

Dear Editors and Reviewers:

Thank you very much for the editorial staff and reviewers' hard-work in processing our manuscript (NO.: WJG-32213). We have carefully read the comments made by the editor and the reviewers. Those comments are valuable and helpful to improve our manuscript. We have revised our manuscript based on the reviewers' suggestions. The comments are addressed below in a point-by-point manner.

Responds to the reviewer's comments

**Comment 1:** p. 6, line 15. Please correct grammar. That is, do not start a sentence with 'And'. At p. 10, line 6, please delete 'remarkable'.

**Comment 2:** Please add 'Figure 1' where referring to the angles at p. 7, line 18.

**Comment 3:** Please delete 'much' at p. 10, line 24, and 'respectively' at line 26; and relate this point to whether the SMV diameter was significantly different or not, between control and cirrhotic.

**Comment 6:** In the legend to Figure 7, please define the asterisk.

**Comment 7:** Please replace 'lacuna' with 'gap' (p. 13, line 3; as well as at p. 14, line 20).

**Comment 8:** In the 'Comments' section, p. 13, 2nd last line, please replace 'no research about', with 'sparse research on'.

**Response:** Thank you for the reviewer's careful work and point out the sentence and grammatical issues in our manuscript. According to those comments, we have corrected those sentences and polished the manuscript with a professional assistance in writing.

**Comment 4:** In Table 2, means and range are shown. Please add the related SEM data, as well as where statistical significance occurs between control and cirrhotic (as a reflection of the P value).

**Comment 5:** In a similar manner to 4, above, Table 3 shows 'mean' data only, and thus please add the related SEM data. Is SEM also missing from Tables 4 and 5? Can SEM data also be incorporated into Figures 3, 4, and 5; or this not possible due to this being idealized model data?

**Response:** Thank you for the reviewer's valuable advice. According to the review's advice, related SEM data was added. Data in Table 2 were expressed as median values and percentages, except for age (median and range). Significance of between-group differences means two-tailed P values below 0.05. In idealized model, there is only one result corresponding to one input. Furthermore, the magnitude of WSS in different parts of portal vein does not comply with the normal distribution. Consequently, we only used median value to represent the mean WSS in Table 3, Table 4, and Table 5. Correspondently, in the part of METHODS, we modified *Data analysis* according to the updated statistical analysis method.

**Comment 7:** Several aspects of the Discussion are excessively verbose and as such, for pages 11-13, the text can be reduced by ~half a page. For example, 'publicly available literature' / 'endothelial cells make up the lumen surface' (and the rest of

that sentence) are statements of the obvious and unnecessary.

**Response:** Thank you for the reviewer's advice. We have gone through the Discussion carefully and deleted the excessively sentences. We also polished this part with a professional assistance.

**What's more, there were two more parts updated below:**

1. We have added two research funds which supported our research previously.
2. We modified a reference according to the Format.

The revised manuscript (NO.:WJG-32213) have been resubmitted to be considered for publication in your journal. We hope the changes are satisfactory. We also hope that we have a chance to publish the manuscript in the World Journal of Gastroenterology.

Correspondence and phone calls about the paper should be directed to Zong-Fang Li at the following address, phone and fax number, and e-mail address:

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Happy New Year!

Sincerely yours