

PEER-REVIEW REPORT

Name of journal: *World Journal of Radiology*

Manuscript NO: 87794

Title: Radiomics analysis with three-dimensional and two-dimensional segmentation to predict survival outcomes in pancreatic cancer

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 07725470

Position: Peer Reviewer

Academic degree: Doctor, MD

Professional title: Attending Doctor, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2023-08-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-09-05 13:57

Reviewer performed review: 2023-09-14 13:53

Review time: 8 Days and 23 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 Grade E: Do not publish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 checked="" type="checkbox"/> Grade B: Good <input 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 checked="" type="checkbox"/> Grade B: Good <input 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 checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 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

This single-institution retrospective study evaluated the prognostic potential of CT radiomic features extracted by 2D and 3D software in pancreatic ductal adenocarcinoma patients treated with neoadjuvant therapy and surgery. A key advantage of the study is the demonstration that higher pretreatment mean tumor density predicted improved overall survival, irrespective of 2D or 3D analysis. This suggests mean density may be a simple and accessible imaging biomarker to help guide prognosis and treatment decisions in this population. The study also examined associations between tumor volume and residual viable tumor on post-treatment imaging, providing data on tumor response. While several radiomic features showed promise, validation in larger multicenter cohorts is warranted to define their clinical utility given the limitations of a small single-institution analysis. If the noted major revisions are adequately addressed, particularly expanding details on radiomic feature extraction, analyzing residual tumor assessment, and discussing generalizability, this study could provide valuable foundational data to build upon in future radiomic investigations in pancreatic cancer. Overall, the authors present an important research question and the conclusions are



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supported by the presented analyses. However, revisions would enhance the quality and interpretability of the findings by providing critical methodologic and contextual information. Below are my comments: 1) Lack of key words. 2) More details are needed on the specific radiomic features extracted and software settings used for feature extraction. A supplementary table listing all features would be helpful. 3) Suggest changing "viability" to "residual tumor" when referring to post-treatment assessment. 4) The authors state they evaluated the relationship between tumor volume and percent viability following treatment, but the specific results are not presented in the abstract. This data should be shown or the mention of treatment response deleted. 5) The methods for assessing tumor viability post-treatment should be detailed - how was this quantified on imaging? What criteria or thresholds were used to categorize viable vs nonviable tumor? 6) Assess interreader variability in judging viability. Was there independent review by multiple radiologists? What was the concordance?

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Professional title: Attending Doctor, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2023-08-28

Reviewer chosen by: Jing-Jie Wang

Reviewer accepted review: 2023-09-23 03:10

Reviewer performed review: 2023-09-23 03:33

Review time: 1 Hour

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 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
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

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

SPECIFIC COMMENTS TO AUTHORS

I am satisfied with the detailed responses provided by the authors addressing the concerns raised in my previous review. Based on the revisions made, I recommend this paper be accepted for publication. The study methods are sound and the results are well articulated. Please have the authors ensure all in-text citations match the reference list prior to final acceptance. Otherwise, I have no further questions or comments at this stage.