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Upon our receipt of your revised manuscript, we will send it for re-review. We will then make a final decision on whether to accept the manuscript or not, based upon the reviewers' comments, the quality of the revised manuscript, and the relevant documents.

Please follow the steps outlined below to revise your manuscript to meet the requirements for final acceptance and publication.

1 MANUSCRIPT REVISION DEADLINE

We request that you submit your revision in no more than **14 days**. **Please note that you have only two chances for revising the manuscript.**

2 PLEASE SELECT TO REVISE THIS MANUSCRIPT OR NOT

Please login to the F6Publishing system at <https://www.f6publishing.com> by entering your registered E-mail and password. After clicking on the "Author Login" button, please click on "Manuscripts Needing Revision" under the "Revisions" heading to find your manuscript that needs revision. Clicking on the "Handle" button allows you to choose to revise this manuscript or not. If you choose not to revise your manuscript, please click on the "Decline" button, and the manuscript will be WITHDRAWN.

3 SCIENTIFIC QUALITY

Please resolve all issues in the manuscript based on the peer review report and make a point-by-point response to each of the issues raised in the peer review report, and **highlighted the revised/added contents with yellow color in the revised manuscript**. Note, authors must resolve all issues in the manuscript that are raised in the peer-review report(s) and provide point-by-point responses to each of the issues raised in the peer-review report(s); these are listed below for your convenience:

Reviewer #1:

Scientific Quality: Grade A (Excellent)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (High priority)

Specific Comments to Authors: As AI begins to become ubiquitous worldwide, Computer-Aided Detection (CADE) is being attempted in various countries, and I myself have had several instances of using it in clinical practice. As mentioned in the paper, there are diverse outcomes regarding the utility of CADE, and personally, I don't perceive its effects to be particularly positive. In this context, this paper provides us with crucial information on how to potentially

apply CAdE in actual practice by presenting the background and results of this study conducted on patients not included in the AI-SEE research. While the precise explanation for why experienced colonoscopists exhibited lower Adenoma Detection Rates (ADR) wasn't explicitly provided in this paper, we acknowledge that interpreting this is quite challenging. Among the results from AI-SEE, a lower Adenomas per Extraction rate might offer a plausible explanation. The high false positive rate in detecting adenomas could indeed pose a problem for CAdE. Both the design of the study and the writing of the paper are commendable in my opinion.

Thank you for this excellent feedback.

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: I thank the editor for inviting me to review this paper. The authors performed a randomized controlled trial to evaluate the impact of CAdE. In this RCT performed at a center with high ADR, use of CAdE was found to have decreased APC, ADR, as well as serrated polyp detection rate. The paper is a prospective clinical study, with excellent writing and clear structure. Although the conclusion is worth discussing, it is still worth reading.

There are the following issues that the authors needs to answer.

1. A total of four endoscopists have performed all clinical endoscopic procedures, and the authors also mentioned that these physicians have over 5 years of work experience. But can this indicate that the four endoscopists have the same level of endoscopy? Have all these endoscopists had experience with large-volumen endoscopic examinations before? The number of four doctors is relatively small, and there may be selection bias.

Thank you for this comment. While there is a range of number of years the endoscopists have been in practice, with range upwards of 20+ years. However, importantly, I think the adenoma detection rate, which is the most important quality indicator among endoscopists, is uniform among our endoscopists. We include the following statement in "Colonoscopy performance": "Baseline ADR for all four endoscopists were >40%."

2. Before performing the procedure, the endoscopists had made it clear whether the case would be screened by CAdE. Psychological implications may affect the rigor of analysis without CAdE.

Thank you for this good point. While we had highlighted this in the discussion, we used this opportunity to make this point more clear: "An additional limitation is the inability to blind the endoscopist. While patients were randomized, we were unable to blind an endoscopist from the presence of CAdE, which was clear to the endoscopist due to presence of the polyp framing box. Due to the nature of the study, our endoscopists could not be blinded (seeing the polyp framing box would clue any endoscopist regarding the presence of CAdE), and as such there may be a Hawthorne effect, whether negative or positive. However, given the similar procedure and withdrawal time between the CAdE compared to without CAdE groups, we believe our

endoscopist did not significantly change their colonoscopy approach depending on their allocation.”

3. In the baseline data, there was a significant race/ethnicity difference between the two groups. Did this difference affect the data?

Related to the small size of the study, despite patient randomization, relative to without CAdE, the CAdE group had lower percentage of Caucasians as well as higher percentage of African Americans. While the variation of patient race/ethnicity was unlikely to have affected polyp detection, black patients have been found to have higher prevalence of polyps >9mm compared to whites.²² However, the CAdE group had higher percentage of black patients without demonstrating benefit of CAdE.

Suggested analysis and discussion In the application of AI in digestive endoscopy, a large and high-quality training set is required to obtain the specificity and sensitivity of auxiliary detection. At the same time, in practical applications, it is also constrained by the operational level of endoscopists, which may lead to misjudgment. Previous research findings mostly suggest that AI or CAdE systems are helpful for lower experienced physicians (those with limited practical experience or shorter working hours). For experienced endoscopists, the value of AI is limited. According to this article, physicians are mostly experienced. It is reasonable that they did not receive CAdE without significant value. Perhaps this AI assisted system is more valuable in medical units with low ADR detection rates or limited volume of endoscopic procedures.

Thank you for this good point. I’ve added the following statement in the Discussion section: “However, CAdE may remain useful for endoscopists with lower ADR and APC. Further studies will be needed to determine the utility and criteria of application. of CAdE among endoscopists.”

4 LANGUAGE POLISHING REQUIREMENTS FOR REVISED MANUSCRIPTS SUBMITTED BY AUTHORS WHO ARE NON-NATIVE SPEAKERS OF ENGLISH

As the revision process results in changes to the content of the manuscript, language problems may exist in the revised manuscript. Thus, it is necessary to perform further language polishing that will ensure all grammatical, syntactical, formatting and other related errors be resolved, so that the revised manuscript will meet the publication requirement (Grade A).

Authors are requested to send their revised manuscript to a professional English language editing company or a native English-speaking expert to polish the manuscript further. When the authors submit the subsequent polished manuscript to us, they must provide a new language certificate along with the manuscript.

Once this step is completed, the manuscript will be quickly accepted and published online. Please visit the following website for the professional English language editing companies we recommend: <https://www.wjgnet.com/bpg/gerinfo/240>.

5 ABBREVIATIONS

In general, do not use non-standard abbreviations, unless they appear at least two times in the text preceding the first usage/definition. Certain commonly used abbreviations, such as DNA, RNA, HIV, LD50, PCR, HBV, ECG, WBC, RBC, CT, ESR, CSF, IgG, ELISA, PBS, ATP, EDTA, and mAb, do not need to be defined and can be used directly.

The basic rules on abbreviations are provided here:

(1) Title: Abbreviations are not permitted. Please spell out any abbreviation in the title.

(2) Running title: Abbreviations are permitted. Also, please shorten the running title to no more than 6 words.

(3) Abstract: Abbreviations must be defined upon first appearance in the Abstract. Example 1: Hepatocellular carcinoma (HCC). Example 2: *Helicobacter pylori* (*H. pylori*).

(4) Key Words: Abbreviations must be defined upon first appearance in the Key Words.

(5) Core Tip: Abbreviations must be defined upon first appearance in the Core Tip. Example 1: Hepatocellular carcinoma (HCC). Example 2: *Helicobacter pylori* (*H. pylori*)

(6) Main Text: Abbreviations must be defined upon first appearance in the Main Text. Example 1: Hepatocellular carcinoma (HCC). Example 2: *Helicobacter pylori* (*H. pylori*)

(7) Article Highlights: Abbreviations must be defined upon first appearance in the Article Highlights. Example 1: Hepatocellular carcinoma (HCC).

Example 2: *Helicobacter pylori* (*H. pylori*)

(8) Figures: Abbreviations are not allowed in the Figure title. For the Figure Legend text, abbreviations are allowed but must be defined upon first appearance in the text. Example 1: A: Hepatocellular carcinoma (HCC) biopsy sample; B: HCC-adjacent tissue sample. For any abbreviation that appears in the Figure itself but is not included in the Figure Legend textual description, it will be defined (separated by semicolons) at the end of the figure legend. Example 2: BMI: Body mass index; US: Ultrasound.

(9) Tables: Abbreviations are not allowed in the Table title. For the Table itself, please verify all abbreviations used in tables are defined (separated by semicolons) directly underneath the table. Example 1: BMI: Body mass index; US: Ultrasound.

6 EDITORIAL OFFICE'S COMMENTS

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) Science editor:

The manuscript has been peer-reviewed, and it's ready for the first decision.
Language Quality: Grade A (Priority publishing)
Scientific Quality: Grade B (Very good)

(2) Company editor-in-chief:

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the Artificial Intelligence in Medical Imaging, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor.

We have updated the figures.

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Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

We have updated the tables.

When revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the RCA. RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: <https://www.referencecitationanalysis.com/>.

Thank you – we have reviewed this.

