

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Gastroenterology*

**Manuscript NO:** 87419

**Title:** Machine Learning Identifies the Risk of Complications after Laparoscopic Radical Gastrectomy for Gastric Cancer

**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 03731081

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Professor

**Reviewer's Country/Territory:** Russia

**Author's Country/Territory:** China

**Manuscript submission date:** 2023-08-30

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2023-08-30 19:36

**Reviewer performed review:** 2023-09-03 10:06

**Review time:** 3 Days and 14 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input 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 Grade E: Do not publish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

<b>Scientific significance of the conclusion in this manuscript</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	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

The authors used three methods of mathematical prediction of the results of minimally invasive laparoscopic surgical methods for the treatment of gastric cancer: Lasso regression model construction, Random forest model construction and Artificial neural networks model construction. These predictive methods have confirmed the effectiveness of laparoscopic surgery for the treatment of gastric cancer. It is laparoscopic distal gastrectomy (LDG) and laparoscopic total gastrectomy (LTG). This study is of great practical importance for the treatment of elderly and old age patients with gastric cancer. It is these patients who need effective minimally invasive surgery. The manuscript is recommended for publication in the World Journal of Gastroenterology.

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**Reviewer's code:** 06082695

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** China

**Manuscript submission date:** 2023-08-30

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2023-09-19 07:33

**Reviewer performed review:** 2023-09-20 13:17

**Review time:** 1 Day and 5 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

Radical gastrectomy is the first choice of treatment for gastric cancer, but the occurrence of postoperative complications is an important adverse factor affecting the prognosis of patients with gastric cancer. In this study, the authors included clinical data from multiple centers for research. The authors used lasso regression, random forest and artificial neural network to construct postoperative complications prediction models for laparoscopic distal gastrectomy (LDG) and laparoscopic total gastrectomy (LTG), and evaluated the prediction efficiency and accuracy. The constructed random forest model can better predict severe complications in patients undergoing laparoscopic radical gastrectomy. Some comments: 1. The results of this article are of great value in guiding clinical treatment. It is recommended that the author add content related to clinical usage methods to facilitate practical application by clinicians. 2. Text descriptions should be revised carefully. For example: the last line of Abstract, Conclusions: "and and".