Peer Review File

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Reviewer A

Very important and comprehensive review.
Could the author add some comments on other techniques such as FUSE?
Thank you for highlighting this technique. We have now discussed FUSE in our manuscript on pg. 13, paragraph 2.

The authors should also briefly comment also on other techniques to increase the ADR (for example cite the MA PMID: 29133257)
Thank you for your comment. Since the focus of the manuscript was on image enhanced colonoscopy, we had not discussed about add-on distal attachments initially, but they do enhance mucosal visualization and hence we have discussed about those techniques briefly now. As suggested, we have incorporated the utility of add-on devices in the improvement of ADR, in addition to citing the above-mentioned article. This can be found on pg. 13, paragraph 3.

What do the authors think of the future of these techniques in light of the widespread in the use of AI?
Thank you for bringing up an important point regarding the future of these techniques, given the investigation of different AI modalities for both detection and characterization of these polyps. Several studies have been published on the use of AI from various study populations. An extensive discussion on this topic is beyond the scope of this article as we primarily restricted our discussion to image enhanced colonoscopy techniques. We have discussed briefly about computer-aided detection and characterization under some of the IEE modalities. Based on your comments, we have briefly discussed the role of AI which could transform the future landscape. We have had encouraging results over the last few years from these studies. More recently, real world data has not shown difference in outcomes with the use of AI, suggesting that there is still room for improvement in terms of training these algorithms with datasets from varied populations, different clinical settings, procedures performed by different levels of endoscopists and not having strict exclusion criteria for future studies. We have briefly discussed this under the future direction paragraph.

Reviewer B

Major comments
1) The review is titled "Update," but it presents outdated information that does not align with the current status in 2023. Specifically, it fails to mention the third generation NBI: EVIS X-1 system, which incorporates Narrow Band Imaging (NBI) and has been available since July 2020. A review articles discussing this development has already been published (https://doi.org/10.1111/den.14489). Additionally, there is insufficient coverage of Computer-Aided Diagnosis (CAD), which has been implemented and extensively studied. The manuscript should be updated to include these advancements.
Thank you for your insightful comments. We have now discussed about the third generation NBI EVIS X-1 system, it can be found on page 5, paragraph 2. While computer-aided detection (CAD) does improve the ability to identify and characterize colon polyps, we restricted our discussion regarding image enhanced colonoscopy techniques, since artificial intelligence is a separate topic of its own and would

require extensive discussion, which is beyond the scope of this article and topic. Your comment is well taken though and based on your suggestion, we have discussed briefly about CAD in this article, further referencing some of the studies which have been implemented using them for diagnosis.

2) This manuscript is inaccurate, and there is a lack of understanding in this field. For instance, the significant reason for the brightness improvement in the second generation of NBI is not simply due to improved light sources and processors but rather the adoption of a different mechanism by eliminating the filter mechanism. Furthermore, the authors fail to accurately explain the chronological sequence and historical progression. For example, the history of NBI is not correctly depicted. Professor Sano, the developer of NBI, proposed the Sano classification as the first NBI classification. This was a highly sensational event at that time, leading to the subsequent introduction of other classifications that imitated it, resulting in confusion within various academic societies. To resolve this confusion, CTNIG was established, and they proposed the NICE classification. The NICE classification demonstrated excellent diagnostic accuracy in high-confidence cases but had the drawback of only being applicable to approximately half of the cases. To address this limitation and facilitate global discussions, evidence-based considerations were conducted, leading to the unification of the expanded NBI classification into the JNET classification. For more details, please refer to the papers on JNET classification.
Thank you for your insights into this. We have described the three generations of NBI chronologically with their subtle differences in mechanisms. We have also briefly discussed about the drawbacks that you mention briefly and eventually about the unification of NBI classification into the JNET classification with consensus achieved with the modified Delphi method. As recommended, the “Narrow band imaging (NBI)” section has been revised to reflect the correct chronological historic development of these systems on page 5 paragraph 3, mentioning initial classification introduced by Professor Sano which evolved in JNET classification for unification and to avoid confusion.

3) Finally, the manuscript lacks originality. It is merely a narrative review that subjectively selects and cites previous reports. It is unfortunate that a systematic approach was not employed in the research. Additionally, instead of simply listing the gathered reports within the text, they should be summarized in tables to facilitate readers' understanding. This manuscript only includes tables sourced from the collected papers. It would be advisable to create at least an original table based on this review.
Thank you for pointing this out. Our goal was to perform a narrative review on this topic and your point is well taken. We have made some modifications based on your comments and also to include an additional original table (Table 5) on chronological events in these innovations. We did decide to keep the tables sources from the collected papers too, to make it comprehensive for our readers to be able to refer to one article with all the classification systems along with their chronology. Table 5 can be found on page 22 and page 23.

Minor comments
1. The organization of the content, which enumerates various IEE techniques and their characteristics, is insufficient and difficult to read and comprehend. It would be beneficial to include subheadings such as Detection/Characterization/Others (e.g., IBD) under each item to facilitate comparison and improve readability.
Thank you for your comment. We have worked on organizing the content better in terms of chronology based on your inputs. We did try to maintain a balance between describing the characteristics and citing the studies required so that our readers are able to refer to them. While you do bring up a valid point regarding the organization into different sub-headings, there is significant overlap among studies in terms of detection/ characterization for various IEE techniques and hence we did discuss them under each IEE technique without sub-dividing as detection/ characterization separately to avoid redundance. All our techniques also discuss the utility in IBD patients towards the last paragraph of each technique, to make it easier for our readers to follow and to keep it uniform.

2. Figure 1 lacks necessity and has poor image quality, making it unsuitable for presentation throughout the review. If figures are included, it would be more appropriate to arrange images of each IEE technique and provide explanatory details about their visual characteristics.
Thank you for bringing this to our attention. We have included a better-quality image.

3. The explanation of the unofficial and outdated Modified Sano classification is unnecessary. It is also important to address recent reports questioning the utility of the WASP classification and acknowledge the challenges faced by both experts and artificial intelligence in the differential diagnosis of SSL (doi: 10.1159/000527978, doi: 10.1053/j.gastro.2022.03.053). The review should strive for fairness in presenting different perspectives.
Thank you for your insightful comment. We appreciate the importance of a balanced viewpoint and therefore have included the stated studies as counterpoints. We included the papers recommended which argue the utility of these classifications in differentiating SSL from hyperplastic polyps by human and AI. These additions are on page 6 paragraph 4.