

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Oncology*

Manuscript NO: 81632

Title: Evaluation of polygenic risk score for risk prediction of gastric cancer

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06403881

Position: Peer Reviewer

Academic degree: MD

Professional title: N/A

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2022-11-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-11-22 00:40

Reviewer performed review: 2022-12-05 13:06

Review time: 13 Days and 12 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

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.

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Manuscript NO: 81632

Title: Evaluation of polygenic risk score for risk prediction of gastric cancer

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05194798

Position: Editorial Board

Academic degree: MD

Professional title: Director

Reviewer's Country/Territory: Japan

Author's Country/Territory: China

Manuscript submission date: 2022-11-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-12-13 10:22

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Review time: 4 Days and 11 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

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 microbiom 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.