

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 60037

Title: Artificial intelligence-aided colonoscopy: recent developments and future perspectives

Reviewer's code: 00028580

Position: Editorial Board

Academic degree: AGAF, FACG, FRCP, MD

Professional title: Professor

Reviewer's Country/Territory: Lebanon

Author's Country/Territory: Italy

Manuscript submission date: 2020-10-13

Reviewer chosen by: Ya-Juan Ma

Reviewer accepted review: 2020-10-19 06:15

Reviewer performed review: 2020-10-27 13:31

Review time: 8 Days and 7 Hours

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input 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 Grade E: Do not publish
Language quality	<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
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input 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 on the role of artificial intelligence in the field of colonoscopy and polyp recognition and analysis. The paper is very well written and addresses nearly all the relevant aspects of this new and exciting technology. Few comments for consideration:

1. The definition of interval colon cancer, better described as post-colonoscopy colon cancer, used in the introduction is not optimal. Please replace with “cancer that is identified before the next recommended screening or surveillance examination” 2. Suggested change: “While mucosal exposure depends on the endoscopist’s examination technique” AND QUALITY OF THE PREPARATION. Although the endoscopist’s technique may be able to correct for deficiencies in the preparation at times, it cannot do so when the preparation is poor and/or when large amount of solid or adherent stools are seen. 3. In the Characterization of Colorectal neoplasia section a reference is missing: Among the considerable number of retrospective studies, similar pooled results were found [refer]. 4. It may be useful if the authors can discuss further the potential drawbacks of this technique including increased reliance on technology affecting performance and training, replacing quality improvement strategies to improve human eye recognition and training, potential harm in non-expert hands (reliance on technology) especially given the one and done ADR issue, etc.

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 60037

Title: Artificial intelligence-aided colonoscopy: recent developments and future perspectives

Reviewer's code: 02954022

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: Italy

Manuscript submission date: 2020-10-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-10-13 19:05

Reviewer performed review: 2020-10-27 13:36

Review time: 13 Days and 18 Hours

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
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 checked="" type="checkbox"/> Accept (General priority) <input 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="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 well done review on CNN-AI colonoscopy. Authors should consider elaborating on some aspects: 1. Consider adding a table enlisting the key AI algorithms in use - either by academic facilities or by industry. While there are several studies on AI-colonoscopy (comparing control to CNN-AI guided colonoscopy), what is at the core of the issue is the source algorithm in use for the CNN-AI. Who developed it and how was it developed. Some of these studies may be using the same algorithm. Algorithms need to be refined for use over time and also updated with more data. There are very few very good AI algorithms and most of these have been developed in Asian countries (China, Japan, others?). 2. The authors need to mention about any ongoing studies which are working on a cloud based algorithm. Or the authors need to consider elaborating on the endoscopy suite requirement to update local hardware for AI and ways to circumvent that. A cloud-based AI can help with that issue. It is impossible to update local hardware at all endoscopy suites. Other options are to purchase industry equipment and attach them to existing endoscopy hardware. These can be discussed under limitations. 3. More summary tables will be appreciated by the readers. But the authors have done well in summarizing the studies in the text of the manuscript.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 60037

Title: Artificial intelligence-aided colonoscopy: recent developments and future perspectives

Reviewer's code: 02954022

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: Italy

Manuscript submission date: 2020-10-13

Reviewer chosen by: Chen-Chen Gao

Reviewer accepted review: 2020-11-19 03:44

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Review time: 1 Day and 7 Hours

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
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 checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
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

TABLE 1 needs footnotes and citations/ references to each of the AI system listed.
Otherwise the authors have answered all the relevant questions.