

Response to Reviewers

Comments by the DEIC:

Thank you for submitting the revised manuscript. Although well written, our reviewers raised some suggestions for the improvement of the manuscript. We therefore invite you to respond to these, as detailed in the comments of the reviewers and to revise your paper accordingly. In addition, we require a letter of response to each of the criticisms or comments made.

Thank you for the opportunity to revise our paper.

Reviewer 1:

This manuscript provides a very interesting theme but still needs considerable revision. Even though it is a review article, the number of reviewed articles is not enough to deepen the discussion. For example, the author just introduced only a few articles in each section and described original results using a lot of space. Also, there is no pro or cons in each section, therefore this review looks not a deep review. I'd like to suggest a major revision to this manuscript to include more latest studies as well as opposite articles/ different points of view.

The strength of this manuscript is the author focused on the visual gaze analysis, which is novel endoscopic research, as the author described. I would suggest to the author to resubmit after major revision to Digestive Endoscopy.

The number of references in each section:

“Visual Search Strategies for Polyp Detection”: The author introduced just 4 articles (9-12)

“Keeping a Luminal View”: The author introduced just one article (13).

“Endoscopy Training”: The author introduced just two articles (14, 15)

“Objective Assessment of Lesion Detection: The author introduced just one article (16).

“Gaze Control”: The author introduced just two articles (17, 18).

Thank you for your comments and taking the time to read our paper. We have now performed a comprehensive systematic review now including 19 relevant papers with the updated breakdown below:

“Visual Search Strategies for Polyp Detection”: 9 studies

“Keeping a Luminal View”: 1 study

“Endoscopy Training”: 2 studies

“Objective Assessment of Lesion Detection: 6 studies

“Gaze Control”: 2 studies

Reviewer 2

This is a review article on eye tracking using the gaze technique during colonoscopy. The strength was the novelty, and the weakness was the non-systematic literature search. My main issues are as follows.

Major issues

1. Research process should be more systematic and reproducible.

-The authors noted that the terms ‘eye gaze, visual gaze, gaze patterns, and gaze control’ were inputted for search literature and picked up eight papers. However, numerous publications were hit

in PubMed according to the described method. A more systematic literature search with a fair attitude is demanding because the DEN Author guideline notes that “although narrative reviews are accepted, systematic reviews would be preferable for publication”. This would be a significant barrier for publication.

Thank you for your comments and taking the time to read our paper. We have now performed a comprehensive systematic review according to PRISMA guidance now including at 19 relevant papers.

2. The introduction can be more structural.

-First, I recommend describing two separate methods to increase detection; recognition and exposure of lesions. High-definition endoscope and imaging technology including AI can increase the recognition and adjunct devices such as EndoCuff can improve the exposure of lesions. In this point of view, eye tracking technology can be included the former. Second, the sentence of “Endoscopists as a group...indicators” (P4L20-22) can be deleted due to scattering the context. Third, “the analysis of the eye...” (P4L31-33) can be “the eye movements of an endoscopist during colonoscopy can be assessed by gaze analysis”.

Thank you, we have updated the introduction to reflect your input to read better structurally.

3. Figure 3 should be refined.

-Higher resolution and larger endoscopic images would improve the readability. Fig 4 in the original paper was more informative. Figure 5 also had a low resolution.

We have updated Figure 5 to a higher resolution. I have included figure 4 from the original paper to refine figure 3. (Note figure numbers changed due to inclusion of PRISMA flow chart).

4. There was inconsistency between the conclusion and the manuscripts.

-Although the authors noted in the conclusion, there was no description on AI systems and high-definition screens in the manuscript.

We have updated the conclusion to remove the inconsistencies.

5. Conclusions can be more comprehensive.

-Because eye tracking technologies in endoscopy are a new field, studies were small and inconclusive. Therefore, concise summaries of each chapter would increase the readability.

We have updated the conclusion to ensure a brief mention of each chapter and have updated the final paragraph to highlight the novel field and resultant small/ inconclusive studies.

Comments from the Editorial Office

Please place an “X” next to each “None” in the COI form.

Updated