

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 42301

Title: Percutaneous ablation for perivascular hepatocellular carcinoma: Refining the current status based on emerging evidence and future perspectives

Reviewer's code: 00289467

Reviewer's country: Italy

Science editor: Ruo-Yu Ma

Date sent for review: 2018-09-19

Date reviewed: 2018-09-25

Review time: 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input checked="" type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

A well-written and exhaustive review on a topic of high interest for interventional oncologists. I have just a minor suggestion: please, add to the conclusions some consideration about the potential prospective role of microwasve ablation of



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perivascular tumors

INITIAL REVIEW OF THE MANUSCRIPT

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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 42301

Title: Percutaneous ablation for perivascular hepatocellular carcinoma: Refining the current status based on emerging evidence and future perspectives

Reviewer's code: 00057742

Reviewer's country: United States

Science editor: Ruo-Yu Ma

Date sent for review: 2018-09-27

Date reviewed: 2018-10-05

Review time: 8 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
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			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

While the authors provide several valid points regarding various modalities of HCC ablation, I have several concerns with this review 1) There is no mention of the relative ubiquity of the 4 described ablation technologies as they relate to modern practice. For

example, in our opinion, in the United States, cryoablation is of historical interest only. Similarly, RFA is gradually losing ground to microwave ablation, which has proven to be superior in ablating liver lesions. This review presents these technologies as equally viable options, albeit with their individual strengths and weaknesses. A review of which techniques are actually being used would be a vital component of this discussion.

2) The authors briefly touch on the technical workings of the 4 discussed modalities, but give no sense to how they have evolved and are evolving over time. There are many, exciting new developments in the newer generation devices, but these are not addressed at all. A discussion to this effect would illuminate the ways in which readers can expect ablation to affect their practices in the coming years.

3) The authors present ablation as a "non surgical" percutaneous technique. While it is true that many centers (to varying degrees depending on the country in question) relegate ablation to interventional radiology departments, many surgeons are actively employing RFA and microwave ablation in conjunction with intraoperative ultrasound (either via laparoscopy or laparotomy). Percutaneous vs. surgical ablation is a contentious issue, and one that mandates mention in a review of this kind.

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Name of journal: World Journal of Gastroenterology

Manuscript NO: 42301

Title: Percutaneous ablation for perivascular hepatocellular carcinoma: Refining the current status based on emerging evidence and future perspectives

Reviewer's code: 02861372

Reviewer's country: Egypt

Science editor: Ruo-Yu Ma

Date sent for review: 2018-09-27

Date reviewed: 2018-10-08

Review time: 11 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
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			<input type="checkbox"/> Yes
			<input type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The authors made a great effort preparing and writing this article. Here are some comments: the current study included most available percutaneous treatment methods available for perivascular HCC. it is important for clinicians to compare available

treatment options then deciding the best for their patients and searching behind it guided by this manuscript. Title. Yes, the title reflect the main subject/hypothesis of the manuscript Abstract. Yes, the abstract summarize and reflect the work described in the manuscript Key words. Yes, the key words reflect the focus of the manuscript Background. Yes, the manuscript adequately describe the background, present status and significance of the study Yes, the manuscript is highlighting the key points concisely, clearly and logically. They are accurate and discuss the paper's scientific significance with relevance to clinical practice sufficiently the figures, are of good quality and appropriately illustrative of the paper contents the manuscript cite appropriately the latest, important and authoritative references the manuscript is well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? There is no page number in the manuscript to refer to thus iam mentioning the paragraphs The authors mentioned that: RF or microwave ablation uses thermal energy from the RF electric current or microwave field to destroy cancer cells.[12] However, when the index tumor is near large blood vessels, the blood flow carries thermal energy away from the targeted tissue, resulting in reduced ablation volume; this considerably modifies the size and shape of the ablation zone, especially during RF ablation The authors should mention here that heat sink effect is much less in MWA The authors mentioned that: post-operative adjuvant transarterial chemoembolization (TACE) after surgical resection improved outcomes among patients who exhibit HCC with microvascular invasion, there remains uncertainty with respect to adjuvant therapy after curative treatment for HCC, with either micro- or macro-vascular invasion because a potent anticancer drug for HCC is not well established in clinical practice. Is there a role for adjuvant TACE in combination with microwave ablation in perivascular tumors? The authors mentioned that: considering the more powerful ablation performance of microwave ablation, relative to RF ablation, microwave ablation



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may be more vulnerable to the risk of vascular complications. Thus far, there has been no study directly comparing RF ablation and microwave ablation for perivascular HCCs. In addition, whether the ability of microwave ablation to induce a broader ablation zone can lead to a real survival benefit remains unclear. As there is no study yet to confirm that microwave ablation may be more vulnerable to the risk of vascular complications, I think the authors should take this with caution as in experienced hands this should not happen In the conclusion: To overcome these potential risks, a modified RF ablation technique, cryoablation, or combined treatment with TACE have been used recently Add microwave ablation in the conclusion, it is now an alternative guideline to RFA since EASL 2018

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