

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 84049

Title: A machine learning model for prediction of low anterior resection syndrome following laparoscopic anterior resection of rectal cancer: A multicenter study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05932402

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Italy

Author's Country/Territory: China

Manuscript submission date: 2023-02-23

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-02-24 11:41

Reviewer performed review: 2023-03-02 21:28

Review time: 6 Days and 9 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 Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

According to the reviewer the work under review is interesting and well written. I do not agree with the choice of algorithms used for machine learning, in fact I believe that other equally interesting techniques could be used; in particular NN-based classifiers. Nevertheless, this is for the reviewer's taste, I don't think the authors need to change anything in the work that I find acceptable in present form.

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Title: A machine learning model for prediction of low anterior resection syndrome following laparoscopic anterior resection of rectal cancer: A multicenter study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05759722

Position: Peer Reviewer

Academic degree: PhD

Professional title: Research Scientist, Teaching Assistant

Reviewer's Country/Territory: Malaysia

Author's Country/Territory: China

Manuscript submission date: 2023-02-23

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-03-20 20:44

Reviewer performed review: 2023-03-20 21:05

Review time: 1 Hour

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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

This manuscript aimed to develop a machine learning model using preoperative and intraoperative factors to predict major low anterior resection syndrome (LARS) following laparoscopic surgery of rectal cancer in Chinese populations. The trained random forest (RF) model had an AUC of 0.852 and a sensitivity of 0.795 and could potentially be used in the clinic to identify patients with a high risk of developing major LARS and improve their quality of life. However, I have some concerns to be addressed

1. In the abstract, the authors claimed that based on the “decision curve analysis, the model had clinical application value.” This can be discussed in the results and discussion part; what is the proposed method's theoretical and practical implication?
2. In the abstract, please clarify how your findings or model performance compared to the state-of-the-art methods and how it can go beyond the state-of-the-art methods.
3. The methodology needs to be improved by further justifying its advancement.
4. Figure 1 is blurry. Its quality needs to be improved.
5. The contribution of the paper is unclear.
6. What are the limitations of the current study? This should be clearly reported in the conclusion section