

## ANSWERING REVIEWERS



September 11, 2014

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 12642-review.doc).

**Title:** Albumin and MRI-liver volume to identify hepatitis B-related cirrhosis and esophageal varices. Research report.

**Author:** Hang Li, Tian-wu Chen, Zhen-lin Li, Xiao-ming Zhang, Cheng-jun Li, Xiao-li Chen, Guang-wen Chen, Jiani Hu, Yongquan Ye

**Name of Journal:** *World Journal of Gastroenterology*

**ESPS Manuscript NO:** 12642

The manuscript has been improved according to the suggestions of reviewers:

1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

3. Response to Reviewer 1:

Comment: The Authors only included patients affected by hepatitis B in their study. This aspect should be emphasized in the title of the manuscript.

Response: As suggested, we added "hepatitis B" in the title of the manuscript.

Comment: In order to make the message of the paper more direct, the authors should add a conclusive table with the best parameter they identified for each category (e.g. presence/absence of cirrhosis, Child-Pugh class A/Child-Pugh class B, etc.) and the relative sensitivity and specificity.

Response: According to the suggestion, we added a conclusive table (Table 5) with the best parameter for each category and the relative sensitivity and specificity in the last paragraph of the section of Results.

Comment: The results presented in Table 3 for RV, RV/ALB and CV/ALB are in contradiction with what stated in the results. The Authors should carefully check the pertinence of the data inserted in the tables.

Response: We carefully checked the pertinence of the data inserted in the tables and found that we made a mistake in 3rd and 4th sentence of the subsection of Comparisons of liver lobe volume parameters between cirrhotic patients with and without esophageal varices in Results section, and we corrected these sentences.

Comment: In the Introduction, the authors state that "In early stage of cirrhosis, the liver is still compensating and interferon treatment can help prolong sufficient liver function". Interferon treatment is reserved to very specific liver diseases. The sentence is therefore inappropriate. The Authors should reformulate this sentence.

Response: As suggested, we reformulated 2nd sentence of 1st paragraph in the section of Introduction.

Comment: The data about the albumin values of the patients could be added to Table 2.

Response: As required, we added the albumin values of the patients in Table 2.

Comment: In Materials and Methods, the authors should include a bibliographic citation to the

Goldsmith and Woodburne system used to define the liver lobes.

Response: As suggested, we added a bibliographic citation (See Reference 14) to the Goldsmith and Woodburne system used to define the liver lobes.

Comment: The paper should be revised for grammatical errors, omissions and punctuation.

Response: As required, we have revised the grammatical errors, omissions and punctuation in this paper.

Response to Reviewer 2:

Comment: My major comment is that the implicit proposal for why MRI should be used (or considered for use) in this setting should be significantly strengthened. It is not obvious why this approach may be better or how it may satisfy an unmet clinical need.

Response: According to the previous study, magnetic resonance imaging (MRI) plays an increasingly important role in the assessment of liver diseases because it is a safe, effective and repeatable noninvasive modality. In addition, some studies have reported that liver volume indexes assessed on MRI could be used as a method for grading the severity of cirrhosis. Therefore, we thought that MRI may be a better approach to measure the liver lobe volume parameter, and added the relative reasons in 2nd paragraph of the section of Introduction.

Response to Reviewer 3:

Comment: I only make minor corrections: Page 8, paragraph 2, line 18: Authors wrote: "age range, 31-76 years; mean age, 56 years". If you report age range you must report median age, on the other hand, if you report mean age, then you must report its standard deviation.

Response: As required, we changed the "mean age" into "median age", and give the relative median value in 2nd paragraph of Patients subsection of Materials and Methods section.

Comment: References 23 and 24: Please, fist author in black, and also in black the volume number. Please note that you must provide PMID and DOI where applicable: English journal article (list all authors and include the PMID where applicable).

Response: As required, we have corrected the fist author's name in black, and also in black the volume number for References 23 and 24. We also listed all authors and provided the PMID and DOI where applicable.

Comment: Please note that you must provide PMID and DOI where applicable: English journal article (list all authors and include the PMID where applicable) For example: 1 Jung EM Jung EM, Clevert DA, Schreyer AG, Schmitt S, Rennert J, Kubale R, Feuerbach S, Jung F. Evaluation of quantitative contrast harmonic imaging to assess malignancy of liver tumors: A prospective controlled two-center study. World J Gastroenterol 2007; 13: 6356-6364 [PMID: 18081224 DOI: 10.3748/wjg.13.6356].

Response: As suggested, we have provided PMID and DOI where applicable in section of reference.

Response to Reviewer 4

Comment: Dear Authors, I have read with great interest your manuscript entitled "Albumin and MRI-liver lobe volume to identify cirrhotic severity and esophageal varices". The paper makes original contribution and it is clinically exhaustive. The manuscript is well written, seems accurate and well organized. Author Guidelines has been followed properly in preparing the manuscript. Literature review is adequate.

Response: We thanks to your good appreciations of our study.

Response to Reviewer 5:

Comment: The sample size is too little and patients are too inhomogeneous to draw strong conclusions. In particular: - diagnosis of liver cirrhosis (comparison among healthy volunteers vs. all other patients):

healthy control group is too small while cirrhotic group includes both compensated and decompensated patients.

Response: Although the sample size is too little and patients are too inhomogeneous, our study has first provided a method to distinguish healthy volunteers from cirrhotic patients. We will perform on a large sample size in a healthy control group to demonstrate our findings, and divide cirrhotic group into compensated and decompensated patients. We also added this in the section of limitation of Discussion section.

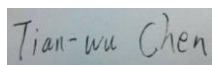
Comment: For the non invasive diagnosis of esophageal varices, there are some criticism: a big amount of patients presented with clinical decompensation (ascites) while had no sign of esophageal varices on upper endoscopy; moreover, while there is a significant clinical relevance for the diagnosis of PH and EV among compensated patients, this relevance is weak if we include also decompensated pts; Despite these criticisms I appreciate this study, so I suggest to include more patients with compensated cirrhosis for the correlation between the proposed score with the presence of EV; include more compensated patients to have a distribution of the disease mimicking the clinical presentation of our patients; avoid the comparison with healthy volunteers.

Response: In this cohort, 33 patients (46.5%) had ascites, 15 patients (21.1%) had esophageal varices, and 10 patients (14.1%) had both ascites and esophageal varices. The possible reason to explain why a big amount of patients presented with clinical decompensation (ascites) while had no sign of EV on upper endoscopy may be attribute to the small sample size in compensated patients. In this study, we did not assess the correlation between PH and EV among compensated patients because PH is not the theme of our study. Despite the criticism, our study could provide some useful information that liver lobe volume parameters could be used to identify the presence of esophageal varices. Our further study involving a larger number of samples in compensated patients will be performed to assess the correlation between PH and EV among compensated patients and confirm our study. We added this criticism in the section of limitation of Discussion section.

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology*.

Sincerely yours,



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