

Dear Editors and Reviewers,

Thank you for your letter and the reviewers' comments concerning our submitted manuscript 63809 entitled "Application of artificial intelligence-driven endoscopic screening and diagnosis of gastric cancer". These comments were very helpful for revising and improving our paper and consolidating our arguments and conclusions. We have studied the comments carefully and have made the corrections in the manuscript, which we hope will be approved.

According to the reviewer's suggestions, we have made significant changes to the manuscript, included a summary of the organisation of the paper at the end of the introduction. We also added some reference to make it more appropriate to the reviewers' suggestions. All these major changes are quoted and described in our point-by-point response letter to the reviewers' comments below.

Best regards,

Ying-Chun Jheng

Point-by-Point Reply Letter

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The authors are dealing with the AI in gastric cancer. In this paper, they conduct a comprehensive review of the AI applications in this type of cancer. AI-assisted endoscopy is a useful tool to assist physicians in the screening and diagnosis of gastric cancer. Hsiao et al. show the current status of the main applications of AI in gastric cancer and indicates directions for future research as well as implementation in clinical practice from a clinical perspective. The authors are of the opinion that the application of artificial intelligence in gastroenterology is “in its infancy”. Although performance on some tasks is better than that of experienced endoscopists, there has been no attempt of clinical trials.

Thank you so much for your evaluation of our manuscript.

Point 1

It would be appropriate for authors to include a summary of the organisation of the paper at the end of the introduction.

Thank you for your suggestion. We agree with you and have added the appropriate description in the end of the introduction: “In the beginning of an AI-assisted diagnostic imaging revolution, we have to anticipate and meticulously assess the potential perils, in the context of its capabilities, to ensure effective and safe incorporation into clinical practice. In this paper, we thereby review the current status of AI applications in screening and diagnosing gastric cancer. We explore with emphasis on two broad categories: namely, the identification of pathogenic infection, as well as the qualitative diagnosis of GC. Finally, we considered some directions for further research and the future of its introduction into clinical practice.”

Point 2

The references are complete and up to date, however, I would like to recommend some references from 2021: - Yu, H., Singh, R., Shin, S. H., & Ho, K. Y. (2021). Artificial intelligence in upper GI endoscopy-current status, challenges and future promise. Journal of Gastroenterology and Hepatology, 36(1), 20-24. - Ikenoyama, Y., Hirasawa, T., Ishioka, M., Namikawa, K., Yoshimizu, S., Horiuchi, Y., ... & Tada, T. (2021). Detecting early gastric cancer: comparison between the diagnostic ability of convolutional neural networks and endoscopists. Digestive Endoscopy, 33(1), 141-150. - Abe, S., & Oda, I. (2021). How can endoscopists adapt and collaborate with artificial intelligence for early gastric cancer detection?. - Zhou, C. M., Wang, Y., Ye, H. T., Yan, S., Ji, M., Liu, P., & Yang, J. J. (2021). Machine learning predicts lymph node metastasis of poorly differentiated-type intramucosal gastric cancer. Scientific Reports, 11(1), 1-7. - Wu, L., He, X., Liu, M., Xie, H., An, P., Zhang, J., ... & Yu, H. (2021). Evaluating the Effects of An Artificial Intelligence System on Endoscopy Quality and Preliminarily Testing its Performance on Detecting Early Gastric

Cancer: A Randomized Controlled Trial. Endoscopy, (AAM). - Xia, J., Xia, T., Pan, J., Gao, F., Wang, S., Qian, Y. Y., ... & Liao, Z. (2021). Use of artificial intelligence for detection of gastric lesions by magnetically controlled capsule endoscopy. Gastrointestinal Endoscopy, 93(1), 133-139.

Thank you for your positive opinion about our manuscript. We agree with you and have added the appropriate description and reference in the manuscript.

Point 3

The manuscript is very interesting. The motivation and justification are appropriate. The paper is well written in correct English. Now I include some typographical errors: For: have plauded read: have lauded For: of 74 patients images read: of 74 patients' images.

Thank you for your suggestion. We have revised the typographical errors For: have plauded read: have lauded For: of 74 patients images read: of 74 patients' images