

Dear Editors:

We are pleased to have an opportunity to have our paper entitled “Evaluation of polygenic risk score for risk prediction of gastric cancer” (Manuscript NO: 81632) published in your Journal. Thanks for the constructive comments from reviewers and scientific editor, which would be much useful for our ongoing study on gastric cancer. The manuscript has been revised as required. Those revisions are highlighted in yellow in the manuscript.

1. Answers to the comments from reviewers:**(1) Response to Reviewer #1:**

Reviewer #1: This is a systematic review article which assessed the accuracy of current polygenic risk score (PRS) models in the risk prediction of gastric cancer. The authors showed that the overall accuracy was moderate with AUC values ranging from 0.56 to 0.7823. Furthermore, they indicated that incorporation of other risk factors for gastric cancer, including epidemiological factors, H. pylori status, genetic variations of H. pylori, and bacterial members of the gastric microbiome could increase the accuracy of the models. This study was conducted well, and the methods are appropriate. The data are presented clearly. In general, this is a well-written paper that presents interesting data. The results will be of interest to clinicians in the field. However, the following a minor issue require clarification:

Minor 1. Previous studies have shown that serum pepsinogen status reflects the extent of atrophic change in gastric mucosa, which is a risk factor for gastric cancer. Furthermore, studies have demonstrated that serum pepsinogen status in combination with H. pylori status can successfully stratify the risk for gastric cancer. The authors should introduce these knowledges. The authors can refer to related articles below: 1) Miki K, Ichinose M, Kawamura N, et al. The significance of low serum pepsinogen levels to detect stomach cancer associated with extensive chronic gastritis in Japanese

subjects. Jpn J Cancer Res 1989;80:1989. 2) Watabe H, Mitsushima T, Yamaji Y, et al. Predicting the development of gastric cancer from combining Helicobacter pylori antibodies and serum pepsinogen status: a prospective endoscopic cohort study. Gut 2005;54:764-768.

Response: Thanks a lot for the comment. The manuscript has been revised as suggested in the third para on Page 8. Three references have been added. The citing number and the reference list have been changed accordingly.

(2) Response to Reviewer #2:

Reviewer #2: It is an interesting study. The authors conducted a systematic review to evaluate current PRS models in gastric cancer risk prediction. They found that PRS models had the potential to predict the risk of gastric cancer with a moderate accuracy.

Response: Thanks for the kind comment.

2. Answers to the comments from Editor Office's comments and suggestions:

(1) Response to Science Editor:

Science Editor: The manuscript has been peer-reviewed, and it's ready for the first decision.

Response: Thanks for the kind comment.

(2) Response to Company Editor-in-Chief:

Company Editor-in-Chief: I recommend the manuscript to be published in the World Journal of Gastrointestinal Oncology. Before final acceptance, 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 Reference Citation Analysis (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/>.

Response: Thanks a lot for the constructive comments. We accept the offer to publish our manuscript in World journal of Gastrointestinal Oncology. Reference Citation Analysis (RCA) has been used when revising the manuscript.

Best Regards

Sincerely yours,

Quanjiang Dong, MD, PhD
Central laboratories and Department of Gastroenterology
Qingdao Municipal Hospital
Shandong
China