Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Dear authors! I read with pleasure and interest your manuscript entitled "Dietary Phytochemical Index and Liver Function: Insights from a Middle Eastern Population" which is based on cross-sectional population-based prospective study. Evident strength are the sample size (more than 5,000 participants) and high methodological level of nutritional examination. The results are novel, and would be interesting to the readers. I have only a few minor comments.

I absolutely agree with your statement in the "strengths" (page 8), that the sample is great, however, it is unlikely "nationally representative", as only people of 35-70 y.o. were enrolled. I would suggest revision of this part of the manuscript and the explanation of the age limits used in the study.

The term 'nationally representative' has now been removed from the manuscript and emphasis given to the large sample size in the 'Limitations and Strengths' section. The reason our study investigated individuals aged 35-70 was because although the PERSIAN study recruited participants belonging to a range of age categories the cohort aged between 35-70 was the largest and most extensive. Further detailed information about the PERSIAN cohort is available from the following publication:

Poustchi H, Eghtesad S, Kamangar F, Etemadi A, Keshtkar AA, Hekmatdoost A, Mohammadi Z, Mahmoudi Z, Shayanrad A, Roozafzai F, Sheikh M, Jalaeikhoo A, Somi MH, Mansour-Ghanaei F, Najafi F, Bahramali E, Mehrparvar A, Ansari-Moghaddam A, Enayati AA, Esmaeili Nadimi A, Rezaianzadeh A, Saki N, Alipour F, Kelishadi R, Rahimi-Movaghar A, Aminisani N, Boffetta P, Malekzadeh R. Prospective Epidemiological Research Studies in Iran (the PERSIAN Cohort Study): Rationale, Objectives, and Design. Am J Epidemiol. 2018 Apr 1;187(4):647-655. doi: 10.1093/aje/kwx314. PMID: 29145581; PMCID: PMC6279089.

Another limitation that may not allow extrapolation the results of this study on the whole Iranian population is that the data of the present study were obtained in 1 province only. However, the dietary patterns may differ significantly depending on the region and ethnicity.

The authors agree with the reviewer and this point has now been added to the limitations section.

Although the reference to previously described study protocol is provided, please, mention that the participants were generally healthy (not recruited from the medical centre visitors).

In the methods section it has now been mentioned that the participants were healthy.

In the exclusion criteria there is a plenty of the information about different types of cancer, however, skin carcinoma in situ would unlikely impact dietary habits. On the other hand, no information on abdominal and chest surgery, as well as food intolerance/allergies is mentioned in the exclusion criteria - please, explain whether these factors were taken into the account.

Factors such as abdominal and chest surgery and food intolerance/allergies were not considered in our study. However, the authors agree that these aspects would be interesting and valuable areas to investigate in future research.

Another interesting point is that some of the participants could have followed special diet (vegetarian, keto, etc), used specialized food products or biologically active compounds other than multivitamin/mineral food supplements - please, provide your comment on this.

Like the previous comment, participants adhering to special diets or who were using specialized food products were also not considered in our study. The authors, whilst agreeing that analysis concerning the intake of these diets/supplements would be interesting, feel that this might offer insights into particularly unique segments of the population and thus be beyond the scope of our study.

There is no information on concomitant medications which could have been used for prophylaxis, or even treatment (for example, statins, in case of hyperlipidaemia), but could influence the studied parameters, due to both, the main and the possible side effects. Please, provide the details on concomitant medications, if possible.

A medication history was taken when the PERSIAN cohort study was conducted but unfortunately this was not included in our analysis. The authors appreciate that the reviewer is correct in stating that this may have influenced our findings and we have now included this as a limitation of our study.

It is mentioned that "The USDA food database was used to calculate nutrient intakes". My own experience suggests that this database is not comprehensive, and a lot of local foods and products are not listed. Moreover, chemical composition of some products may differ significantly region by region. Please, explain, whether USDA food database suited for the study performed in your country.

The reviewer is correct in stating that the USDA food database is not entirely comprehensive. However, it has been widely used in the absence of an Iran-specific food database in several previous publications and as such we deemed its use to be appropriate.

It seems to be important to discuss the data on the components of DPI, as larger amounts of fruits may not be that healthy for the liver. For example, food reach in fructose is known factor associated with NAFLD development. Thus, the pattern of fruits and vegetables consumption may be important also.

The authors agree with the reviewer that the pattern of fruit and vegetable consumption is very important. However, we believe that this may be somewhat out of the scope of this paper which is predominantly focused on the impact of the DPI upon liver function. Perhaps an additional paper focusing on dietary patterns in this context would be a logical and well-needed next step for the continuation of this research.

Formal matters. I would recommend to choose additional key words to enhance visibility of the research by search engines (for example, dietary patterns, phytochemical index, etc).

Additional key words have now been added to the manuscript to increase visibility.

The paper (including tables and references) is not formatted per the requirements of the journal.

The format of the paper has now been amended in accordance with the requirements of the journal.

There are some typos, please, check.

The paper has now been proof-read by all authors and all typos have been corrected.

The comments provided above in no way diminish the scientific quality of the paper. I hope, that my suggestions would help the authors make their manuscript even better.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The manuscript shows an inverse association between dietary phytochemical index (DPI) score and serum ALP in Iranian adults. This is very well written paper with a proper methothology, however the title does not reflect the main hypothesis of the manuscript, as it is a cohort with specific endpoint (serum liver function tests measurement), the term "insights" would reflect a more abrangent and general view of the topic.

The title of the manuscript has been changed to better reflect the study.

The abstract summarizes and reflects the work described in the manuscript. The manuscript adequately describes the background and significance of the study, and the methods and statistics are adequate detailed, and finally the research objectives are achieved. In the discussion session the authors interpret the findings adequately and appropriately, highlighting the key points of the subject. This paper has a high quality of organization and presentation.

(1) Science editor:

The manuscript elaborated an article on dietary phytochemical index (DPI) score and serum ALP in Iranian adults. I find it a well-structured interesting study. The sample size of more than 5000 is surprising. Nevertheless, there are a number of points that may deserve some revisions.

Please use the format of a three-line table.

The format of a three-line table has now been used throughout.

In addition, I don't think the title is very appropriate: "insights from a Middle Eastern population".

The title has now been changed to better reflect the study.

This article needs language modification to avoid grammatical errors.

The paper has now been proof-read by all authors and hopefully all grammatical errors have been corrected.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade B (Very good)

(2) Company editor-in-chief:

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of

Hepatology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before its final acceptance, the author(s) must provide the Institutional Review Board Approval Form or Document and the Signed Informed Consent Form(s) or Document(s). For example, authors from China should upload the Chinese version of the document, authors from Italy should upload the Italian version of the document, authors from Germany should upload the Deutsch version of the document, and authors from the United States and the United Kingdom should upload the English version of the document, etc.

The authors do not have access to the individual signed informed consent forms for the PERSIAN Cohort Study so we are unable to supply these. The authors also do not have access to the institutional review board approval document. However, the design of the PERSIAN Cohort Study has been approved by the ethics committees of the Ministry of Health and Medical Education, the Digestive Diseases Research Institute (Tehran University of Medical Sciences), and each participating university. This is clearly documented by the study team in the paper below. Our study was approved by the ethics committee of Shahid Sadoughi University of Medical Sciences (approval code: IR.SSU.SPH.REC.1397.161). We hope that this information might be acceptable to the Company Editor-in-Chief, especially given that our study is secondary in nature.

Poustchi H, Eghtesad S, Kamangar F, Etemadi A, Keshtkar AA, Hekmatdoost A, Mohammadi Z, Mahmoudi Z, Shayanrad A, Roozafzai F, Sheikh M, Jalaeikhoo A, Somi MH, Mansour-Ghanaei F, Najafi F, Bahramali E, Mehrparvar A, Ansari-Moghaddam A, Enayati AA, Esmaeili Nadimi A, Rezaianzadeh A, Saki N, Alipour F, Kelishadi R, Rahimi-Movaghar A, Aminisani N, Boffetta P, Malekzadeh R. Prospective Epidemiological Research Studies in Iran (the PERSIAN Cohort Study): Rationale, Objectives, and Design. Am J Epidemiol. 2018 Apr 1;187(4):647-655. doi: 10.1093/aje/kwx314. PMID: 29145581; PMCID: PMC6279089.

Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden.

The format of a three-line table has now been used throughout.

The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned.

The columns and rows of the tables have now been aligned.

Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

To the authors knowledge these have not been used.