**Title:** Integrative bioinformatics analysis and experimental validation of key biomarkers driving the progression of cirrhotic portal hypertension

In the study, the authors focused on focused on identifying key biomarkers and hub genes associated with the advancement of cirrhotic portal hypertension through bioinformatics analysis and cross validated experimentally. The manuscript is well-organized and clearly written, making complex methodologies and results accessible to a broad researcher. The findings have provided valuable insights into future research. With revisions, it will be a valuable addition to literature and of great interest to researchers working on cirrhotic portal hypertension.

## **Comments**

- 1. Overall, the article is well-written, but it would improve with a thorough proofread by a native English speaker. Some sections need to be more concise and to the point.
- 2. Is there any research that back up Tian et al.'s findings? Kindly include it in the section on introduction.
- 3. The date of access to the GEO database should be given by the author.
- 4. What is the signal value? Why was the highest signal value utilized by the authors?
- 5. Additional works that assume the interaction score threshold should be cited.
- 6. What is the number of participants in the study? What is the ratio of men to women? Add it in the methodology section.
- 7. Once the abbreviation is given for the words, the authors should use those abbreviations for the rest of the manuscript. The authors should thoroughly check this.
- 8. Check the spelling of immune infiltration in Figure 1.
- 9. The names of the genes appear odd in Figure 2B as well in Figure 4C. It is unreadable.
- 10. Are there any other studies that support the authors findings?