Lian-Sheng Ma
Company Editor-in-Chief
Editorial Office
Baishideng Publishing Group Inc

Dear Dr. Lian-Sheng Ma

Thank you very much for your letter dated August 22, 2020, and for the careful review of our manuscript, which we have amended following the reviewers' suggestions. A copy of the revised manuscript has been uploaded to the submission system. Also, please find below an itemized point-by-point response to the reviewers' comments.

We look forward to hearing the status of this manuscript, which we hope is now acceptable for publication in World Journal of Hepatology. Please feel free to contact me if you require any additional information.

Sincerely,

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***Science Editor***

*- I was honored to review the manuscript entitled "The Bioelectrical Impedance Vector Analyses (BIVA) evaluates cellularity and hydration in cirrhotics" submitted to World Journal of Gastroenterology. The study presents high quality and deals with important clinical issue, such type of study is needed. The aim of this study is to evaluate body composition of cirrhotics through BIVA. I have only few small remarks that authors should address properly. I recommend to accept the manuscript after minor revision. There are only some points to correct:*

1. *Please provide the list of abbreviations*

**Response:** Already included in the article

2. *Please provide the number of ethical approval*

**Response:** Already included in the article

3. *Introduction and discussion section needs improvement*

**Response:** Paragraphs were included in the introduction and discussion in order to make the reading clearer as suggested by the reviewer. Such as: "The BIA can further provide angular vectors of alterations of body fluids amount and cellularity of the patient; this method is named Bioelectrical Impedance Vector Analysis (BIVA)[16-18].

The PA provides us with a large amount of data that, analyzed in a special way, with specific statistical programs, allows us to make new analyzes of body composition and deepen your knowledge. BIVA uses graphic vectors for the analysis of BIA data, where Impedance (Z) is plotted as a vector by its components R (X axis) and Xc (Y axis) after standardization by weight [11,12,18].

The electrical properties of the tissues (R and Xc) must be standardized by sex and race, with their tolerance intervals, in relation to a given population. The resulting graph provides ellipses of tolerance, ie 50%, 75% and 95% percentiles (confidence intervals) that are divided into quadrants that represent groups of patients with more or less hydration, more or less cellularity. The advantage of this method is that it allows simultaneous information about changes in body hydration or soft tissue mass, regardless of body weight. Thus, BIVA is able to correctly interpret, even if the patient is extremely heavy, the distribution of

water volume in different diseases, assessing the general composition of the body[19-21]." "BIVA offers advantages over traditional methods of evaluating the composition of boby, due to its non-invasive nature and simplicity. BIVA has a methodological advantage over traditional BIA calculations due to its independence from regression equations. In addition, BIVA can facilitate longitudinal assessment to assess changes in body composition over time. These properties are useful for assessing nutrition and hydration in cirrhotic patients, who are unable to tolerate more invasive assessment methods. This research demonstrates the potential of using published BIVA data for further analysis, especially for decompensated cirrhotic patients."

*4. Please provide information on how your results will translate into clinical practice*

**Response:** A paragraph has been included on how this method can assist in clinical practice as suggested by the reviewer. Emphasizing the following points: "BIVA offers advantages over traditional methods of evaluating the composition of boby, due to its non-invasive nature and simplicity. BIVA has a methodological advantage over traditional BIA calculations due to its independence from regression equations. In addition, BIVA can facilitate longitudinal assessment to assess changes in body composition over time. These properties are useful for assessing nutrition and hydration in cirrhotic patients, who are unable to tolerate more invasive assessment methods. This research demonstrates the potential of using published BIVA data for further analysis, especially for decompensated cirrhotic patients."

*5. In discussion section please provide study strong points and study limitation section*

**Response:** Points on the limitations of this study was included, as suggested by the reviewer. Highlighting the following points: "The limitation of this study is that nutritional screening tools were not used, which makes it difficult to compare the nutritional basis. Therefore, our ability to assess how BIVA relates to nutritional status is limited.

A small number of studies were evaluated in this analysis. This analysis included only English language studies, and it is possible that studies using BIVA in different cultural contexts have been excluded. There are challenges in using

the BIVA method properly when there is variability in how reference populations are chosen. The BIVA method does not provide quantitative data on body composition variables and, therefore, we need stratification, according to clinical variables, of BIVA data to determine clinically significant outcomes."

***Editorial Office's comments***

**1) Science Editor:** 1 Scientific quality: The manuscript describes a retrospective study of the bioelectrical impedance vector analyses in cirrhotics. The topic is within the scope of the WJG. (1) Classification: Grade C; (2) Summary of the Peer-Review Report: The study presents high quality and deals with important clinical issue, such type of study is needed. The aim of this study is to evaluate body composition of cirrhotics through BIVA. However, there are some issues should be addressed. "introduction" and "discussion" section need improvement. In discussion section, please provide study strong points and study limitation section. The questions raised by the reviewers should be answered; and (3) Format: There are 4 tables and 4 figures. A total of 33 references are cited, including 3 references published in the last 3 years. There are 3 self-citations. 2 Language evaluation: Classification: Grade B. 3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, the signed Conflict-of-Interest Disclosure Form and Copyright License Agreement, the Institutional Review Board Approval Form, and informed consent. No academic misconduct was found in the CrossCheck detection and Bing search. 4 Supplementary comments: This is an invited manuscript. The study was supported by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – CAPES. The topic has not previously been published in the WJG. The corresponding author has published 1 article in the BPG. 5 Issues raised: (1) I found the authors did not provide the original figures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; and (2) I found the authors did not write the "article highlight" section. Please write the "article highlights" section at the end of the main text. 6 Re-Review: Not required. 7 Recommendation: Conditionally accepted.

***Editorial Office Director****: I have checked the comments written by the science editor.*

***Company Editor-in-Chief****: I recommend the manuscript to be published in the World Journal of Hepatology.*