

Thank you for your constructive comments. We have addressed all comments from reviews as described below.

1. Please describe each abbreviation in detail, such as US GI, ASGE, HD-WLE, SCENIC because there was no abbreviation in main text. Also, please describe abbreviation for AGA, BSG, ECCO, ASGE, PSC, CRC, CE, SD-WLE, and HD-WLE in Table 1.

This correction has been made

3. Please delete “CE” at the end of section “Dose dysplasia detection affect long-term outcomes?”

This correction has been made.

Well-written and well-balanced review article of an important clinical procedural technique, which may benefit from inclusion of some additional more recent publications, as well as a description of how the article selection process was conducted (i.e., methods section with database used and time-frame of studies included).

Major Suggestions:

1. Methods section is missing: please add databases used and time-frame for identified studies.

This was a narrative review, not a systematic review as such a methods section was not included. We have added further clarification in the text that the review is narrative.

2. Keywords are missing; consider adding

These have been added in the abstract section

3. As clinical outcomes is a major focus of the review, in addition to barriers to CE, please consider adding more recent publications that discuss clinical implications: Marion et al Clin Gastroenterol Hepatol 2016 Ten Hove et al Endoscopy 2017 Iannone A et al Clin Gastroenterol Hepatol 2016

These additional articles have been reviewed and added to the section entitled, “Does dysplasia detection affects long-term outcomes”

Minor Suggestions:

4. Consider adding cost of equipment needed for CE and/or comment on compatibility with endoscope models, when discussing barriers/cost of CE

Additional information regarding the cost of equipment required to perform CE has been added.

5. In Barriers: Does Expertise Affect Outcomes, please consider an explanation for why neoplasia detection rate of 11% vs. 14% is significant, while 18.5% vs. 13.1% is not significant

We clarified the language in this to point out that in the second study by Carrabal et al the difference between expert and non-expert endoscopists was not found to be statistically significant. In the first study by Mooewier et al, a p-value was not reported when looking at experts v. non-experts.

6. A few grammatical errors highlighted in the attached document – These errors have been corrected

Dear Authors, I have read with great interest the review by Dr. Richa Shukla et al. entitled “Use and Barriers to Chromoendoscopy for Dysplasia Surveillance in Inflammatory Bowel Disease”. This descriptive review reports on the latest advances on the use of Chromoendoscopy to improve dysplasia detection in longstanding IBD with large bowel involvement. The issue is an established evergreen in the field of GIE and IBD but recently published evidence has raised new points of view and further perspectives. Consistently, Authors have clearly focused on current trend and evidence supporting or limiting the implementation of CE in this field. Overall, the manuscript is well written and clear. Below, I will provide some comments (in order of appearance in the text).

1. General comment: this manuscript merely appears a descriptive review. No systematic analysis has been made and Authors did not disclose any key words or setting (pubmed/embase) used for this research. Whenever possible, please provide some of these methodological data.

This an invited review and was requested to be a descriptive review. As such no systematic analysis was made and no methodologic data was included. We have updated the abstract to include keywords.

2. Introduction. In this section, several sentences are not supported by reference. Please consider to add the appropriate refs.

These references have been added in the introduction section.

3. Barriers to Performing Chromoendoscopy - Does Expertise Affect Outcomes? From “CE is highlighted as a more effective” to “It lends greater credence to a targeted biopsy approach for dysplasia surveillance that has shown promising results in recently published data.[38]”. This paragraph focuses on another issue as compared to the previous one: there is no trace of any data referring to CE expertise. Here, Authors report on the concept and the impact of invisible dysplasia. Accordingly, it deserves another subtitle.

We agree with this comment and have added a new heading to this section called “Clinical Impact of Chromoendoscopy”

4. in the same paragraph, Authors state “This data suggests that “invisible dysplasia” is not that common and perhaps not very clinically relevant. It lends greater credence to a targeted biopsy approach for dysplasia surveillance that has shown promising results in recently published data.[38]” This generalization is in contrast with the above-mentioned literature. At least, the authors should state that invisible dysplasia as detected by random biopsy is infrequent and not very relevant. In fact, invisible dysplasia is still an open issue with relevant clinical impact on patients’ outcomes (“75 separate dysplastic or cancerous lesions were identified, 38 of 65 dysplastic lesions (58.5%) and 8 of 10 cancers (80.0%) were visible”). In addition, as suggested by the authors in the previous section, emerging evidence suggest that the term “invisible” relies on the endoscopic technique used to performed surveillance colonoscopy, since advanced endoscopic imaging may reveal dysplasia where standard white-light imaging was negative.

This point is well-taken. We have amended this paragraph to reflect the fact that invisible dysplasia remains an open issue of unclear clinical relevance and likely requires further future investigation.

5. Does Dysplasia Detection Affect Long-Term Outcomes? Within this section, Authors state “. To date, there have been no longitudinal studies that have assessed long-term outcomes of dysplasia detected on CE as compared with white light endoscopy.” However, There is some very recent evidence focusing on this issue in the following paper: Endoscopy. 2017 Feb;49(2):161-168. doi: 10.1055/s-0042-119394. Epub 2016 Dec 12. (Clinical implications of low grade dysplasia found during inflammatory bowel disease surveillance: a retrospective study comparing chromoendoscopy and white-light endoscopy. Ten Hove JR1, Mooiweer E1, van der Meulen de Jong AE2, Dekker E3, Ponsioen CY3, Siersema PD1, Oldenburg B1.)

This article was reviewed as part of the additional articles suggested by Reviewer 1 (see above)

6. In addition, please consider to discuss another matter related to the implementation of CE in clinical practice. In the study by Mooiweer et al. no improvement in dysplasia detection was found from the use of CE. The authors have questioned previous studies on CE stating that back-to-back studies on IBD surveillance have always performed the two endoscopic examinations in a fixed order, with standard endoscopy first, and DBC performed as the second examination, thereby generating a bias.

This is an excellent point and we have made a comment about this stating that chromoendoscopy has yet to be shown to have a positive impact on real-world outcomes such as reduction in cancer rates or improved overall survival. Furthermore, we agree there is a

potential bias in the back-to-back study design of several of the background CE studies and have made a comment about this as well.