



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 107408

Title: Noninvasive model based on liver and spleen stiffness for predicting clinical decompensation in patients with cirrhosis

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03656595

Position: Peer Reviewer

Academic degree and professional title: Chief Physician, MD, PhD, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2025-03-22

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2025-04-23 14:04

Reviewer performed review: 2025-04-24 12:17

Review time: 22 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? Yes 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
-------------------------------	---



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

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? **Not Applicable**

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? **No**

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?
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 B (Very Good)
Creativity or innovation of this manuscript	Grade B (Very Good)
Scientific significance of the conclusion in this manuscript	Grade B (Very Good)
Language quality	Grade A (Excellent)
Does this manuscript describe a study of the existing knowledge system?	Yes
Does this manuscript report a revolutionary innovation?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Accept
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	

SPECIFIC COMMENTS TO AUTHORS

I have read this retrospective clinical research study carefully. The topic is related to chronic liver disease. They justified their proposed model based on statistical analyses of data from 140 patients who underwent transient elastography. Hepatitis combined with cirrhosis is a common clinical disease, and cirrhosis is the final stage of chronic liver disease. Predicting decompensation is like identifying a critical turning point in disease progression. It allows clinicians to seize the window of opportunity for intervention,



**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

thereby improving long-term outcomes, reducing the incidence of complications, and potentially prolonging survival. At present, predicting the onset of clinical decompensation in patients with liver cirrhosis is critically important for assessing disease progression, guiding treatment strategies, and evaluating candidacy for liver transplantation. Commonly used methods and indicators include the Child-Pugh score, MELD (Model for End-stage Liver Disease) score, hepatic venous pressure gradient (HVPG), ALBI score (Albumin-Bilirubin), and various biological markers. When selecting predictive indicators, patients and clinicians alike tend to prefer methods that are both effective and non-invasive. In this study, the authors analyzed data from 140 patients with cirrhosis using logistic regression to develop a predictive model. The model was subsequently validated in an independent cohort of 60 patients. In addition, they evaluated the diagnostic performance of the LSPS, VRI, AAR, and Baveno VI criteria and novel models. The research design is scientific and reasonable, the statistical analysis is standardized, and there are clear results and conclusions. This is a well-written paper containing interesting results which merit publication. For the benefit of the reader, however, there are some points to be addressed, as listed below. 1. The first time TE appears in the manuscript, please provide the full term "transient elastography". 2. For all figures with multiple panels, please clearly label and refer to each panel (Figure A, Figure B). 3. The first occurrence of abbreviations such as LSPS, VRI, and AAR must include their full terms, followed by the abbreviation in parentheses. 4. If the Youden index was used in the statistical analysis, please ensure that the corresponding values are included in the relevant table for clarity and completeness.



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 107408

Title: Noninvasive model based on liver and spleen stiffness for predicting clinical decompensation in patients with cirrhosis

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02731847

Position: Editorial Board

Academic degree and professional title: Associate Professor, MD, PhD

Reviewer's Country/Territory: Brazil

Author's Country/Territory: China

Manuscript submission date: 2025-03-22

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2025-04-23 01:00

Reviewer performed review: 2025-04-28 00:22

Review time: 4 Days and 23 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? Yes 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
-------------------------------	---



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

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**

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? **No**

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?
Yes

Are additional experiments needed for the study? **Yes**

Does the research scope comply with ethics? **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 B (Very Good)
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?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Minor revision
Re-review	Yes
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	

SPECIFIC COMMENTS TO AUTHORS

Yang et al. present a retrospective study evaluating a novel noninvasive model incorporating liver stiffness measurement (LSM), spleen stiffness measurement (SSM), and spleen long diameter (SLD) to predict clinical decompensation in patients with viral cirrhosis. Their model demonstrates excellent performance, with an AUC of 0.944 in the modeling group and 0.954 in the external validation cohort, outperforming several existing noninvasive models such as LSPS, VRI, AAR, and Baveno VI criteria. The work offers a promising tool to identify patients at risk of decompensation without requiring



**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

invasive HVPG testing. This is a very interesting and relevant study. The authors have addressed a clear clinical need—reducing reliance on invasive HVPG measurements—using a well-constructed and clinically practical approach. The methodology is generally sound, the analyses are appropriate, and the model performance is impressive. I found no major errors in the presented methods or results; however, I do have some suggestions that may help refine and strengthen the manuscript further. The inclusion and exclusion criteria are clear and well-justified. The choice to focus only on viral cirrhosis patients (HBV and HCV) is reasonable for initial model development, but the authors should consider discussing how generalizable the model might be to other etiologies of cirrhosis (e.g., NASH, alcohol-related). A brief comment on this point in the Discussion could enhance the future applicability. The methods for CTLV, CTSV, LSM, and SSM measurements are adequately described. It is commendable that the same operator performed TE to minimize inter-operator variability. One small suggestion: it might be helpful to state whether the FibroScan probes (M or XL) were chosen based on BMI or skin-to-liver capsule distance, since this could affect measurement reliability. The statistical approach (univariate screening followed by multivariate logistic regression) is appropriate. One minor point: while the logistic model formula is provided, it would be useful to show an example calculation or decision tree in an Appendix or Supplement to help clinicians apply the model easily in real-world settings. Also, although the authors performed a nonparametric test for non-normally distributed variables, a brief mention of how normality was assessed (e.g., Shapiro-Wilk test?) could be added for clarity. The model's high AUC in both the modeling and external validation groups is impressive and suggests strong generalizability. Calibration using Hosmer-Lemeshow testing and decision curve analysis (DCA) is properly conducted and supports clinical utility. The figures are clear, although perhaps the DCA graphs could benefit from a slightly larger font for axis labels



**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

to improve readability when printed. While the discussion is succinct, it could benefit from a paragraph on potential integration of this model into clinical practice – whether through EHR-based risk calculators, for instance. Also, the authors may briefly mention plans for prospective validation, which would be a natural and important next step. It is worth noting that noninvasive models like this could be especially valuable in resource-limited settings where HVPG is unavailable or impractical. The manuscript is mostly very well written, but there are occasional minor awkward phrasings (e.g., “help predict the occurrence of clinical decompensation” could be tightened to “help predict clinical decompensation” for smoother reading). Careful proofreading would correct these small issues.



RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 107408

Title: Noninvasive model based on liver and spleen stiffness for predicting clinical decompensation in patients with cirrhosis

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02731847

Position: Editorial Board

Academic degree and professional title: Associate Professor, MD, PhD

Reviewer's Country/Territory: Brazil

Author's Country/Territory: China

Manuscript submission date: 2025-03-22

Reviewer chosen by: Shang Wu

Reviewer accepted review: 2025-06-25 16:38

Reviewer performed review: 2025-06-26 01:39

Review time: 9 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? Yes 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
-------------------------------	---



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

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**

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?
Yes

Are additional experiments needed for the study? **No**

Does the research scope comply with ethics? **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 B (Very Good)
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?	No
Does this manuscript report an unconventional innovation?	No
Conclusion	Accept
Peer-reviewer statements	Peer-Review: Anonymous
	Conflicts-of-Interest: No
Are your review comments generated by AI tools?	

SPECIFIC COMMENTS TO AUTHORS

I appreciate the authors' thoughtful and thorough revisions to the manuscript entitled "Noninvasive model based on liver and spleen stiffness for predicting clinical decompensation in patients with cirrhosis." All my previous concerns have been adequately addressed. The authors have clarified the generalizability of their model to other cirrhosis etiologies, explained the technology used for elastography (not requiring probe changes), and elaborated on the model's clinical application, including the interpretation of the logistic regression formula. Additionally, editorial suggestions regarding terminology, figure labeling, abbreviation use, and inclusion of the Youden



**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

index have all been implemented. The revised manuscript is now clearer and better structured for clinical interpretation. I have no further concerns and recommend the manuscript for acceptance.