PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 94450

Title: Establishing and Clinically Validating a Machine Learning Model for Predicting Unplanned Reoperation Risk in Colorectal Cancer

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 07915355

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Assistant Professor, Doctor

Reviewer’s Country/Territory: United States

Author’s Country/Territory: China

Manuscript submission date: 2024-03-25

Reviewer chosen by: AI Technique

Reviewer accepted review: 2024-03-31 12:48

Reviewer performed review: 2024-04-13 12:03

Review time: 12 Days and 23 Hours

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<th>Scientific quality</th>
<th>Grade A: Excellent</th>
<th>Grade B: Very good</th>
<th>Grade C: Good</th>
<th>Grade D: Fair</th>
<th>Grade E: Do not publish</th>
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<th>Novelty of this manuscript</th>
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### SPECIFIC COMMENTS TO AUTHORS

The study presents a comprehensive approach to predicting postoperative unplanned reoperations in colorectal cancer patients, utilizing machine learning methods and clinical data from two hospitals. The study is well-structured and addresses a clinically relevant problem. The methods are appropriately described, and the statistical analyses are sound. (1) The study employs machine learning techniques and thorough statistical analyses to identify independent risk factors and construct a predictive model. (2) Considering the high morbidity and mortality associated with postoperative complications in colorectal cancer patients, the development of a predictive model for unplanned reoperations is highly relevant and could potentially improve patient outcomes. (3) The discussion effectively combined the results of existing literature, and the conclusion is consistent with the results. Overall, this study makes a valuable contribution to the field of colorectal cancer surgery by providing a predictive model for postoperative unplanned reoperations. With some additional validation and transparency improvements, the study could have even greater impact in clinical practice.
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Manuscript NO: 94450

Title: Establishing and Clinically Validating a Machine Learning Model for Predicting Unplanned Reoperation Risk in Colorectal Cancer

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 08017768

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor, Senior Lecturer

Reviewer’s Country/Territory: France

Author’s Country/Territory: China

Manuscript submission date: 2024-03-25

Reviewer chosen by: AI Technique

Reviewer accepted review: 2024-04-13 12:02

Reviewer performed review: 2024-04-20 10:54

Review time: 6 Days and 22 Hours

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<td>[ ] Grade D: No creativity or innovation</td>
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### Scientific significance of the conclusion in this manuscript
- Grade A: Excellent
- Grade B: Good
- Grade C: Fair
- Grade D: No scientific significance

### Language quality
- Grade A: Priority publishing
- Grade B: Minor language polishing
- Grade C: A great deal of language polishing
- Grade D: Rejection

### Conclusion
- Accept (High priority)
- Accept (General priority)
- Minor revision
- Major revision
- Rejection

### Re-review
- Yes
- No

### Peer-reviewer statements
- Peer-Review: Anonymous
- Onymous

### Conflicts-of-Interest
- Yes
- No

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**SPECIFIC COMMENTS TO AUTHORS**

I have carefully read the manuscript titled "Establishing and Clinically Validating an Approach for Unplanned Reoperations in Colorectal Cancer Surgery", which is a well-executed and interesting study. The authors have developed a predictive model for postoperative unplanned reoperations in CRC patients using machine learning techniques and clinical data. The advantages of this study lie in its rigorous methodology, large sample size, clinical relevance, and validation process. The internal validation and separate training/validation groups enhance the credibility of the predictive model. Some comments: a) The authors should consider conducting external validation using data from other healthcare institutions. This would validate the model's performance across diverse patient populations and treatment settings. b) Long-term follow-up data would provide insights into the model's predictive accuracy beyond the immediate postoperative period. c) Some grammatical and syntactic errors should be corrected and improved. d) All figures should be clearer. After completing the modifications, the manuscript could be considered for publication.