

APPENDIX C: Key Question 2 Evidence to Decision Table

QUESTION

Should Laparoscopic MWA vs. Percutaneous MWA be used for HCC and/or CRLM less than 5 cm??	
POPULATION:	HCC and/or CRLM less than 5 cm?
INTERVENTION:	Laparoscopic MWA
COMPARISON:	Percutaneous MWA
MAIN OUTCOMES:	Incomplete Ablation; Local/Regional Recurrence; Perioperative Complications; Disease Free Survival 1yr; Overall Survival 1yr;
SETTING:	
PERSPECTIVE:	PATIENT-CENTERED
BACKGROUND:	
CONFLICT OF INTERESTS:	

ASSESSMENT

Problem																														
Is the problem a priority?																														
JUDGEMENT		RESEARCH EVIDENCE			ADDITIONAL CONSIDERATIONS																									
<div><div><div>○ No</div><div>○ Probably no</div><div>○ Probably yes</div><div>● Yes</div><div>○ Varies</div><div>○ Don't know</div></div></div>																														
Desirable Effects																														
How substantial are the desirable anticipated effects?																														
JUDGEMENT		RESEARCH EVIDENCE			ADDITIONAL CONSIDERATIONS																									
<div><div><div>○ Trivial</div><div>○ Small</div><div>● Moderate</div><div>○ Large</div><div>○ Varies</div><div>○ Don't know</div></div></div>		<div>Vote: Moderate 64% (7/11); Small 36% (4/11)</div> <table><tr><th>Outcomes</th><th>No of participants (studies) Follow-up</th><th>Certainty of the evidence (GRADE)</th><th>Relative effect (95% CI)</th><th colspan="2">Anticipated absolute effects* (95% CI)</th></tr><tr><td></td><td></td><td></td><td></td><th>Risk with Percutaneous MWA</th><th>Risk difference with Laparoscopic MWA</th></tr><tr><td>Incomplete Ablation</td><td>151 (2 observational studies)</td><td>⊕○○○ Very low^{a,b}</td><td>RR 0.28 (0.05 to 1.55)</td><td colspan="2">Study population</td></tr><tr><td></td><td></td><td></td><td></td><td>93 per 1,000</td><td>67 fewer per 1,000 (88 fewer to 51 more)</td></tr></table>			Outcomes	No of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects* (95% CI)						Risk with Percutaneous MWA	Risk difference with Laparoscopic MWA	Incomplete Ablation	151 (2 observational studies)	⊕○○○ Very low ^{a,b}	RR 0.28 (0.05 to 1.55)	Study population						93 per 1,000	67 fewer per 1,000 (88 fewer to 51 more)		
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	Local/Regional Recurrence	75 (1 observational study)	⊕○○○○ Very low ^{b,c}	RR 0.43 (0.10 to 1.75)	Study population	
					222 per 1,000	127 fewer per 1,000 (200 fewer to 167 more)
	Disease Free Survival 1yr	75 (1 observational study)	⊕○○○○ Very low ^{b,c}	RR 1.14 (0.94 to 1.38)	Study population	
					796 per 1,000	111 more per 1,000 (48 fewer to 303 more)
	Overall Survival 1yr	75 (1 observational study)	⊕○○○○ Very low ^{b,c}	RR 1.00 (0.93 to 1.07)	Study population	
					1,000 per 1,000	0 fewer per 1,000 (70 fewer to 70 more)
<p>a. Both studies had some risk of bias due to ambiguity around length of follow up. In one study, the baseline characteristics were not comparable and there was no statistical matching. The percutaneous group had significantly more patients that had previous HCC treatment, less more patient with BCLC stage A1 and less patients with stage A4 or multifocal disease. A higher amount of energy over tumor size was delivered in the laparoscopic group.</p> <p>b. In addition to very small sample sizes and even smaller event rates in this outcome, the range of effects crosses several clinically significant thresholds from large benefit to large harm.</p> <p>c. In this study, the baseline characteristics were not comparable and there was no statistical matching. The percutaneous group had significantly more patients that had previous HCC treatment, less more patient with BCLC stage A1 and less patients with stage A4 or multifocal disease. A higher amount of energy over tumor size was delivered in the laparoscopic group.</p>						

Undesirable Effects

How substantial are the undesirable anticipated effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS																								
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Certainty of evidence

What is the overall certainty of the evidence of effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS																		
<p>● Very low</p> <p>○ Low</p> <p>○ Moderate</p> <p>○ High</p> <p>○ No included studies</p>	<p>Vote: Very Low 100% (11/11)</p> <table> <tr> <th>Outcomes</th><th>Importance</th><th>Certainty of the evidence (GRADE)</th></tr> <tr> <td>Incomplete Ablation</td><td>IMPORTANT</td><td>⊕○○○ Very low^{a,b}</td></tr> <tr> <td>Local/Regional Recurrence</td><td>IMPORTANT</td><td>⊕○○○ Very low^{b,c}</td></tr> <tr> <td>Perioperative Complications</td><td>CRITICAL</td><td>⊕○○○ Very low^{a,b,d}</td></tr> <tr> <td>Disease Free Survival 1yr</td><td>CRITICAL</td><td>⊕○○○ Very low^{b,c}</td></tr> <tr> <td>Overall Survival 1yr</td><td>CRITICAL</td><td>⊕○○○ Very low^{b,c}</td></tr> </table> <p>a. Both studies had some risk of bias due to ambiguity around length of follow up. In one study, the baseline characteristics were not comparable and there was no statistical matching. The percutaneous group had significantly more patients that had previous HCC treatment, less more patient with BCLC stage A1 and less patients with stage A4 or multifocal disease. A higher amount of energy over tumor size was delivered in the laparoscopic group.</p> <p>b. In addition to very small sample sizes and even smaller event rates in this outcome, the range of effects crosses several clinically significant thresholds from large benefit to large harm.</p> <p>c. In this study, the baseline characteristics were not comparable and there was no statistical matching. The percutaneous group had significantly more patients that had previous HCC treatment, less more patient with BCLC stage A1 and less patients with stage A4 or multifocal disease. A higher amount of energy over tumor size was delivered in the laparoscopic group.</p> <p>d. In addition to very small sample sizes and even smaller event rates in this outcome, the range of effects crosses several clinically significant thresholds from large benefit to trivial harm.</p>	Outcomes	Importance	Certainty of the evidence (GRADE)	Incomplete Ablation	IMPORTANT	⊕○○○ Very low ^{a,b}	Local/Regional Recurrence	IMPORTANT	⊕○○○ Very low ^{b,c}	Perioperative Complications	CRITICAL	⊕○○○ Very low ^{a,b,d}	Disease Free Survival 1yr	CRITICAL	⊕○○○ Very low ^{b,c}	Overall Survival 1yr	CRITICAL	⊕○○○ Very low ^{b,c}	
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Values

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Is there important uncertainty about or variability in how much people value the main outcomes?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
<input type="radio"/> Important uncertainty or variability <input checked="" type="radio"/> Possibly important uncertainty or variability <input type="radio"/> Probably no important uncertainty or variability <input type="radio"/> No important uncertainty or variability	Vote: 91% (9/11)	Difference in HCC vs. CRLM patients due to additional therapies available
Balance of effects Does the balance between desirable and undesirable effects favor the intervention or the comparison?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
<input type="radio"/> Favors the comparison <input type="radio"/> Probably favors the comparison <input checked="" type="radio"/> Does not favor either the intervention or the comparison <input type="radio"/> Probably favors the intervention <input type="radio"/> Favors the intervention <input type="radio"/> Varies <input type="radio"/> Don't know	Vote: 91% (9/11)	Tumor specific anatomy or patient factors that drives selection of perc vs. lap ablation
Acceptability Is the intervention acceptable to key stakeholders?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> Yes <input type="radio"/> Varies <input type="radio"/> Don't know	Vote: 89% (8/9)	
Feasibility Is the intervention feasible to implement?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
<input type="radio"/> No <input type="radio"/> Probably no <input type="radio"/> Probably yes <input checked="" type="radio"/> Yes <input type="radio"/> Varies	Vote: 90% (9/10)	

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o Don't know		
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SUMMARY OF JUDGEMENTS

	JUDGEMENT						
PROBLEM	No	Probably no	Probably yes	Yes		Varies	Don't know
DESIRABLE EFFECTS	Trivial	Small	Moderate	Large		Varies	Don't know
UNDESIRABLE EFFECTS	Large	Moderate	Small	Trivial		Varies	Don't know
CERTAINTY OF EVIDENCE	Very low	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	Possibly important uncertainty or variability	Probably no important uncertainty or variability	No important uncertainty or variability			
BALANCE OF EFFECTS	Favors the comparison	Probably favors the comparison	Does not favor either the intervention or the comparison	Probably favors the intervention	Favors the intervention	Varies	Don't know
ACCEPTABILITY	No	Probably no	Probably yes	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	Probably yes	Yes		Varies	Don't know

TYPE OF RECOMMENDATION

Strong recommendation against the intervention ○	Conditional recommendation against the intervention ○	Conditional recommendation for either the intervention or the comparison ●	Conditional recommendation for the intervention ○	Strong recommendation for the intervention ○
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CONCLUSIONS

Recommendation

Justification

Subgroup considerations

Implementation considerations

Monitoring and evaluation

Research priorities

- Granularity collecting data – limited by size, molecular biology, location, experience of institution and physician (IR vs. surgeon)
- imaging modality for recurrence- MRI versus CT; Agreed MRI with Eovist vs. protocolized CT
- These outcomes are bare minimum
- TACE/MW versus MW alone
- learning curve of both - can use our HPB fellows to plot this curve!!
- clear definition of which patients benefit from either intervention
- define which cases are going to laparoscopic approach
- Interventional oncology
- Separate studies for CRLM and HCC patients – matching of patients
- Salvage vs. definitive
- Chemotherapy for CRC
- Severity of co-morbidities

Use of multimodality treatment besides ablation: chemo, surgery, radiation for CRC