Dear reviewers:

We sincerely thank the editor and all reviewers for their valuable feedback that we have used to improve the quality of our manuscript. In this revised version, the reviewers' comments are laid out below in *italicized font* and specific concerns have been numbered, changes to our manuscript were at highlight within the documents by using green-colored text point-by-point responses to the three reviewers listed below this letter.

Reviewer 1:

1. The authors considered positive a titter ≥1:100. However, autoantibody standardized positivity is at titer ≥ 1: 40 or 1：80. The authors, therefore, should further specify the autoantibody procedure (commercial kit? in-house protocol?).

Thanks for your question. This is indeed our negligence. We used the test kit for autoimmune liver disease antibodies produced by Oumon Corporation. Starting dilution is 1:100 and samples with a titer >1:100 will be deemed positive. Titer >1:100 is also the lowest commonly used concentration in China.

2. A comparison with previous studies demonstrating the diagnostic role of antinuclear antibodies as surrogate markers of AMA for the diagnosis of PBC, should be discussed

We think this is an excellent suggestion. We have added some content according to the reviewers' suggestions. The change can be found in green-colored text on pages 9 to 11.

3. *Regarding the diagnostic role of anti-centromere, a previous study also demonstrated a prognostic role of such an autoantibody and should be recalled.*

Thank you for your suggestion. We have added some content according to the reviewers' suggestions. The change can be found in green-colored text on pages 11 to 12.

4. *If reference 13 is not appropriate, please modify it.*

We sincerely thank your careful reading. We have checked the literature carefully and changed a proper reference.

4. *Histology: how histology was assessed. Experienced pathologist? this is a very important point as the early stage of PBC may not be particularly evident for not experienced pathologists.*

We sincerely thank your careful reading. The reliability of pathological diagnosis is indeed very important. Pathology readings were performed by 2 experienced pathologists, and at least one chief pathologist. You can find the content on page 6.

5. *Authors should recall and discuss the diagnostic role of the so-called PBC-specific antinuclear antibodies in PBC patients who are AMA negative or low-titer of AMA as previously described in previous studies demonstrating the diagnostic.*

We think this is an excellent suggestion. We have added some content according to the reviewers' suggestions. The change can be found in green-colored text on pages 9 to 11.

6. The diagnostic and prognostic role of anti-centromere antibodies has been previously demonstrated also in other geographical areas and should be recalled as previously

demonstrated.

Thank you for your suggestion. We have added some content according to the reviewers' suggestions. The change can be found in green-colored text on pages 11 to 12.

Reviewer 2:

1. *The study found a higher proportion of patients with negative findings of antimitochondrial antibodies and ALP than is described in the literature.*

We sincerely appreciate your careful reading. This is an oversight. We carefully checked the data and found that this sentence caused ambiguity among the reviewers. Therefore, without affecting the results and conclusions of the paper, we have deleted this sentence.

2. *What diagnostic criteria were used in the study?*

We used "APASL clinical practice guidance: the diagnosis and management of patients with primary biliary cholangitis": The diagnosis of PBC can be established when meeting two or more of the following three criteria: a. Biochemical evidence of cholestasis based mainly on the elevation of ALP and GGT with the exclusion of extrahepatic biliary obstruction by imaging studies; b. Presence of AMA or other PBC-specific ANAs including anti-sp100 or anti-gp210; c. Histologic evidence of non-suppurative destructive cholangitis mainly affecting the interlobular bile ducts.

3. *Anti-centromere antibodies are present in approximately 15 percent of patients with PBC and such patients tend to have a worse outcome. How do the authors explain the correlation between anti-centromere antibodies and the severity of liver disease?*

Thanks for your question. In the last studies, the anticentromere antibodies were associated with severity prognosis in portal hypertension type. However, our study aims to discuss the clinical features of early stage PBC. That's why we didn't add relevant content to the main text.

4. *Language requires significant polishing to achieve precision, clarity, and grammatical correctness.*

Thanks for your suggestion. We have tried our best to polish the language in this revised manuscript.

We tried our best to improve this manuscript and made some changes. We appreciate for reviewers' warm work and hope the correction will meet with approval. Once again, thank you very much for your comments and suggestions.

Yours sincerely
Yu-Jin Zhu