

Dear Editor,

I'm submitting the revised Manuscript No. 51098 "Ultrasound-based techniques for the diagnosis of liver steatosis".

All the corrections are highlighted by using the track changes function of the Word processor.

The answers to your very much appreciated comments have been given right below each comment.

As suggested, in the revised manuscript I've have added two tables and two figures. As recommended, both figure are given in a PPT file and the legends are in the text box of each slide. Following the format for manuscript minireview, the two figures have been also embedded in the manuscript.

The references have been checked: there were a missing PMID for one article and a missing DOI for another one. Both have been added to the reference list of the revised manuscript.

The English has been re-checked: the corrections are highlighted.

The title page has been completed following the guidelines for minireview.

I've read the CrossCheck report. The vast majority of similar sentences is due to: classification of liver steatosis; spelling out of abbreviations; numbers and percentages. This is unavoidable in a review article that reports results of studies performed by others. Looking at the report, I can see that there wasn't any complete sentence that was copied from other articles. However, it is unavoidable that some words are common because they are commonly used in articles dealing with liver steatosis assessment. I've changed the wording of the few sentences that were similar to previous published material.

The audio core tip has been provided.

Below please find the reply to the Reviewers.

Sincerely yours,

Giovanna Ferraioli, MD

Reviewer's code: 00227368

We would like to thank the Reviewer for his/her comments.

Reviewer's code: 00030389

We would like to thank the Reviewer for his/her comments.

Reviewer's code: 00032933

We would like to thank the Reviewer for his/her comments.

The full name of ATI has been given in the revised manuscript. Like CAP, it is a proprietary technology. Both assess the attenuation of the ultrasound beam, however CAP hasn't a B-mode guidance for choosing the area of measurement. It has been added in the revised manuscript. The measurement of the attenuation coefficient with ATI, ATT, and UGAP is performed inside a region of interest, which is color-coded when ATI is used.

In the literature, it is reported that SSE is calculated off-site at a depth of 60mm (corresponding to the focal elevation depth of the ultrasound transducer). However, we feel that this technical information is a little bit complicated. Thus, we didn't add it in the revised manuscript.

Reviewer's code: 00052899

We would like to thank the Reviewer for his/her comments.

Reviewer's code: 00053888

We would like to thank the Reviewer for his/her comments.

Figures and tables have been added to the revised manuscript. The English has been rechecked and corrected.

Reviewer's code: 00058381

We would like to thank the Reviewer for his/her comments.

Figures and tables have been added to the revised manuscript. The English has been rechecked and corrected. We apologize for the typing mistake (page 10).

Abbreviations not spelled out refer to proprietary software. Nonetheless, as suggested, in the revised manuscript we have written them out when used for the first time.

Reviewer's code: 01557574

We would like to thank the Reviewer for his/her comments.

Reviewer's code: 00253956

We would like to thank the Reviewer for his/her comments.

We'd like to underline that steatosis is defined as the accumulation of lipid droplets in the hepatocyte cytoplasm. The ultrasound appearance of liver steatosis is not linked to the cause of liver disease, i.e. it is the same in NAFLD and ALD. A review is always based on published studies. As of today, the studies that have quantified liver steatosis were performed in patients with NAFLD or mixed etiologies of liver disease. To the best of our knowledge, there isn't any study that have addressed this topic specifically in ALD patients.

We have presented all the available techniques that are available as of today, and reported the results of published studies. Thus, this review is unbiased.

In the submitted manuscript, the size of the studies has been specified. The predictive value based upon the numbers of the cohorts investigated can be obtained in a meta-analysis or a systematic review, but this is beyond the scope of a minireview.

Tables have been added to the revised manuscript.