

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 43013

Title: Hepatocellular carcinoma: Can LI-RADS v2017 on gadoxetic-acid enhancement magnetic resonance and diffusion-weighted imaging improve the diagnostic accuracy?

Reviewer's code: 03742333

Reviewer's country: United Kingdom

Science editor: Ruo-Yu Ma

Date sent for review: 2018-11-27

Date reviewed: 2018-11-30

Review time: 3 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 checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input 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 type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input checked="" 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

I have read with great interest the manuscript entitled "Hepatocellular Carcinoma: Can LI-RADS v2017 on Gadoteric-acid Enhancement MR and Diffusion-weighted Imaging Improve the Diagnostic Accuracy?", submitted to the World Journal of Gastroenterology.

This retrospective single-centre study investigated whether the use of diffusion-weighted imaging (DWI) associated with gadoxetic acid-enhanced MRI improves the diagnosis of HCC on imaging. The authors conclude that this combined protocol can be successfully applied, and it increases the efficiency of the diagnosis of HCC. The manuscript is well written and reads well. Additionally, the topic is interesting and indeed the continuous evolving of imaging exams may improve the accuracy of imaging HCC diagnosis. Thus, this manuscript has the potential to add in the current knowledge, however I truly believe that careful consideration of the points highlighted bellow may confirm the findings and improve the quality of the work.

MAJOR COMMENTS

1- From figure 1, the addition of DWI to Gadoxetic-acid Enhancement MR apparently changes the numbers mainly between the borderline groups, LR-3 (intermediate probability of HCC) and LR-4 (probably HCC). There were no changes in LR-1, LR-2, LR-5 and LR-TIV; and, smaller changes were seen in LR-M. This point needs to be highlighted in the manuscript and better explained in the discussion. Would the authors consider this finding as an indication of the exam? A special situation where this exam should be reserved? Before developing further this idea, please consider addressing comment 2 below.

2- Small differences were seen between the groups, as the Youden index were apparently only slightly different between groups. In order to confirm the significance of the findings, and superiority of the protocol combining DWI, a statistical test comparing the Youden index should be mandatorily performed.

3- In accordance with the previous comment, a proper statistical test comparing the two Youden test should be performed to support the conclusion reached on the manuscript (abstract and manuscript).

MINOR COMMENTS

1- In the methods, patients' session, the definitions of the abbreviations HBV and HCV should be added.



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- ☐ No

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- ☐ Plagiarism
- ☐ No

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Reviewer's code: 00058381

Reviewer's country: Austria

Science editor: Ruo-Yu Ma

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<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
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			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

This manuscript deals with diagnostic imaging of hepatocellular carcinoma. The presented study has several limitations (retrospective design, etc.) and this is mentioned by the authors in the discussion. A paper on this topic would be more appropriate for a

journal on diagnostic imaging. Please check the numbers; e.g., section "LI-RADS lesion categories and diagnostic efficiency": "For LR-4/5/M, the values were 75.8%, 58.8%, and 70.2% without DWI (Youden index value=0.539) and 87.9%, 58.8%, and 78.4% with DWI, respectively. The Youden index value of this LI-RADS classification with DWI (Youden index value=0.467) was higher than that without DWI (Youden index value=0.346)." - A Youden index value of 0.539 does not seem to be consistent with the findings shown in Table 3 (LR-4/5/M, A-DWI). Minor Comments: Table 2, "Note": "Alphs-fetoprotein" -> Alpha-fetoprotein. Table 2: "1 (0.4%)" -> 1 (0.49%) [in order to be consistent with the lines above]. Section "Histologic results" and Table 2: "5.30 cm (range 1.10-12.80 cm)" -> 5.3 cm (range 1.1-12.8 cm).

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