

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 83825

Title: Radiomics model based on contrast-enhanced computed tomography to predict early recurrence in patients with hepatocellular carcinoma after radical resection

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03397971

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: Italy

Author's Country/Territory: China

Manuscript submission date: 2023-02-18

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-11 10:45

Reviewer performed review: 2023-03-11 10:59

Review time: 1 Hour

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 Grade E: Do not publish
Novelty of this manuscript	<input checked="" type="radio"/> Grade A: Excellent <input type="radio"/> Grade B: Good <input type="radio"/> Grade C: Fair <input type="radio"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input checked="" type="radio"/> Grade A: Excellent <input type="radio"/> Grade B: Good <input type="radio"/> Grade C: Fair <input type="radio"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[Y] Grade A: Excellent [] Grade B: Good [] Grade C: Fair [] Grade D: No scientific significance
Language quality	[Y] Grade A: Priority publishing [] Grade B: Minor language polishing [] Grade C: A great deal of language polishing [] Grade D: Rejection
Conclusion	[Y] Accept (High priority) [] Accept (General priority) [] Minor revision [] Major revision [] Rejection
Re-review	[Y] Yes [] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous
	Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors reported their experience on the development of a radiomics model based on preoperative contrast-enhanced CT (contrast-enhanced CT) to evaluate early recurrence in patients with a single lesion of hepatocellular carcinoma (HCC). They retrospectively evaluated 402 patients from two centres who were diagnosed with a single HCC and underwent radical resection. A total of 1915 radiomics features were extracted from contrast-enhanced CT images, and 31 of them were used to determine the radiomics scores, which showed a significant difference between the early recurrence and nonearly recurrence groups. The authors were able to show that radiomics scores and serum AFP were independent indicators and were used to develop a combined model to predict early recurrence. The paper is well written and easy to follow. The authors should be congratulated for their work. I have no minor nor major concerns with regard to this paper.

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Title: Radiomics model based on contrast-enhanced computed tomography to predict early recurrence in patients with hepatocellular carcinoma after radical resection

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03738573

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2023-02-18

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-07 10:17

Reviewer performed review: 2023-03-16 02:24

Review time: 8 Days and 16 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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" 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 type="checkbox"/> Minor revision <input checked="" 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 study, the authors developed a preoperative radiomics model to predict early recurrence among patients with single hepatocellular carcinoma. The radiomics scores based on contrast-enhanced CT images and serum AFP were independent indicators and were used to develop this combined model, which showed modest accuracy and clinical utilities. However, I have the following concerns about this study. 1. In 2.1 Patients section, “We retrospectively enrolled 537 HCC patients from 2 institutions (Institution 1 set as training cohort: Affiliated Hospital of Guilin Medical University, 277 enrolled from 10/2009 to 5/2017; Institution 2 set as validation cohort: Peking University People’s Hospital, 125 enrolled from 6/2010 to 12/2017) who underwent radical resection. According to the exclusion criteria in Figure 1, 277 patients met the requirements in institution 1 and were set as the training cohort, while 125 patients in institution 2 were set as the validation cohort.” The authors have described the information about the two cohorts in the bracketed content, so there is no need to repeat it. 2. The first appearance of the abbreviation in the manuscript should be given in full term, for example: MVI. 3. In the second paragraph of the discussion section, the authors



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
https://www.wjgnet.com

discussed some deficiencies of several previously reported models for predicting HCC recurrence. Moreover, the authors mentioned the development of liquid biopsies, would like to see a comparison of this approach with the radiomics model mentioned in this paper. In other words, what is the advantage of the preoperative radiomics model compared to liquid biopsies? 4. In the discussion, "Hence, we employed radiomics to explore more details from contrast-enhanced breast CT images," Given that the authors' previous statements were "contrast-enhanced CT", the different expressions can be confusing. 5. The font size and color of the images should be unified, for example: Figure 2 and Figure 7.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Author's Country/Territory: China

Manuscript submission date: 2023-02-18

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2023-03-31 12:22

Reviewer performed review: 2023-03-31 12:27

Review time: 1 Hour

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
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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

In fact, the author has provided answers to my questions. Although there are still some flaws, from the perspective of retrospective research and the practicality of the article, it is still recommended to publish. I hope to continue to focus on this research in the future and truly apply it to clinical practice.