A NOVEL INTERDISCIPLINARY PLATFORM FOR MEDICAL DEVICE TRAINING J M Kinross, MD, H Lee, MD, V Patel, MD, M Chan, A Das, MD, K Miles, R Davies, R Aggarwal, PhD, A Darzi, MD, Department of Biosurgery and Surgical Technology, Imperial College London

ETP78 NEW TEACHING MODALITIES: A VIRTUAL REALITY CRICOTHYROIDOTOMY EXPERIENCE Neil Perera, MD, Bradley N Younggren, MD, Kelly Blair, MD, Mohamad Haque, MD, Robert Rush, MD, Alan Liu, PhD, Madigan Army Medical Center - Ft. Lewis, Washington

ETP79 SUBCUTANEOUS SURGICAL TUNNELLING FOR SINGLE INCISION LAPAROSCOPIC SURGERY Monika E Hagen, MD, Wagner J Oliver, MD, Thompson Kari, MD, Jacobsen Garth, Spivack Adam, Mark Talamini, Brian Wong, Lauren Fischer, Santiago Horgan, Department of Surgery, University of California San Diego

ETP80 A STOMACH-LIFTING TECHNIQUE TO OBTAIN BETTER SURGICAL VIEW IN LAPAROSCOPY-ASSISTED GASTRECTOMY Tatsushi Suwa, MD, Kazuo Shinozaki, MD, Satoshi Okabe, Naokazu Nakamura, Div.Surgery, Kashiwa Kousei General Hospital

ETP81 LONGER HOLMIUM LASER CATHETERS ALLOW FOR EASIER MANIPULATION OF THE DUODENOSCOPE DURING BILIARY LITHOTRIPSY Jose M Martinez, MD, Diya Aladeen, MD, Atul Madan, MD, Alberto Iglesias, MD, University of Miami, Miller School of Medicine

ETP82 EVOLVING DEVELOPMENT AND UTILIZATION OF THE ENDOSCOPIC GASTRIC BAND CUTTER Raffi Barsoumian, MD, Colin J Powers, MD, Alan C Geiss, MD, Arthur Lowy, MD, Syosset Hospital of the North Shore University - Long Island Jewish Health System

ETP83 ENDOLUMINAL WRAP REPAIR AFTER FAILED LAPAROSCOPIC NISSEN FUNDOPPLICATION Georg O Spaun, MD, Christy M Dunst, MD, Danny V Martinec, BS, Lee L Swanstrom, MD, Legacy Health System, Portland, Oregon

ETP84 SINGLE SITE TECHNIQUE FOR VENTRICULOPERITONEAL(VP) SHUNT PLACEMENT IN INFANTS AND CHILDREN Jose M Prince, MD, Bradley J Segura, MD, Matthew Adamo, Robert C Burns, MD, Theodore J Spinks, MD, Timothy D Kane, MD, Children's Hospital of Pittsburgh

ETP85 AUDIO-VIDEO (AV) COMMUNICATION TO THE OPERATING ROOM USING A MOBILE, CART-BASED COMMUNICATION SYSTEM AND STANDARD NETWORK CONNECTION Brian J Dunkin, MD, Rohan Joseph, MD, Eddie Mitchell, BS, Peter Renzi, MS, The Methodist Institute for Technology, Innovation, and Education (MITIE), Houston, Texas

ETP86 USE OF A 2MM "FOURTH INSTRUMENT" IN SINGLE SITE CHOLECYSTECTOMY TO REPLICATE THE TRADITIONAL TECHNIQUE Jeffrey W Carter, MD, Yagnik Pandya, MD, Scott Boulanger, MD, Robert Parry, MD, Todd A Ponsky, MD, Rainbow Babies and Children's Hospital

ETP87 THE COST-EFFECTIVE ORGAN COLLECTING TECHNIQUE "PARACHUTE TECHNIQUE BY USING EZ-PURSE "FOR LAPAROSCOPIC SURGERY Masanobu Hagiike, MD, Hironobu Suto, MD, Takahiro Kasiwagi, MD, Ryusuke Takebayashi, MD, Sinto Akamoto, MD, Tatsushi Inoue, MD, Keitaro Kakinoki, MD, Keiichi Okano, MD, Kunihiko Izuizhi, MD, Hisashi Usuki, MD, Yasuyuki Suzuki, MD, Dept of Gastroenterological surgery, Kagawa University, Japan

ETP88 TOTALLY N.O.T.E.S. TRANSVAGINAL CHOLECYSTECTOMY – NEW VAGINAL PORT ALLOWS TRUE NOTES R Zorron, M Filgueiras, L Pombo, E Kanaan, Department of Surgery – University Hospital Teresópolis HCTCO-FESO, Rio de Janeiro, Brazil

ETP89 THE USE OF EXTRA-LONG TELESCOPES IN SINGLE SITE LAPAROSCOPY Yagnik Pandya, MD, Jeffrey Carter, MD, Scott Boulanger, MD, Robert Parry, MD, Todd A Ponsky, MD, Rainbow Babies and Childrens Hospital

ETP90 NOTES RETROPERITONEAL NEFRECTOMY AND ADRENALECTOMY USING FLEXIBLE ENDOSCOPY: EXPERIMENTAL AND HUMAN APPLICATIONS R Zorron, L C Goncalves, D Leal, H L Fang, M Soldan, M Costa, F Malcher, M Coury, A L Oliveira, E Kanaan, Department of Surgery, Hospital Municipal Lourenco Jorge, Rio de Janeiro; Universidade Estadual Norte Fluminense-UENF, Campos- Brazil

ETP91 LAPAROSCOPIC ACCESS USING THE SURGISEAL AIRSEAL Mitchell S Roslin, MD, Edward Yatco, MD, Lenox Hill Hospital

ETP92 A NOVEL FLEXIBLE ENDOSCOPIC CLIP APPLIER OVERCOMES THE SHORTCOMINGS OF CURRENTLY USED LIGATION CLIPS FOR NOTES Oliver J Wagner, MD, Monika E Hagen, MD, Kurt Bally, Brian Wong, MD, Lauren Fischer, MD, Adam Spivak, MD, Kari Thompson, MD, Garth Jacobsen, MD, Mark Talamini, MD, Santiago Horgan, MD, Center for the Future of Surgery, University of California San Diego, Ethicon Endo-Surgery, Inc., Cincinnati, Ohio

ETP93 DEVELOPMENT OF ROBOTIC SPECIFIC TASKS FOR ROBOTIC SKILLS ACQUISITION Ray Gonzales, Jose M Martinez, MD, Ray Leveillee, MD, Nahida Chakhtoura, MD, J Matt Pearson, MD, Alberto R Iglesias, MD, Atul K Madan, MD, Division of Laparoendoscopic and Bariatric Surgery, University of Miami Miller School of Medicine, Miami, FL.

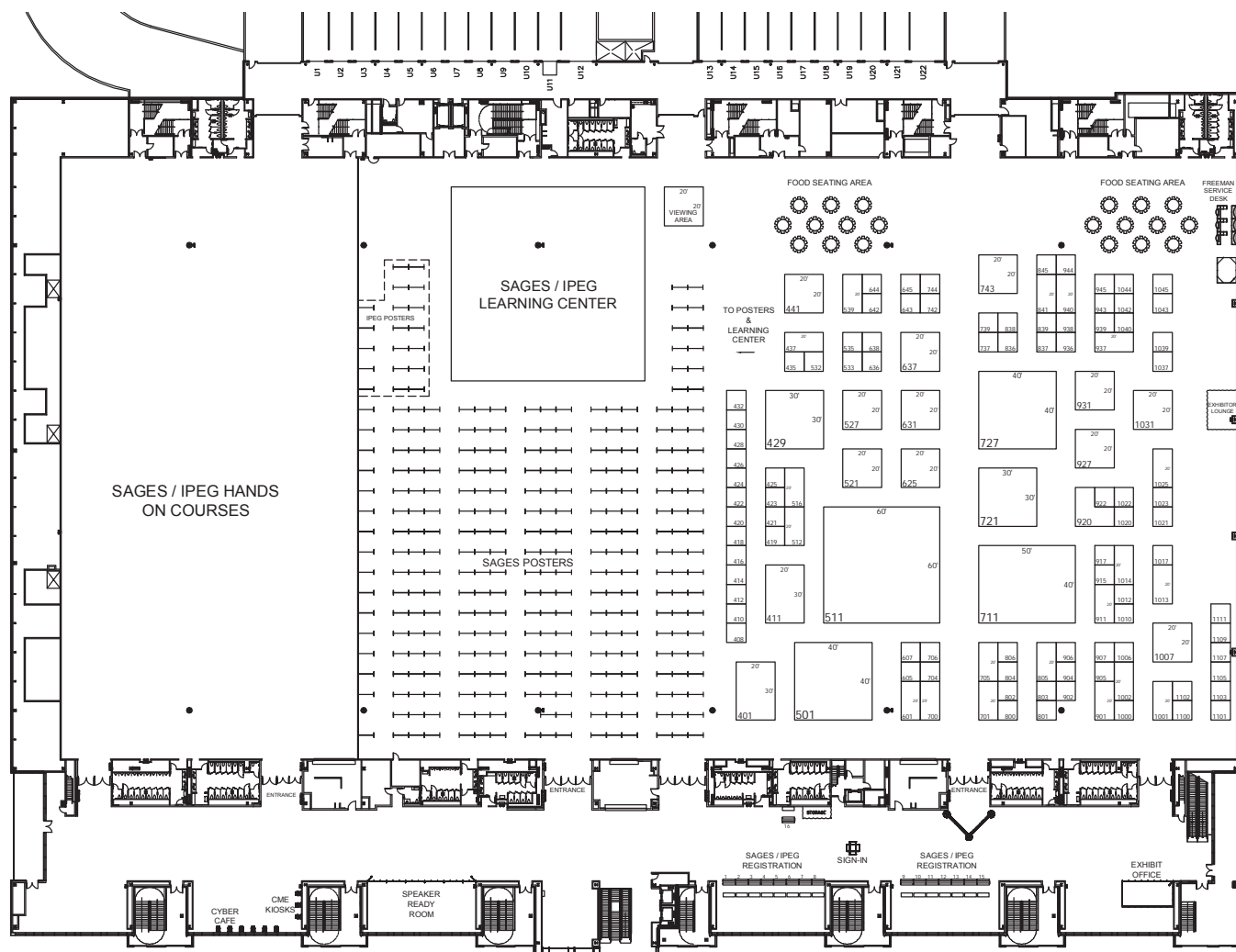
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ETP95 TRANSABDOMINAL INGUINAL HERNIA REPAIR (TAPP) OFFERS A BETTER LEARNING EXPERIENCE FOR ROBOTIC SURGERY THAN CHOLECYSTECTOMY S S Vorburgher, MD, B Gloor, MD, G Beldi, MD, O J Wagner, MD, A Kurmann, MD, D Candinas, MD, Inselspital, University Hospital Bern

ETP96 USER-POSITIONED MARKERS DELIVER DYNAMIC AND FLEXIBLE AUGMENTED REALITY SIMULATION Donncha Ryan, BA, Nicolas Sezille, BA, Derek Cassidy, BA, Fiona Slevin, BA, Haptica Ltd., Dublin, Ireland



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Index of Faculty & Presenters

Semaan M. Abboud	55	Paul G. Curcillo II	3, 27, 35, 41, 50	Carlos D. Godinez	74, 80
Juan Acosta	28	Matthew G. Cusick	73	Thorsten O. Goetze	80
M. Adamina	64	Ibrahim Dagher	80	Jason Gold	75
Reid Barton Adams	2, 27	Bernard Dallemagne	34, 61	Dragan J Golijanin	80
Gina L. Adrales	16, 40	Giovanni Dapri	51	Maria V. Gorodner	81
Rajesh Aggarwal	3, 39	Steven Scott Davis Jr.	67	Jon C. Gould	3, 65
Craig Albanese	2	Catherine DeAngelis	71	Jayleen Grams	44, 62
Mohamed R. Ali Jr.	37	Aureo L. De Paula	28, 54, 81	Teodor P. Grantcharov	85
R. Andrews	37	Maurits Debrauw	55	Casey J. Graybeal	41
Mehran Anvari	3, 37	Conor P. Delaney	3, 17, 23, 53, 55, 73	Robert A. Green	63
Chandrakanth Are.	3, 75	Eric Joel DeMaria	52	Frederick L. Greene	3, 42, 47, 61
S. Arora	45	Steven R. DeMeester	75	Linda Groah	38
Maurice E. Arregui	46	Sebastian V. Demyttenaere	46, 51	Brandon T Grover	79
Horacio J. Asbun	2, 3, 28, 45, 80	Alexandre Y. Derevianko	82	Andrew A. Gumbs	41
Vikram Attaluri	82	Daniel J. Deziel	2, 27, 47	Eric J. Hanly	64
Edward D. Auyang	44, 80	Nicola Di Lorenzo	42	Carroll "Mac" Harmon	67
Georges Azzie	85	John Dixon	52	Kristi Lee Harold	16
Manjit Bains	75	Kenneth Dobler	76	Karem Harth	46
Virinder K. Bansal	44	Edward P. Dominguez	67	Adrian M Harvey	65
Limaris Barrios	84	Guillermo Dominguez	41	Alan E. Harzman	36
Klaas Bax	3	Quan-Yang Duh	45	Robert H. Hawes	3, 24
Nancy N. Baxter	15	S. A. Dulschavsky	82	Jeffrey W. Hazey	17, 24
Estuardo Behrens	46	Titus D. Duncan	79	W. Scott Helton	27
Noam Belkind	82	Brian J. Dunkin	2, 3, 17, 50, 75, 85	B. Todd Heniford	2, 16, 19, 58, 79
Audrey K. Bell	44	Gary Dunnington	3, 38, 68	Daniel M. Herron	2, 3, 35, 77
Simon Bergman	3, 36, 38, 41	Sanjeev Dutta	35, 68, 85	Kelvin D. Higa	3, 26, 74
Ramon Berguer	3, 59, 61	David Bryan Earle	3, 59, 74	A Katharine Hindle	58
Marcos Berry	37	David W. Easter	3, 58, 63, 80	Colleen Hittle	63
Peter M. Bertin	81	Chris A. Edwards	50	Steven E. Hodgett	62
Cristiana M. Bertocchi	59	Michael B. Edye	2, 35	Michael D. Holzman	2, 3, 16, 38, 40
William Bertucci	80	Jonathan E. Efron	23	Tea-Ho Hong	50
Marc Bessler	41, 80	Dan Eisenberg	66	Santiago Horgan 2, 3, 26, 35, 37, 41, 42, 73	
Nazneen R. Billimoria	66	Enrique Elli	65, 80	Karen D. Horvath	2, 3, 36
Desmond H. Birkett	50	James C. Ellsmere	65	Eric Steven Hungness	24, 41
William Bisland	81	Afshin Eslami	81	Steven R. Hunt	23
H. Jaap Bonjer	3, 15	Steve Eubanks	2, 3, 47, 63, 67	John Hunter	27, 34, 47, 58
Philippe Bouchard	32, 55	Sarah Evans	54	Matthew M. Hutter	3, 26, 65
Steven P. Bowers	34, 40	Robert D. Fanelli	3, 53, 65	David Iannitti	36
Camilo Boza	62, 81	Timothy M. Farrell	53	Tony Ignagni	63
Marc Brand	78	Raad Fayez	45	William Barry Inabnet III	45
Fredrick J. Brody	2, 3, 40, 74	Nicole M. Fearing	82	Atif Iqbal	71
Steven Brower	2	Liane S. Feldman	3, 38, 53	Takuro Ishii	78
L. Michael Brunt	2, 3, 27, 59	Edward L. Felix	2, 3, 63	Arsalla Islam	41
Gordon Buduhan	81	Alberto R. Ferreres	73	Saleen Islam	78
Jo Buyske	2, 43, 59	George S. Ferzli	63	Moises Jacobs	61
Ronan A. Cahill	77	Abe L. Fingerhut	54	Garth R. Jacobsen	24, 38, 41, 42
Mark P. Callery	2, 27	Aaron Fink	78	Eric D. Jenkins	79
John Cameron	55	Michael K. Fishman	37	Blair A. Jobe	34, 26
Alfredo M. Carbonell	16	Robert J. Fitzgibbons	16	Daniel Bougere Jones	2, 3, 15, 39, 59, 65
Robert Carpenter	84	James W. Fleshman	35	Stephanie B. Jones	65
George J. Chang	23	Jason Foote	78	Irving Jorge	66
Lily C. Chang	36, 40	Rachel Forbes	84	Rohan A. Joseph	50, 65
Michael Chaump	37	Kenneth A. Forde	3, 61	Gregg H. Jossart	26
Anthony C. Chin	51	Dennis L. Fowler	58, 74	Matthew F. Kalady	23
Jenny J. Choi	44	T. D. Francone	66	Lee Kaplan	52
Elie K. Chouillard	50	Morris E. Franklin Jr.	2, 15, 16, 18, 35, 74	Martin Karpeh	75
Alberto Chousleb	28	Gerald M. Fried	2, 3, 38, 47, 59	Namir Katkhouda	58
Robert Cima	53	Karl H. Fuchs	42	Jennifer E. Keller	44
Clancy J. Clark	80	Terrence M. Fullum	32, 67	William E. Kelley Jr.	24
Mattew Coates	46	Michel Gagner	26, 61, 65, 66	Timothy J. Kennedy	20
Ricardo V. Cohen	26	Manoel P. Galvao Neto	28	Kent W. Kercher	3, 16, 35, 36
Claudius Conrad	64	T. Clark Gamblin	45	Leena Khaitan	3, 40, 51, 64
John M. Cosgrove	27	Alex Gandsas	65	Saurabh Khandelwal	79
Tiffany C. Cox	64	Pankaj Garg	46	Yuko Kitagawa	66
Michael W. Cripps	82	Brice Gayet	45, 62	Seigo Kitano	79
Robert Croce	21	Denise Gee	2	Hyun Koo Kim	44
Angel Cuadrado-Garcia	73	Daniel P. Geisler	23	Mary E. Klingensmith	38
John Cullen	80	Keith E. Georgeson	67	Geoffrey P. Kohn	64

Index of Faculty & Presenters

Shanu N. Kothari.....	85	Ninh Tuan Nguyen.....	2, 3, 26, 37, 41, 52	Alex Rosemurgy.....	35, 41
Irina Kruglikova.....	82	Abdelrahman A. Nimeri.....	16	Daniel J. Rosen.....	80
Marina Kurian.....	26	Gregg K. Nishi.....	37	Michael J. Rosen.....	3, 16, 20, 41, 71, 79
Antonio M. Lacy.....	42, 55	Yuri W. Novitsky.....	63	Raul J. Rosenthal.....	2, 3, 28, 61
Robert T. Lancaster.....	54	Michael S. Nussbaum.....	2, 66	Thomas B. Roshek.....	66
Jacob Langer.....	36	Fiemu E. Nwariaku.....	61	Sharona B. Ross.....	
William S. Laycock.....	40	Brendan G. O'Connell.....	79	James B. Rosser Jr.....	3, 45, 67, 84
Karl A. Leblanc.....	63	Brant K. Oelschlager.....	2, 3, 34, 40	Ricardo L. Rossi.....	28
Amy C. Lehman.....	44	Allan E. Okrainec.....	3, 41, 61, 71, 84, 85	John Scott Roth.....	16
Eli Lerner.....	2	Dmitry Oleynikov.....	2, 3, 42, 84, 85	Steven S. Rothenberg.....	42, 67
Emanuele Lezoche.....	15, 44, 78	Juan J. Omana.....	81	Nicolás Rotholtz.....	32
W. Scott Liebert.....	53	Raymond P. Onders.....	3, 40, 63	Richard Rothstein.....	17
David W. Lin.....	45	Sean Orenstein.....	58	Mathieu Rousseau.....	44
Edward Lin.....	17, 37, 40	Maciej Otto.....	79	Aviel Roy-Shapira.....	73
Dimitrios Linos.....	2, 79	Chinnusamy Palanivelu.....	62	Eric Rullier.....	53
Demetrius E.M. Litwin.....	79	Pavlos Papasavas.....	78	Gustavo Salinas.....	71
Davide Lomanto.....	78	Prakash R. Paragi.....	79	Barry A. Salky.....	3, 53, 58, 74
Emanuele Lo Menzo.....	51, 66	Adrian E. Park.....	2, 3, 36, 47, 64, 66, 77	Richard M. Satava.....	76
Bryan D. Loh.....	58	John J. Park.....	23	Mark Scerbo.....	39
Gilberto Lozano-Dubernard.....	44	John H. Parker.....	76	Philip R. Schauer.....	2, 26, 52, 65, 77
Emily S. Lukacz.....	42	Marco G. Patti.....	34	Bruce D. Schirmer.....	2, 3, 47, 65, 80
James D. Luketich.....	75	Jacques J. Perissat.....	61	Christopher M. Schlachta.....	2, 3, 15, 71, 76, 82
Henry Lynch.....	75	Serene Perkins.....	61	Sven C. Schmidt.....	58
Bruce V. MacFadyen Jr.....	2, 18, 59, 81	Kyle A. Perry.....	77, 80	Guido Schumacher.....	51
Gordon MacKinlay.....	36	Joseph B. Petelin.....	61	Steven D. Schwartzberg.....	2, 3, 19, 27, 65
Atul K. Madan.....	3, 52	Jeffrey H. Peters.....	47	Daniel J. Scott.....	2, 3, 25, 35, 41, 42, 81, 86
Kashif Z. Malik.....	80	Anthony T. Petrick.....	58	Niaz M. Selim.....	2, 58
Joseph Mamazza.....	15	Thai H. Pham.....	44	Don J. Selzer.....	3, 44
Gregory J. Mancini.....	41	Edward H. Phillips.....	2, 63, 74, 79	Anthony J. Senagore.....	53
Paul Mansfield.....	75	Richard A. Pierce.....	44	Paul A. Severson.....	2
Peter W. Marcello.....	15, 23	Alessio Pigazzi.....	32, 37	Neal E. Seymour.....	2, 3, 38, 39, 84
Jeffrey M. Marks.....	2, 17, 24, 42	Mark A. Pleatman.....	59	Manish Shah.....	75
John H. Marks.....	2, 3, 15, 24, 32, 53	Carlos Podesta.....	28	Paresh C. Shah.....	2, 17, 63, 66
Michael R. Marohn.....	3, 17, 37, 64	Erica R. Podolsky.....	80	Virender K. Sharma.....	24
Jose M. Martinez.....	24	Patricio Polanco.....	80	Vadim Sherman.....	67
Viney Mathavan.....	37	Marek Polomsky.....	54	Danny A. Sherwinter.....	73
Samer G. Mattar.....	3, 26, 34, 77	Alfons Pomp.....	81	Anand Singla.....	55
Kai Matthes.....	84	Robert Pompa.....	24	Allan E. Siperstein.....	45
Brent D. Matthews.....	2, 3, 16, 36, 41, 46	Jeffrey L. Ponsky.....	22, 35, 47	P. Sivagnanam.....	64
David A. McClusky.....	3, 64	Todd Ponsky.....	63	Stephen M. Smeaton.....	64
Marian P. McDonald - 2.....		Alex Poor.....	64	C. Daniel Smith.....	2, 3, 34, 54, 58, 76
Melissa McKee.....	85	Guillermo R. Portillo.....	32, 46	Bok-Yan Jimmy So.....	42
Nora Meehaghan.....	65	Stephen J. Poteet.....	81	Renato V. Soares.....	44
Andreas H. Meier.....	38	Eric Charles Poulin.....	3, 45	Dae Kyung Sohn.....	73
John D. Mellinger.....	3, 17, 38	Benjamin K. Poulouse.....	38, 41, 81, 85	Tino A. Solomon.....	46
Lora Melman.....	58	Janey S.A. Pratt.....	65	Nathaniel J. Soper.....	2, 3, 25, 27, 42, 47, 51
Laleh G. Melstrom.....	44	Raymond R. Price.....	3, 53, 59	Georg O. Spaun.....	64, 73
W. Scott Melvin.....	2, 3, 24, 34, 42, 64, 67, 76	Aurora Dawn Pryor.....	3, 36, 44, 66, 82	Ariel U. Spencer.....	64
Brent W. Miedema.....	17	Gretchen P. Purcell Jackson.....	2, 3, 65, 77, 84	Jose R. Speranza.....	42
Dean J. Mikami.....	24	Barry Rabin.....	78	Shawn D. St. Peter.....	66
Yoav Mintz.....	62, 78	Reza Rahbar.....	45	Donna Stanbridge.....	3, 38
Benyamine Mizrahi.....	32	Sonia L. Ramamoorthy.....	3, 23	Dimitrios Stefanidis.....	82
Tsunekazu Mizushima.....	77	Bruce J. Ramshaw.....	2, 16, 63, 74	Greg V. Stiegmann.....	58
Paul Mlyniec.....	78	Abhay Rane.....	35, 41	Steven Strasberg.....	27, 45
Philippe Mognol.....	26	Prashanth Prabhakar Rao.....	41, 44, 66	Vivian E.M. Strong.....	3, 75
Paul Montero.....	66	David W. Rattner.....	2, 3, 34, 42	Maki Sugimoto.....	66, 73
Donald W. Moorman.....	74	Patrick R. Reardon.....	35, 67	Maura Sullivan.....	38
Yoshihiro Moriya.....	32	Kevin M. Reavis.....	24, 38	Erica Sutton.....	44, 81
John M. Morton.....	3, 26, 43, 85	Petachia Reissman.....	79	Paul Swain.....	42, 66, 78
Angela Moulhas.....	79	Christine Ren.....	81	T. W. Swanson.....	79
Fady Moustarah.....	44	Rocco Ricciardi.....	15	Lee L. Swanstrom.....	3, 21, 27, 34, 42, 62
Kenric M. Murayama.....	27, 82	William O. Richards.....	2, 73	John F. Sweeney.....	3, 67
Matthew G. Mutch.....	15, 23	William S. Richardson.....	2, 41, 53	Patricia Sylla.....	24, 73
Christopher J. Myers.....	73	Daniel Riskin.....	76	Zoltan Szabo.....	84
Vadim Nakhmityayev.....	55	E. Matt Ritter.....	3, 25	Mark A. Talamini.....	2, 42, 54, 58, 71, 76
Peter N. Nau.....	73	Homero Rivas.....	35, 41, 50	Howard Tanzman.....	43
Philip Neff.....	66	Nabil Rizk.....	75	John Tarpley.....	77
Kurt Newman.....	74	John R. Romanelli.....	66	Roger P. Tatum.....	40





Index of Faculty & Presenters

Dana A. Telem	32	David R. Urbach.....	2	Steven D. Wexner.....	2, 36, 55
Gurkan Tellioglu.....	79	MHGM van der Pas.....	77	R. Larry Whelan.....	15, 32
Deron J. Tessier.....	16, 40	Mark I van Berge Henegouwen	27	Mark H. Whiteford.....	23
Klaus Thaler.....	3, 17, 24	David van der Zee	68	David Williams.....	72-74
Pierre Theodore.....	75	Oliver A. Varban	81	Andrew S. Wright.....	86
Christopher C. Thompson	24	Esteban Varela.....	82	Andrew S. Wu.....	50
Kari Thompson	80	Jesus Vasquez	28	Manabu Yamamoto	2, 3, 62
Winnie Tong	79	Melina C. Vassiliou	41, 71, 78, 82, 84	Laurence F. Yee	23
Alfonso Torquati	3, 52	Darmarajah Veeramootoo.....	51, 62	Steven M. Yood	51
Shirin Towfigh	3, 63	Vic Velanovich	3, 24, 34, 43	Yoo-Soek Yoon	54
Tung Tran	66	Pratibha Vemulapalli	50	Tonia M. Young-Fadok.....	2, 3, 17, 23, 32
L. William Traverso	27	Ashley Vernon	40	Nia Zalamea.....	37
Joseph A. Trunzo	64	Michel Vix	37	Joerg Zehetner	51
Thadeus L. Trus.....	3, 17, 24, 85	Guy R. Voeller.....	16, 63	Bin Zheng.....	65, 82
Michael Tsinberg.....	77	Martin Walz.....	45	Ricardo Zorron.....	62, 73, 78
Shawn T. Tsuda	3, 41, 67, 86	Paul Wara	79	Keith Zuccala	50
Aku O. Ude Welcome.....	45	Mark J. Watson.....	40	Natan Zundel.....	2, 3, 28
Suthep Udomsawaengsup.....	44	Thomas J. Watson	27		
Benno Ure.....	3, 36	Carl J. Westscott	2		

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