

Reviewer 1:

1. Question 1: 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).

Answer: I have revised.

2. 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.

Answer: The instantaneous elastography technology utilized at our institute is equipped with a specialized hybrid probe and employs a precise measurement formula, thereby overcoming the limitation of probe size. This technology eliminates the need for probe replacement and enables the background system to directly calculate the hardness values of the liver and spleen by measuring their density and the propagation speed of shear waves.

3. 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.

Answer: The prediction model developed in this study is expressed as follows: $\ln[P/(1-P)] = -4.969 - 0.279SSM + 0.348LSM + 0.272SSD$. The cutoff value was set at 0.56. This formula integrates liver stiffness measurement (LSM), spleen stiffness measurement (SSM), and spleen

length diameter (SLD) to calculate the probability (P) of decompensation. If the calculated P value exceeds 0.56, the result is considered positive, indicating the presence of the decompensation phase. Conversely, if the P value is less than or equal to 0.56, the result is negative, suggesting the absence of decompensation.

4. 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).

Answer: I have revised.

Reviewer 1:

1. The first time TE appears in the manuscript, please provide the full term "transient elastography".

Answer: I have revised.

2. For all figures with multiple panels, please clearly label and refer to each panel (Figure A, Figure B).

Answer: I have revised.

3. The first occurrence of abbreviations such as LSPS, VRI, and AAR must include their full terms, followed by the abbreviation in parentheses.

Answer: I have revised.

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.

Answer: I have revised.

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 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.

Response: Thanks for your comments.