PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 88203

Title: Comparison of machine learning and traditional logistic regression algorithms for predicting lymph node metastasis in gastric cancer：A two-center study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

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Reviewer's code: 06413380

Position: Peer Reviewer

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: Reviewer_Country

Author's Country/Territory: China

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Reviewer chosen by: AI Technique

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Review time: 8 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [ ] Grade B: Minor language polishing [Y] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

1.The introduction is skillfully written and provides valuable background information. However, it is worth noting that the authors could have strengthened their work by including additional literature that elucidates the critical role of machine learning in facilitating the identification of lymph node metastasis in gastric cancer. Additionally, the authors should consider a more comprehensive discussion of gastric cancer lymph node metastasis in the background section. 2.Logistic regression is not the best model, both in the textual description of the results section and in the table presentation, but the authors used logistic regression as an important model for presenting the results. Can the author's team give a reasonable explanation? 3.The conclusion part of the article describes that GBM has the best performance, the highest predictive value and accuracy. Through this study, machine learning can tap into the ability of clinical data to reflect disease, which can help clinicians assess patients' conditions and make better treatment decisions. However, we think the author team just illustrated that GBM works better compared to other machine learning models, and did not prove how the algorithm helps clinicians assess patients' conditions and make decisions accordingly. I hope the author

team can give a reasonable explanation. 4.We found that Table 1 of the article uses non-English descriptions, which is not in line with international journal publication standards. And Table 1 does not describe the abbreviations accordingly. 5.We wish the author team could have accurately depicted the exclusion and inclusion criteria for the studies in Figure 1 to make the picture more clear and concise. 6.Regarding the ethical aspects of the study, the article describes that the study was approved by the Ethics Committee of Xuzhou Medical University Hospital. However, this study used relevant data from two regional hospitals, and the ethics of the other hospital was not described accordingly.

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Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
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SPECIFIC COMMENTS TO AUTHORS

I am really grateful to review this manuscript. In my opinion, this manuscript can be published once some revision is done successfully. I made one suggestion and I would like to ask your kind understanding. This study used numeric data from 369 patients, applied seven machine learning models and achieved the areas under the curves of 92% with the random forest and boosting for the prediction of lymph node metastasis in gastric cancer. This study presented variable importance results as well. I would argue that this is a good achievement. However, it can be noted that the Shapley Additive Explanations (SHAP) summary plot is very effective to identify the direction of association between lymph node metastasis in gastric cancer and its major predictor derived from variable importance. In this context, I would like to ask the authors to derive the SHAP summary plot.