

May 22, 2024

Dear Dr. Managing Editors:

On behalf of my co-authors, we really thank you for giving us an opportunity to revise the manuscript. We appreciate you and the reviewers for the valuable comments and suggestions on our manuscript (NO.: 93458) entitled “ A practical nomogram based on liver stiffness and spleen area with ultrasound for post hepatectomy liver failure: a multicenter study”. We have revised the manuscript in accordance with the comments and responded point by point to each reviewer’s comment as listed below. We hope that the revised manuscript is acceptable for publication in *World Journal of Gastroenterology* after peer reviews.

Sincerely,

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Response to Reviewer 1:

The data are clinically important and interesting. I would congratulate the authors on producing a paper showing a new predicting model of PHLF. However, there are some concerns in this manuscript.

1. The manuscript has some typographic and grammar mistakes that should be corrected.

Response: Thank you for your careful discovery, we have carefully checked our typography and grammar and asked a professional to review it to correct these errors.

2. Can authors describe which parameters and findings were considered to assess the liver failure?

Response: Thank you for raising this question. We mainly used INR and TB as parameters to evaluate liver failure according to the definition of liver failure, and also included some parameters those reflect liver function, including albumin, alanine transaminase, prothrombin time, platelet count, γ -glutamyl transpeptidase, white blood cell (WBC) count, hemoglobin (HB), alpha-fetoprotein (AFP), hepatitis B virus (HBV) status, and HBV-DNA level. Indicators that reflect liver reserve, including the extent of liver incision, liver stiffness, and spleen area, as well as previous studies suggesting that intraoperative conditions may be factors affecting PHLF, so blood loss, hepatic portal clamping time, and finally baseline characteristics of the population, such as age and sex were considered to evaluate PHLF. Due to the large number of variables included, a preliminary screening of variables was performed using LASSO regression analysis, and all variables considered for inclusion were shown in Table 1.

3. The TIMPs (Tissue Inhibitors of Metaloproteases) have been reported to present significantly lower serum values in cirrhosis. It is known what happens with these inhibitors at the onset of HCC? Could be potential independent predictors for this

nomogram?

Response: Thank you very much for your advice, your suggestion is very cutting-edge, metabolic protease tissue inhibitors were considered to be closely related to fibrosis in recent years, including liver fibrosis, pulmonary fibrosis and renal tubulointerstitial fibrosis, etc., which is a very worthy of study, but at present, our patients have not been routinely tested, your suggestion is very valuable, and it is a factor that we can consider in future research.

Response to Reviewer 2:

The author should justify the clinical utility of model they are proposed. They can correlate specifically with other Post operative predictive models.

Response: Thank you for your suggestion. We have supplemented the correlation analysis of our model with the two previously studied models (the ALBI and MELD models), the results were supplemented on page 8 of the manuscript in "Diagnostic performance of the PM compared with previously reported models" and highlighted.