PEER-REVIEW REPORT

Name of journal: *Artificial Intelligence in Gastroenterology*

Manuscript NO: 76203

Title: Artificial Intelligence using Advanced Imaging techniques and Cholangiocarcinoma: Recent advances and future direction

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05521209

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: India

Author's Country/Territory: United States

Manuscript submission date: 2022-03-07

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-03-07 04:04

Reviewer performed review: 2022-03-07 04:29

Review time: 1 Hour

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] 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

Following are a few suggestions to the authors to revise the manuscript. 1. The manuscript is should be organized as per the standard submission requirements. Kindly follow the author guidelines. 2. The abstract section, conclusion section and keywords are missing in the manuscript.   3. The title needs a revision. The present title do not give clarity by mentioning it is there a future? 4. Full form of the abbreviated words should be presented atleast once in the manuscript.   5. It would be better if the authors can include a Table on the Summary of recent related studies, methods, study type, outcomes 6. The authors should include a section on evidence synthesis, search strategy, inclusion and exclusion criteria for shortlisting the relevant studies considered in this review. 7. Since the authors mentions "In fact, artificial intelligence is utilized in almost every field" Several studies related should be cited in this context to support the sentence and further strengthen the introduction   The authors can cite the following article a) Patil V, Vineetha R, Vatsa S, Shetty DK, Raju A, Naik N, Malarout N. Artificial neural network for gender determination using mandibular morphometric parameters: a comparative retrospective study. Cogent Engineering. 2020 Jan 1;7(1):1723783. b) Musunuri B, Shetty S, Shetty DK, Vanahalli MK, Pradhan A, Naik N, Paul R. Acute-on-chronic liver failure mortality prediction using an artificial neural network. Engineered Science. 2021 Aug 24;15:187-96. c) Yang CM, Shu J. Cholangiocarcinoma evaluation via imaging and artificial intelligence. Oncology. 2021;99(2):72-83. d) Haghbin H, Aziz M. Artificial intelligence and cholangiocarcinoma: Updates and prospects. World Journal of Clinical Oncology. 2022 Feb 24;13(2):125-34. e) Shah M, Naik N, Somani BK, Hameed BZ. Artificial intelligence (AI) in urology-Current use and future directions:

An iTRUE study. Turkish Journal of Urology. 2020 Nov;46(Suppl 1):S27. 8) The multivariate analysis section may need to be renamed and provide an appropriate header which includes the relant studies. 9) The authors should consider the techniques including neural networks, machine learning, deep learning which comes under the wing of AI. Studies like below should be included. Zhang Q, Li Q, Yu G, Sun L, Zhou M, Chu J. A multidimensional choledoch database and benchmarks for cholangiocarcinoma diagnosis. IEEE access. 2019 Oct 15;7:149414-21. Negrini D, Zecchin P, Ruzzenente A, Bagante F, De Nitto S, Gelati M, Salvagno GL, Danese E, Lippi G. Machine learning model comparison in the screening of cholangiocarcinoma using plasma bile acids profiles. Diagnostics. 2020 Aug;10(8):551. Overall the manuscript needs a further organizing of the content for better readability and to be well presented for considering it for publication in the journal

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Reviewer's code: 03863132

Position: Editorial Board

Academic degree: PhD

Professional title: Assistant Professor, Senior Research Fellow

Reviewer's Country/Territory: France

Author's Country/Territory: United States

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-03-08 12:11

Reviewer performed review: 2022-03-21 09:38

Review time: 12 Days and 21 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
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| Peer-reviewer statements | Peer-Review: [Y] Anonymous   [   ] Onymous |
| | Conflicts-of-Interest: [   ] Yes   [Y] No |

SPECIFIC COMMENTS TO AUTHORS

In Brenner et al., authors approach some of the most common artificial intelligence (AI)-based techniques used in gastroenterology. In particular, they focus their interest on Cholangiocarcinoma (CCA). In that sense, authors describe how machine/deep learning models help other classical methods to improve the diagnostic and prognostic of CCA patients. In the opinion of this reviewer, the work can be of interest for readers of the journal. Additionally, the manuscript is well written and is also easy to follow. Just a little thing, during introduction authors mentioned deep learning and no description of it is done. Then, this reviewer feel confortable with the idea of this work being published in Artificial Intelligence in Gastroenterology.