

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 77145

Title: Can diffusion kurtosis imaging predict the recurrence and the invasion of the peritumoral zone of hepatocellular carcinoma after transcatheter arterial chemoembolization?

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 00070191

Position: Editorial Board

Academic degree: MD

Professional title: Professor

Reviewer's Country/Territory: Turkey

Author's Country/Territory: China

Manuscript submission date: 2022-04-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-18 14:23

Reviewer performed review: 2022-04-23 11:33

Review time: 4 Days and 21 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection



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Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

In this study, the authors investigated the efficacy of DKI in detecting invasion and pseudo-invasion in hepatocellular carcinoma, which is one of the aggressive cancers, after TACE treatment in 82 cancer nodules of 76 cases. The results show that this method helps determine progression and pseudo-progression with DKI-related parameters. 1. The authors state the strong performance of the method evaluated in the study group. Indeed, this is the most striking aspect of the study. Therefore this finding should be emphasized in the core tip. 2. Please use words before abbreviations starting from the abstract section. 3. The lack of pathological examination of tumor changes before and after treatment is another potential limitation of the study. This should be stated in the discussion. 4. I suggest that the authors revise and prepare their manuscript according to the guidelines for manuscript submission of the WJGS.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05270042

Position: Editorial Board

Academic degree: PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: Viet Nam

Author's Country/Territory: China

Manuscript submission date: 2022-04-18

Reviewer chosen by: Dong-Mei Wang

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection

Re-review	[<input checked="" type="checkbox"/>] Yes [<input type="checkbox"/>] No
Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No

SPECIFIC COMMENTS TO AUTHORS

This is a good study to predict HCC recurrence after TACE. However, there are a few issues that the authors should clarify: 1. Pathological examination: Were all cases or selected cases performed? What is the pathological definition of true progression? What is the pathological definition of pseudo-progression? 2. There were cases TACE was performed more than once. The authors should clearly state the number of times TACE was performed on a tumor. 3. In Table 1, the authors analyzed AFP with positive or negative values after performing TACE. I think AFP should be analyzed whether the values decrease or not after doing TACE. There are HCC cases without increased AFP.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06111120

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor, Research Assistant

Reviewer's Country/Territory: Iran

Author's Country/Territory: China

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Reviewer performed review: 2022-06-26 13:09

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Scientific quality	<input checked="" type="radio"/> Grade A: Excellent <input type="radio"/> Grade B: Very good <input type="radio"/> Grade C: Good <input type="radio"/> Grade D: Fair <input type="radio"/> Grade E: Do not publish
Language quality	<input checked="" type="radio"/> Grade A: Priority publishing <input type="radio"/> Grade B: Minor language polishing <input type="radio"/> Grade C: A great deal of language polishing <input type="radio"/> Grade D: Rejection
Conclusion	<input type="radio"/> Accept (High priority) <input checked="" type="radio"/> Accept (General priority) <input type="radio"/> Minor revision <input type="radio"/> Major revision <input type="radio"/> Rejection

Re-review	[<input checked="" type="checkbox"/>] Yes [<input type="checkbox"/>] No
Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No

SPECIFIC COMMENTS TO AUTHORS

This is an observational study, evaluating the role of diffusion kurtosis imaging (DKI) and DKI-derived metrics in predicting the recurrence and cellular invasion of the peritumoral liver zone of hepatocellular carcinoma (HCC) after transcatheter arterial chemoembolization (TACE). The authors investigated the characteristics of the DKI-derived metrics between the true progression and pseudo-progression groups. The study is highly original and relevant. The organization & flow of the paper is of high quality. The authors addressed all the limitations of the study properly and despite these limitations, this study has a strength of novelty of describing the DKI with derived functional metrics (including MD, DA, DR, KA, and FAk) as an assessment tool for evaluating the therapeutic response of TACE to HCC, as well as peritumoral zone invasion. Therefore, I recommend to accept this manuscript for publication.