PEER-REVIEW REPORT

Name of journal: Artificial Intelligence in Gastrointestinal Endoscopy

Manuscript NO: 67534

Title: Artificial Intelligence in polyp detection- where are we and where are we headed?

Reviewer's code: 05085307

Position: Editorial Board

Academic degree: MD

Professional title: Assistant Professor

Reviewer's Country/Territory: Japan

Author's Country/Territory: United States

Manuscript submission date: 2021-04-27

Reviewer chosen by: Li Ma

Reviewer accepted review: 2021-05-10 02:18

Reviewer performed review: 2021-05-17 04:44

Review time: 7 Days and 2 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [Y] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[Y] Grade A: Priority publishing [ ] 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

Summary The authors reviewed the CADe paper, stating that the use of neural networks has dramatically improved computer aided detection (CADe) systems by enabling real-time polyp detection. In the text, they cited four randomized controlled trials and stated that the advantages of CADe include increased detection of lesions and the possibility of inhibiting interval cancers. On the contrary, they are cautious about applying the current system as it is because it is not double blind, the base adenoma detection rate (ADR) is lower than in the US and Europe, and it does not work when the mucosa is not delineated.   Comments This is a review of several papers on RCTs of the CADe system, and I believe it will play a very important role. However, I believe that some major changes are needed to publish this paper. Major comments.   1. In January 2021, GIE published a meta-analysis of 6 papers on CADe by Cesare Hassan et al. The paper by Cesare Hassan et al. is a meta-analysis, but the authors' paper is a review, and I think it has less impact. It would be desirable to add one or two more RCTs to the review. (For example, Dexin Gong et al.'s paper " Detection of colorectal adenomas with a real-time computer-aided system (ENDOANGEL): a randomised controlled study", Lancet Gastroenterol Hepatol, 5 (2020), pp. 352-361)   2. This study is a review, but it does not describe the criteria for selecting papers. The selection method (search system used, search criteria, etc.) needs to be indicated.   3. The summary of the selected articles (number of patients, ADR, extraction time, etc.) needs to be summarized in a table to visually appeal to readers.   4. I have the impression that the authors' arguments are not clear. Do the authors' position consider the current CADe system to be inadequate and impractical? If so, it would be better to state this clearly so that the authors can make a strong issue for points to be improved. 5. In the Discussion, authors mention that the limitation of the CADe system is that it cannot find mucosal polyps that doesn't be depicted, and the other hand they cite the paper by Karnes et al. that solved this problem

using AI. If you are going to mention it in the discussion, you need to explain to what extent this problem has been solved by Karanes et al. 6. In the Discussion, the author mentions resect and discard, which also gives an abrupt impression. It seems that this is a proposal to deal with the increased number of lesions found in CADe, but I think it is necessary to cite the paper by Radaelli et al. and discuss the expected cost-effectiveness. Minor comments.   1. In line 19 on page 3, you state that the base ADR in the Wan et al. study was lower than in Europe and the U.S. I think you should present the paper that supports this.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Reviewer's code: 05085307

Position: Editorial Board

Academic degree: MD

Professional title: Assistant Professor

Reviewer's Country/Territory: Japan

Author's Country/Territory: United States

Manuscript submission date: 2021-04-27

Reviewer chosen by: Man Liu

Reviewer accepted review: 2021-07-07 00:09

Reviewer performed review: 2021-07-07 00:59

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	[Y] Grade A: Priority publishing [ ] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Thank you very much for the opportunity to review this manuscript. Also, thank you

for your additions and corrections. I think the addition of Su et al.'s paper and the revision to the discussion made the content much clearer. I think that the revised content can be published.