

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 77119

Title: Machine-learning predicts portal vein thrombosis after splenectomy in patients with portal hypertension: A comparative analysis of PPER-based models

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05975745

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: India

Author's Country/Territory: China

Manuscript submission date: 2022-04-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-19 10:00

Reviewer performed review: 2022-04-19 10:03

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 Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" 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



**Baishideng
Publishing
Group**

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

Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No
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SPECIFIC COMMENTS TO AUTHORS

1. In the Introduction section, the drawbacks of each conventional technique should be described clearly. 2. You should emphasize the difference between other methods to clarify the position of this work further. 3. The Wide ranges of applications need to be addressed in the Introduction 4. Add the advantages of the proposed system in one quoted line for justifying the proposed approach in the Introduction section. 5. In the introduction, the findings of the present research work should be compared with the recent work of the same field towards claiming the contribution made. , kindly provide several references to substantiate the claim made in the abstract (that is, provide references to other groups who do or have done research in this area). 6. Authors can refer to some latest related works from reputed journals like IEEE/ACM Transactions, Elsevier, Inderscience, Springer, Taylor & Francis, etc.

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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05230210

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Egypt

Author's Country/Territory: China

Manuscript submission date: 2022-04-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-30 09:58

Reviewer performed review: 2022-05-08 16:59

Review time: 8 Days and 7 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
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
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SPECIFIC COMMENTS TO AUTHORS

I would like to thank the authors for this new approach to the clinical problem with deep machine learning.

- Aim of the study the authors used the term “excavate”, I think it is not appropriate here. Please modify to examine or assess or other more popular scientific term.
- Why the authors chose to use a machine learning programming to assess this issue instead of multivariate analysis, and are there any previous studies using the statistical methods per se to assess this issue in question?
- In the exclusion criteria the authors stated that they excluded “platelet count on the first and third day after the operation (PLT1, PLT3) were not elevated compared to the preoperative values”, could they elaborate why they didn’t add to the model this group? Either as a control group or as a prediction to the reverse of not having a postoperative effect on the platelet count?
- The authors stated “We diagnosed PVT by color Doppler ultrasound examination and enhanced CT would be applied as an auxiliary examination when its diagnosis was questioned” does they mean CT angiography on the abdomen with contrast? Or triphasic CT or contrasted CT?, please clarify.
- The thrombophilia as a cause of thrombosis, are there any attributed clinical problem causing it, rather than the splenectomy , for example reactionary. This is consistent with the results of the study, where the authors stated “In most cases, platelet, erythrocyte, and leukocyte counts rose dramatically over a short time after splenectomy in patients with PH, and the blood was hypercoagulable[8]. Therefore, previous studies suggested that preoperative low platelet and leukocyte count were founders for the formation of PVT postoperatively[38]. This study revealed that the preoperative lymphocyte count was an influential factor in PVT postoperatively, which coincided with the above view.”>>>This will lead to bias caused

by confounding factors, could the authors clarify how they dealt with that issue? Or they stated them as a direct and independent cause for the PVT? • The authors wrote “Most scholars have recently advocated that the earlier the prophylactic anticoagulant therapy is administered postoperatively, which will be more helpful in reducing the incidence of PVT” >> how they find that factor affecting the outcome in this cohort? And if it is affecting the model results? As a I see no mention in the table or the methodology regarding this therapeutic variable factor (prophylactic anticoagulation)? • The authors stated in the limitation of their study “Second, the uncommon preoperative factors that may influence the formation of PVT, such as splenic vein diameter, spleen volume, and portal vein flow velocity[8, 19], were not routinely measured in our institution and thus failed to be included in the present study. “>> But some of these parameters For example splenic vein diameter could be assessed through the CT scan angiography films or abdominal ultrasound, so why they were not assessed?

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05230210

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Egypt

Author's Country/Territory: China

Manuscript submission date: 2022-04-16

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2022-06-14 11:28

Reviewer performed review: 2022-06-15 11:14

Review time: 23 Hours

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input 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
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 type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

I would like to thank the authors for their modifications. 1- The authors mentioned in their answer to reviewers that “. And we excluded patients who received prophylactic anti-coagulant therapy after splenectomy when designed this study. Therefore, the therapeutic variable factor (prophylactic anti-coagulation) will not be included in the table or the methodology in our study.” >> I recommend that this exclusion criterion be mentioned clearly in the methodology to avoid reader’s confusion. 2- To the authors: please add your explanation in Q2 to reviewer #1, of why choosing a machine learning program instead of the most common statistical method for analysis, in introduction or methodology to explain the benefit of the new technique. 3- Could the authors add their explanation in Q3 to reviewer #1 to the discussion? 4- The authors did not answer the Q5 to reviewer #1, the reviewer asked for the reactionary elevation of platelet count as due to anemia (or infection with lymphocytosis) , and if this was a “statistical confounder” in their results, and could cause bias? Please answer this specific query.