

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 81564

Title: Artificial intelligence as a noninvasive tool for pancreatic cancer prediction and diagnosis

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05332467

Position: Peer Reviewer

Academic degree: N/A

Professional title: N/A

Reviewer's Country/Territory: China

Author's Country/Territory: Romania

Manuscript submission date: 2022-11-15

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-11-23 02:51

Reviewer performed review: 2022-11-25 10:45

Review time: 2 Days and 7 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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 type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
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

This is a review focusing on the application of AI on the prediction and diagnosis of pancreatic cancer. Although the AI is a hotspot in the field of pan-cancers, the idea here is not innovative since there have been some similar reviews focusing on this issue. My concerns are as follows: 1. The description about the novelty of this article compared to other similar studies (e.g. Ref 1,2,4) is insufficient. In addition, the authors spent too much time on introducing the characteristics of PC and compositions of AI, which are not the crucial topics of this study. 2. There is a lack of information regarding the translational value of the results obtained by the studies mentioned in the manuscript. Are the results routinely applied in clinical practice or just reported in researches? 3. In Figure 1, 34 studies were included and 14 studies were excluded. Where are the remaining ones among the total studies reviewed? I was confused about the exact number of studies. 4. Then the author declared that "Twenty-nine eligible studies were included as follows 20 for current status in diagnostic methods in PC and 9 studies with implications in PC prediction by using AI algorithms." What is the exact number of studies involved, 34 or 29? 5. Although polished, the English language in the article is not entirely smooth regarding wording and grammar. e.g. the sentence "The authors aim to classify the IPMN as benign or malignant and the AI ability for predicting malignancy had an accuracy of 0.94, higher than the human preoperative diagnostic accuracy which was 0.56. This study had a number of limitations: it was retrospective, had a small sample of cases, with only internal validation and one center provided the cases" on page 13. 5. Please check the word "ofv" on page 6, the word "eare" on page 14, the word "analized" on page 16, 19 and the word "whit" on page 19. 6. On page 12, the



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sentence “87-91 specificity and 80% specificity” is probably not what the authors intended to write. 7. On page 13, the sentence “The authors aim to classify the IPMN as benign or malignant and the AI ability for predicting malignancy had an accuracy of 0.94, higher than the human preoperative diagnostic accuracy which was 0.56” should be modified. 8. What does it mean by the sentence “AI methods can represent the needed step to reach a standardized interpretation of patient data and investigations while reducing human bias or error” on page 18. 9. On page 18, the sentence “A collaboration between governments, scientists and academic centers such as was seen in the COVID-19 era proves that humans from different countries and continents can work together in sharing information in a common attempt to save lives and stop the virus. Their collaborations proved the existing potential of scientists working together to create creating a vast database” should be modified. 10. The limited references are insufficient to summarize the conclusions. Besides, please check the styles of all the references according to the World Journal of Gastroenterology guidelines.

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Review time: 6 Days and 4 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="radio"/>] Anonymous [<input type="radio"/>] Onymous
	Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No

SPECIFIC COMMENTS TO AUTHORS

The manuscript of Faur Alexandra Corina et al. provides a detailed overview of the current status of non-invasive methods for detecting PC, focusing on early lesions and AI. This is a very interesting aspect, considering the challenge on early detection of this disease in the general population. The overall English is adequate, even though I would suggest a review by the authors since there are some typos (for example “typicaly” instead of “typically” paragraph ...). The abstract includes a background of the issue, concerns and suggestions but not a descriptive summary of the methods reported. The keywords do not reflect clearly the main focus of this manuscript and are repetitive. I would suggest to keep less of them and the most accurate. The introduction is well structured but I would suggest a deeper emphasis to the AI matter which is the main point of the manuscript. Methods are properly organized. I strongly recommend to homogeneously write all statistical data with numbers (Ninety percent of exocrine PC cases are pancreatic ductal adenocarcinoma (PDAC), with 80% ...) Legends of the table and figure must be added.

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Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

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Author's Country/Territory: Romania

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Reviewer chosen by: AI Technique

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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
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	Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No

SPECIFIC COMMENTS TO AUTHORS

Thses studies show that the symptoms of PC if present are not specific and there is a need for diagnosing preneoplastic lesion. Artificial intelligence (AI) models integrating multisource risk factors are the future of early PC diagnosis. The purpose of our study was to identify the current diagnostic methods for detecting PC by using noninvasive techniques with emphasis on early lesions and artificial intelligence. The article is novel and interesting. This publication impact clinical practice in the future. The authors need to draw a picture to describe the application of the current algorithm, and pointed the process of AI in the future. Besides, there are language problems in some places, which need to be improved.