Baishideng Publishing Group

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 114370

Title: Interpretable machine learning model for early complication prediction after split liver transplantation

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06503585
Position: Peer Reviewer
Academic degree and professional title: Assistant Professor, Associate Chief Pharmacist, Founder, Head, Lecturer, Manager, PhD, Postdoc, Professor, Professor Emerita, Professor Emeritus, PsyD, Research Assistant Professor, Research Dean, Research Fellow, Researcher
Reviewer's Country/Territory: Iraq
Author's Country/Territory: China

Manuscript submission date: 2025-09-20
Reviewer chosen by: AI Editor
Reviewer accepted review: 2025-09-23 06:36
Reviewer performed review: 2025-09-23 07:01
Review time: 1 Hour

Content to be reviewed	Does the manuscript's content fall within the scope of the journal? **Yes** Is there any Key Word that is not included in the manuscript title? **Yes** Do authors' affiliations correspond to the content of the manuscript? **Yes**

Baishideng Publishing Group

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

	Does the Abstract contain the contents of each part of the manuscript (IMRaD)? **Yes** Are the Key Words complete? **Yes** Is the content of the Introduction adequate? **Yes** Is the content of the Materials and Methods complete? **No** Is the description of the experiments clear and complete? **Yes** Are the experimental data presented in the manuscript's biostatistics content reliable? **Yes** Are the experimental data of the Results true and reliable? **Yes** Are the quality and resolution of the images up to standard? **Yes** Do the selection and design of the figures and tables follow the principles of necessity and clarity? **Yes** Is there any duplication between various parts of the manuscript and between the main text and the content presented in the figures and tables? **No** Are the figures and tables numbered consecutively in the order in which they appear in the manuscript? **Yes** Is the content of the Discussion reasonable? **Yes** Is the Conclusion reasonable? **Yes** Are all references necessary and reasonable? **Yes** Do authors omit important references? **Yes** Are all references related to the topic of the manuscript? **Yes** Do authors only cite their own earlier publications? **No** Is the manuscript's text correct, concise, and clear? **Yes** Will the manuscript's content be of interest to readers?

Baishideng Publishing Group

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

	Yes Are additional experiments needed for the study? **No** Does the research scope comply with ethics? **Yes**
Scientific quality	Grade A (Excellent)
Novelty of this manuscript	Grade A (Excellent)
Creativity or innovation of this manuscript	Grade A (Excellent)
Scientific significance of the conclusion in this manuscript	Grade A (Excellent)
Language quality	Grade B (Very good)
Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	Yes
Does this manuscript report an unconventional innovation?	Yes
Conclusion	Minor revision
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	No

SPECIFIC COMMENTS TO AUTHORS

Dear researcher, thank you for submitting your research to our journal. However, there are several amendments that need to be made.

1: The first thing I need is to reduce the abstract, as it contains 388 words. I want to reduce it to fewer than 300 words. The keywords should be (Keywords, not Key words)

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

and must align with the Mesh Keywords. There should be approximately five keywords, listed in alphabetical order.

2: Additionally, you initially selected 128 people, but some were excluded, resulting in a final count of 109. I hope you can explain the reasons for the exclusions and the reason for choosing this number in the method section

3: Define "early postoperative complications" more explicitly (are these within 30 days?).

4: Provide rationale for excluding Child–Pugh score in multivariate model, beyond collinearity.

5: Include an example of how the nomogram could be applied clinically.

6: Add calibration plots and decision curves in the main text instead of supplementary for a stronger impact.

7: Simplify SHAP explanations for clinical readers (e.g., a plain-language description).

8: Table 1 and 2 are dense—consider highlighting statistically significant results in bold for clarity.

9: Expand more on how the findings could guide future clinical trials or perioperative management protocols.

10: Acknowledge potential overfitting due to small sample size when using ML.

Grammer corrections

1. in the abstract-Result "intraoperative blood loss, and operation time as key contributors. "should be changed with "intraoperative blood loss, and operation time as key contributors to the model. "

2. "Kaplan–Meier analysis indicated that SII and MELD score" should be changed to "Kaplan–Meier analysis indicated that SII and MELD scores"

3. Core Tip: This study applied an interpretable machine learning framework to evaluate risk factors for early postoperative complications (EPC) in adult recipients of right tri-segment split liver transplantation (SLT).

Baishideng Publishing Group

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

should be changed with "Core Tip: This study employed an interpretable machine learning framework to assess risk factors for early postoperative complications (EPCs) in adult recipients of right tri-segment split liver transplantation (SLT). "

Baishideng Publishing Group

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 114370

Title: Interpretable machine learning model for early complication prediction after split liver transplantation

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 08385865
Position: Peer Reviewer
Academic degree and professional title: Assistant Professor, Principal Investigator
Reviewer's Country/Territory: China
Author's Country/Territory: China

Manuscript submission date: 2025-09-20
Reviewer chosen by: Jia-Lin Zhang
Reviewer accepted review: 2025-09-26 05:41
Reviewer performed review: 2025-09-26 08:41
Review time: 3 Hours

Content to be reviewed	Does the manuscript's content fall within the scope of the journal? **Yes** Is there any Key Word that is not included in the manuscript title? **No** Do authors' affiliations correspond to the content of the manuscript? **Yes** Does the Abstract contain the contents of each part of the manuscript (IMRaD)? **Yes** Are the Key Words complete? **Yes**

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

	Is the content of the Introduction adequate? **Yes** Is the content of the Materials and Methods complete? **Yes** Is the description of the experiments clear and complete? **Yes** Are the experimental data presented in the manuscript's biostatistics content reliable? **Yes** Is the manuscript's text correct, concise, and clear? **Yes** Are additional experiments needed for the study? **Yes** Does the research scope comply with ethics? **Yes** Will the manuscript's content be of interest to readers? **Yes**
Scientific quality	Grade B (Very good)
Novelty of this manuscript	Grade B (Very Good)
Creativity or innovation of this manuscript	Grade B (Very Good)
Scientific significance of the conclusion in this manuscript	Grade A (Excellent)
Language quality	Grade A (Excellent)
Does this manuscript describe a study of the existing knowledge system?	No
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Accept
Re-review	No
Peer-reviewer statements	Peer-Review: Onymous

Baishideng Publishing Group

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	No

SPECIFIC COMMENTS TO AUTHORS

This manuscript by Wang et al. presents a timely and clinically valuable study on the development of a model for predicting early complications (ECP) after split liver transplantation. The ability to stratify patients based on their risk for adverse events such as bile leakage, hemorrhage, and impaired graft function is a significant challenge in clinical practice. Therefore, a reliable predictive model has the potential to directly impact post-operative management, guide more intensive monitoring for high-risk individuals, and ultimately improve patient outcomes. The authors are to be commended for tackling this complex problem and for presenting their data in a clear and well-structured manuscript. The results appear robust and hold considerable promise for clinical translation.

Minor Suggestions for Improvement:

1. Structural Clarification of the Background Section:

The authors currently introduce specific examples of ECP (e.g., bile leakage, hemorrhage) within the introduction. While this provides immediate context, I suggest that this detailed clinical information would be more impactful if integrated into a dedicated background section. The introduction could be sharpened to briefly state the clinical problem of ECP in broad terms, while a subsequent background section could more thoroughly review the incidence, clinical consequences, and economic burden of specific complications like bile leakage and hemorrhage. This structural change would allow the introduction to focus on establishing the knowledge gap—the lack of a reliable predictive model—while the background section would build a stronger, more compelling rationale for why filling this gap is so critically important. It would help the

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

reader fully appreciate the clinical significance of the study before delving into the methodology.

2. Enhanced Accessibility of the Machine Learning Methodology:

In the section titled “Risk Biomarkers for ECP Predicted by Machine Learning Models,” the authors present their findings effectively. However, to make the manuscript more accessible to its broad intended audience, which undoubtedly includes clinicians and surgeons, I recommend adding a brief primer on the core principles of the specific machine learning algorithms employed. For instance, a short paragraph explaining the fundamental logic of a Random Forest (as an ensemble of decision trees) or a Support Vector Machine (as finding an optimal hyperplane for classification) would be immensely helpful. This does not require a deep dive into mathematical complexities but should focus on the intuitive logic behind why each algorithm was chosen and how it generally operates to identify patterns. This addition will demystify the methodology for readers less familiar with computational techniques, thereby enhancing the manuscript's educational value, fostering interdisciplinary dialogue, and strengthening the perceived validity of the approach.