

Dear Dr. Lian-Sheng Ma:

We would like to thank you and the reviewers for your consideration, time, and review of our manuscript. We appreciate the reviewers' helpful and thoughtful comments. We have prepared the revised version of the manuscript as recommended.

All of the comments have been addressed in the revised version, and our point-by-point responses to the reviewers' comments are given below. The reviewers' comments are in *black italics*, while our responses are in **blue font**.

Thank you again for your consideration and time.

Very Respectfully,

Prof. Yunshi Zhong

Endoscopy Center, Zhongshan Hospital of Fudan University, Shanghai

Reviewers' Comments:

Reviewer #1: This is an interesting and excellent resultant study. I have just some minor comments.

1. How was the number of cases required for the training and validation sets calculated?

RE: Thank you for your comments. In our opinion, the greater the number of training sets, the better the accuracy of the model. However, the low detection rate of early ESCC limits our ability to collect more images. Thus, a total of 2167 abnormal NM-NBI images of early ESCCs in 235 cases and 2568 normal NM-NBI images in 412 cases were collected from three institutions as the training dataset. Then the AUC of the CAD-NBI system was 0.9761, which showed this model have great performance. As we need paired images including WLI and NBI at the same location and at the same angle, 316 pairs of images were collected as validation sets. After extensive reading of the literature and consulting statisticians, we found there was no consensus on the number of training and validation sets required. We believe that the current number is sufficient for the purposes of this study. However, the small sample size, including images in the training and validation datasets, was still one of several limitations for this study. We have added the description on small sample size in the Discussion section. Thank you again for your comments!

2. Is the images used in this study a direct view of the lesion or a bird's eye view of the lumen?

RE: Thank you for your comments. As NM-NBI was used in screening examinations, a bird's eye view of the lumen was used for images. Figure 4 showed the represented images in this study. When a lesions was found after screening, a direct view was used for a closer look under magnifying endoscopy with NBI model.

3. Page 10 Line 28. Abbreviation "NMI" is not defined.

RE: Thank you for your advice. We apologize for the misspelling, and “NMI” is in fact NBI. We have made the corrections.

4. Please describe the figure legends of A (CAD-WLI) and B (CAD-NBI) in Figure 5.

RE: Thank you for your advice. We have updated the corresponding description in the figure legends of A (CAD-WLI) and B (CAD-NBI) in Figure 5.

Reviewer #2: Excellent work with reliable results

RE: Thank you for your thorough and comprehensive review of our manuscript.

Editorial office’s comments:

Science editor:

1 Scientific quality: The manuscript describes an observational study of the AI for detecting early ESCC. The topic is within the scope of the WJG. (1) Classification: Grade A and Grade C; (2) Summary of the Peer-Review Report: Excellent and well documented comparative study between CAD-WLI and CAD-NBI for screening esophagus squamous cell carcinoma. However, there are some issues should be addressed. How was the number of cases required for the training and validation sets calculated? Please describe the figure legends of A (CAD-WLI) and B (CAD-NBI) in Figure 5. The questions raised by the reviewers should be answered;and (3) Format: There are 4 tables and 6 figures. A total of 21 references are cited, including 13 references published in the last 3 years. There are 2 self-citations.

RE: Thank you for your thorough and comprehensive review of our manuscript. All of the comments from reviewers have been addressed in the revised version, and our point-by-point responses to the reviewers’ comments are given above.

2 Language evaluation: Classification: Grade A and Grade B. A language editing certificate issued by International Science Editing was provided.

RE: Thank you for your thorough and comprehensive review of our manuscript.

3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, and the Institutional Review Board Approval Form. Written informed consent was waived. The authors need to provide the signed Conflict-of-Interest Disclosure Form and Copyright License Agreement. The authors need to fill out the STROBE checklist with page numbers. No academic misconduct was found in the CrossCheck detection and Bing search.

RE: Thank you for your thorough and comprehensive review of our manuscript. We have uploaded the signed Conflict-of-Interest Disclosure Form and Copyright License Agreement. We have filled out the STROBE checklist with page numbers.

4 Supplementary comments: This is an unsolicited manuscript. The study was performed with 6 financial supports. The topic has not previously been published in the WJG. The corresponding author has not published articles in the BPG.

RE: Thank you for your thorough and comprehensive review of our manuscript.

*5 Issues raised: (1) I found the title was more than 18 words. The title should be no more than 18 words; (2) I found the authors did not provide the approved grant application form(s). Please upload the approved grant application form(s) or funding agency copy of any approval document(s); (3) I found the authors did not provide the original figures. 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; (4) I found the authors did not write the “article highlight” section. Please write the “article highlights” section at the end of the main text; and (5) please don’t include any *, #, †, §, ‡, ¥, @....in your manuscript; Please use superscript numbers for illustration; and for statistical significance, please use superscript letters. Statistical significance is expressed as aP <0.05, bP <0.01 (P > 0.05 usually does not need to be denoted). If there are other series of P values, cP <0.05 and dP <0.01 are used, and a third series of P values is expressed as eP <0.05 and fP <0.01.*

RE: Thank you for your advice. (1) We have shortened the title as “A Comparative Study on AI Systems for Detecting Early Esophageal Squamous Cell Carcinoma between Narrow-Band and White-Light Imaging” which is 18 words. (2) We have uploaded copies of the proof of funding. (3) We have uploaded a PowerPoint including the original figure documents. (4) We have added the “article highlights” section at the end of the main text. (5) We have checked the full text to meet the requirements.

6 Re-Review: Required.

RE: Thank you for your thorough and comprehensive review of our manuscript.

7 Recommendation: Conditionally accepted.

RE: Thank you for your thorough and comprehensive review of our manuscript.

Editorial office director:

I have checked the comments written by the science editor.

RE: Thank you for your thorough and comprehensive review of our manuscript.

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 World Journal of Gastroenterology, 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.

RE: Thank you for your thorough and comprehensive review of our manuscript.