PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 64345

Title: Establishment and Validation of a Computer-assisted Colonic Polyp Localization System Based on Deep Learning

Reviewer's code: 00033377

Position: Editorial Board

Academic degree: FACG, MD

Professional title: Staff Physician

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2021-02-19

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-02-21 16:01

Reviewer performed review: 2021-03-17 01:33

Review time: 23 Days and 9 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Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish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 [ ] Grade B: Minor language polishing [Y] 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

Study is well done and it adds to the data on the use of AI to improve detection of adenomatous polyps. The study needs significant language corrections prior to publication. Methods: There should be comments on the polyp histology procedure, was there a central pathology reading for example? For Table 3 and the results of this table in the manuscript body, rather than comparing PDR among the different variables, more informative would be ADR and serrated polyp. In fact there were no serrated polyps per the supplementary tables which is somewhat unusual Supplementary video 1: Even tough this is a supplementary video, the demarcation of one polyp is good enough as an example, four is repetitive Figure 2 is not necessary Supplementary tables 3, 6 and 7 are not necessary Results: "CADe identified all the 86 polyps with an overall sensitivity of 92.2% [91.9%-92.4%] and overall specificity of 93.6% [93.6%-93.7%] in terms of frame-based analysis, but showed suboptimal sensitivity for "challenging" polyps" This sentence is not worded correctly and therefore confusing. Perhaps something along the lines of Although CADe identified all 86 polyps, in terms of frame-based analysis there was an overall sensitivity of 92.2% and … Also, if there was suboptimal sensitivity for challenging polyps what was the sensitivity and specificity for these polyps?

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Position: Editorial Board

Academic degree: FACG, MD

Professional title: Staff Physician

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2021-02-19

Reviewer chosen by: Man Liu

Reviewer accepted review: 2021-04-13 13:01

Reviewer performed review: 2021-04-17 21:49

Review time: 4 Days and 8 Hours

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)　[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

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Methods section: "Patients received 3 L polyethylene glycol as a split-dose bowel preparation and were either sedated with propofol or without." Were patients sedated with something else or unsedated? I think authors meant unsedated but sentence not clear. "The observer observed the two monitors" As not to repeat, would use The observer was monitoring the two screens or The observer was watching the two monitors. Since the authors had 2 experienced pathologists looking at the histology, may be worthwhile to mention this in the methods ssection. Results: "Supplementary Table 2 shows the characteristics of the polyps in the test dataset." may delete this sentence. "although the PDR and ADR did not increase (P = 0.06 and P = 0.13, respectively" The PDR and ADR did increase but was not statistically significant, should correct to reflect this. Discussion "Notably, our findings further demonstrated that CADe assisted colonoscopists in detecting more adenomas in clinical practice but not merely in selected colonoscopy videos [19]. Should not be but, instead should use and "CADes given that a great abundance and variety of random artifacts from the quick movement. Videos with higher running speeds..." Please separate sentences "However, their CADe detected no polyps before colonoscopists with a relatively greater false-positive frequency. " Please rephrase sentence