



## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 63407

**Title:** Artificial intelligence in colonoscopy

**Reviewer's code:** 05562447

**Position:** Peer Reviewer

**Academic degree:** MSc, PhD, RN

**Professional title:** Nurse, Research Assistant Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** United States

**Manuscript submission date:** 2021-01-28

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-03-30 13:32

**Reviewer performed review:** 2021-04-04 17:12

**Review time:** 5 Days and 3 Hours

<b>Scientific quality</b>	<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 Grade E: Do not publish
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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## SPECIFIC COMMENTS TO AUTHORS

This is a review article on artificial intelligence application during colonoscopy on colorectal polyp detection and polyp characterization in white light endoscopy, narrow band imaging, laser-induced fluorescence spectroscopy, autofluorescence endoscopy, magnifying chromoendoscopy, endocytoscopy and confocal endomicroscopy. It is nicely written and covered all existing literatures of clinical trials. Some comments: 1. Although all existing evidences of computer-aided detection of colorectal polyp from clinical trials were discussed, it may provide a more comprehensive description on the current situation of AI-assisted polyp detection by adding the recently published meta-analysis, such as: a. Barua I, Vinsard DG, Jodal HC, Løberg M, Kalager M, Holme Ø, Misawa M, Bretthauer M, Mori Y. Artificial intelligence for polyp detection during colonoscopy: a systematic review and meta-analysis. *Endoscopy*. 2021 Mar;53(3):277-284. doi: 10.1055/a-1201-7165. Epub 2020 Jun 17. PMID: 32557490. b. Lui TKL, Guo CG, Leung WK. Accuracy of artificial intelligence on histology prediction and detection of colorectal polyps: a systematic review and meta-analysis. *Gastrointest Endosc*. 2020 Jul;92(1):11-22.e6. doi: 10.1016/j.gie.2020.02.033. Epub 2020 Feb 29. PMID: 32119938. 2. Limitations of the AI-assisted colorectal polyp detection technology were not discussed. For example, the low ADR (8-20%) in the control group in some of the included clinical trials and potential high false positive rate. Hassan, et al reported a mean 27.3% false positive activations per colonoscopy of a randomized controlled trial (RCT) on CAde performance. Hassan C, Badalamenti M, Maselli R, Correale L, Iannone A, Radaelli F, Rondonotti E, Ferrara E, Spadaccini M, Alkandari A, Fugazza A, Anderloni A, Galtieri PA, Pellegatta G, Carrara S, Di Leo M, Craviotto V, Lamonaca L, Lorenzetti R, Andrealli A, Antonelli G, Wallace M, Sharma P, Rösch T, Repici A. Computer-aided detection-assisted colonoscopy: classification and relevance of false positives. *Gastrointest Endosc*. 2020 Oct;92(4):900-904.e4. doi: 10.1016/j.gie.2020.06.021. Epub 2020



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Jun 16. PMID: 32561410. 3. It may be worthwhile to add the information of whether the AI system mentioned was regulatory approved and available on market to the summary tables. 4. Some typos: Page 1 line 1. "in" should be "is" Page 10 line 10 "diminutive" should be "diminutive"