PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 82707

Title: Prospective study comparing hepatic steatosis assessment by magnetic resonance imaging and four ultrasound methods in 105 successive patients

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05424290

Position: Editorial Board

Academic degree: MBBS, MD

Professional title: Academic Research, Doctor, Professor

Reviewer's Country/Territory: India

Author's Country/Territory: France

Manuscript submission date: 2023-02-08

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2023-03-02 11:56

Reviewer performed review: 2023-03-08 10:35

Review time: 5 Days and 22 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Authors have described different US and MRI based techniques to detect hepatic steatosis. I have few comments. 1. Authors have written it as a "Randomised clinical trial". They have used single cohort of patients prospectively and have evaluated different US and MRI based techniques on all of them. by definition "Randomised clinical trial" is "he process by which participants in clinical trials are assigned by chance to separate groups that are given different treatments or other interventions" Please explain as to why they think it to be RCT. 2. The comparison of time needed for acquisition of hepatic steatosis by a particular method, its cost should also be included. When we apply any method for a large population screening these parameters are relevant to be addressed.

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Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Overall, the study appears to be well-conducted and provides important insights into the diagnostic accuracy of various ultrasonographic tools for detecting hepatic steatosis in patients with NAFLD. The current study evaluated the diagnostic performance of various ultrasonographic tools for the detection of steatosis in an exclusively NAFLD patient population, using MRI-PDFF as the gold standard. The study found that standard ultrasound had poor sensitivity for mild steatosis and suffered from inter- and intra-observer variability. Hepato-renal index (HRI) was found to be the most reliable technique, followed by controlled attenuation parameter (cCAP), and acoustic radiation force impulse (ARFI) elastography-based liver fat quantification techniques, shear wave elastography (SSE), and ARFI elastography (AC). The study concluded that HRI had the best performance and was the simplest and most available method, while standard ultrasound should remain the first-line screening tool for steatosis. The study also noted that further validation of these results is needed in different populations and in a multicenter study. Recent studies suggest that VCTE may be the superior performing method available for assessing the degree of hepatic steatosis and fibrosis in the US

population and in epidemiological studies (PMID: 36774231, PMID: 36460186), please discuss the advantages and disadvantages of other methods compared to VCTE.

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Peer-review model: Single blind

Reviewer's code: 05401900

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Iran

Author's Country/Territory: France

Manuscript submission date: 2023-02-08

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-09 07:23

Reviewer performed review: 2023-03-10 17:17

Review time: 1 Day and 9 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
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Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Thank you for your submission. Your manuscript was an interesting read. The manuscript is well organized and follows a clear flow.

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The author evaluated several US tools to detect and measure hepatic steatosis and found that hepatorenal index had the best performance. MRI proton density fat fraction assessment diagnosis was used as the "gold standard". However, there are some concerns 1, The sample size of this study is quite small, while only 19% of included patients without steatosis. 2, Since the result of US is usually influenced by the examinators. The author said that AC, SSE and HRI were assessed by two different examinators in limitations. Please showed the kappa test to determine the concordance between two examinators.   3, Why one patient failed to receive Fibroscan/US? 4, Please describe the statistical method used in Figure 1. 5, Please show the data in SSSE, AC, cCAP between non-steatotic and steatotic patients.

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Peer-review model: Single blind

Reviewer's code: 06275372

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Canada

Author's Country/Territory: France

Manuscript submission date: 2023-02-08

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-09 16:55

Reviewer performed review: 2023-03-20 17:00

Review time: 11 Days

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
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Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
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	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Collin and colleagues report an important study evaluating the capability of different ultrasonographic tools to detect and measure hepatic steatosis. The findings provide reference to clinical diagnoses that will enhance precision and efficiency. The overall study is sound. I only have minor comments for the authors to consider. 1. Figure 1. Panel A in straight line, while panels B-D in curve. Since the authors stated Spearman correlation was performed in Results section, I am curious what regression analysis was perform in Figure 1. Please indicate the statistics clearly (linear vs non-linear) and the correlation parameters in figures, e.g. R-square, actual P value rather than p <0.01. 2. Generally the order of citing figures should follow the order it appears in the manuscript. It's weird that the present Results describe Figure 1, then jump to Figure 4A, 4B, and then figure 2, figure 4D.   3. No citation of Figure 3 in the text. This should be at least mentioned in Results.   4. Table 1. Could the author show the clinical threshold of biological data in healthy population as a reference? 5. Considering the age difference (mean±SD, 56±14), could the author discuss the impact of age on the observed diagnostic capability? 6. Is there any correlation between the severity of steatosis identified from US

and biological parameters?

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[Y] Grade A: Priority publishing [ ] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Peer-reviewer	Peer-Review: [Y] Anonymous [ ] Onymous

statements	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The comments are relevant and explanatory.

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Peer-reviewer	Peer-Review: [Y] Anonymous [ ] Onymous

| statements | Conflicts-of-Interest: [   ] Yes   [Y] No |

SPECIFIC COMMENTS TO AUTHORS

No other comments.