



PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Oncology*

Manuscript NO: 80160

Title: Efficacy of Texture Analysis of Pre-operative MRI in Predicting Microvascular Invasion in Hepatocellular Carcinoma

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05569437

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Adjunct Professor, Attending Doctor, Postdoctoral Fellow, Surgical Oncologist

Reviewer's Country/Territory: Italy

Author's Country/Territory: Singapore

Manuscript submission date: 2022-09-19

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-09-29 16:38

Reviewer performed review: 2022-10-09 09:58

Review time: 9 Days and 17 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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 Grade E: Do not publish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

In this interesting manuscript, the authors analyzed 50 patients who underwent hepatectomy for HCC, investigated clinical and radiological MRI differences between patients with and without microvascular invasion (MVI, postoperatively assessed at histologic examination of the resected specimen), and, using a software for evaluation of radiomics texture parameters, performed different methods for MR detection of MVI. Tumor Texture analysis, either qualitative or quantitative, is gaining interest as a novel approach to preoperatively detect tumor characteristics that may impact on the choice of the most correct patient management. The manuscript is overall well written, however I have some comments:

1. Concerning the abstract, I would specify that the texture analysis is both qualitative (performed by radiologists) and quantitative (performed by a software).
2. In the introduction: "Recent studies have sought to use TA to predict MVI on [please delete: "both"] MRI and have identified certain imaging and textural features (such as tumour entropy) that may be associated with bad tumour behaviour [14,15]." 3. Concerning exclusion criteria: What about the presence of macro-vascular invasion at preoperative imaging? I believe it should be an exclusion criteria.
4. Chapter RESULTS: the sentence "The pre-operative serum γ -glutamyltranspeptidase (GGT; $p < 0.01$) was found to be statistically significant between the two groups." Should be changed with "we found a statistically significant difference of the pre-operative serum γ -glutamyltranspeptidase (GGT; $p < 0.01$) level between the two groups."
5. Similar in the following sentence: what is statistically significant is the difference in rates of imaging fetarures between the two study groups,



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not the imaging features in se. 6. Figure 3 and related figure description do not add to the manuscript, please improve (for example showing all the qualitatively detectable images characteristics assessed in the current study and describing them in the description) or delete. 7. In tables 1 and 2 the % values should be recalculated. For example, Gender Male, n (%) 43 (86) 12 (12/15=80%) 31 (31/35=88%) This will allow a better comparison between incidences in the two groups and an easier assessment of differences between groups. 8. the authors should highlight the low number of study patients, which may account for the the lack of statistically significant differences among two study groups in terms of both clinical and radiological characteristics between two study groups. 9. I would add the column "TOTAL" in table 2, similar to table 1.



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Reviewer’s code: 05759338

Position: Editorial Board

Academic degree: MD

Professional title: Assistant Professor

Reviewer’s Country/Territory: Thailand

Author’s Country/Territory: Singapore

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Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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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
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SPECIFIC COMMENTS TO AUTHORS

Congratulations to this good work. The authors show an organized concept and comprehensive modern knowledge.