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PEER-REVIEW REPORT

Name of journal: *World Journal of Meta-Analysis*

Manuscript NO: 87200

Title: Transient elastography (FibroScan) in critical care: Applications and limitations

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02445854
Position: Editorial Board
Academic degree: MD

Professional title: Doctor, Research Assistant Professor

Reviewer's Country/Territory: Italy

Author's Country/Territory: India

Manuscript submission date: 2023-07-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-08-01 09:14

Reviewer performed review: 2023-08-01 16:39

Review time: 7 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [Y] Grade D: Fair [ ] Grade E: Do not publish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

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Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] 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 [ ] Major revision [Y] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The aim of this review article was to report indications and pitfalls of employing transient elastography (TE) in patients admitted to intensive care units. However, this aim is not fully achieved because it's not clear what are the indications for employing TE in this setting. Some studies that demonstrate an increase of liver stiffness measurements in critically ill patients are reported however it's unclear how this can help in the management of patients in the everyday practice. The content of some sections, such as the one on pregnancy or the one on differentiating cirrhotic etiologies, is not related to patients admitted to intensive care units. The section "Acute liver dysfunction in critically ill patients" is based on the results of a single article published in 2011. It is incorrect to state that "TE correlates well with liver dysfunction". In fact, liver stiffness is NOT increased in all patients with "liver dysfunction". TE, as the ARFI-based techniques, quantifies liver stiffness that is directly related to liver fibrosis but may also increase due to other factors that are "confounding factors" when stiffness is used as a non-invasive substitute of histology for staging fibrosis. These "confounding factors" are well known and have been highlighted by guidelines and updated guidelines (not cited):

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EFSUMB updated guidelines (PMID: 28407655), WFUMB updated guidelines (PMID: 30209008), SRU updated consensus (PMID: 32515681). By the way, "Aixplorer" is an ultrasound system in which an ARFI-based technique (real-time 2D-SWE) is implemented and not the technique itself. Please check the above guidelines for a correct terminology. TE is a shear wave elastography (SWE) technique. The role of the SWE techniques beyond the assessment of liver fibrosis, including heart failure and SOS, has been reported in review articles published in the World Journal of Gastroenterology (PMID: 32655265; PMID: 36569278). The last article in the reference list is a study performed in dogs: any study in humans? Table 1: point shear wave elastography is missing. Elastography does not assess attenuation or viscosity. It assesses stiffness by assuming that tissues are purely elastic. The content of figure 1 is incorrect. Please check the guidelines for a correct terminology. By the way, ElastPQ is the registered name of the Philips point shear wave elastography technique. Other vendors have their own registered name for other point shear wave elastography techniques. The same applies to the 2D-SWE technique. Currently, all vendors have developed a 2D-SWE technique. In the figure, only the one available on the Aixplorer system is included. The Aixplorer system is currently manufactured by Hologic.

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Provenance and peer review: Invited manuscript; Externally peer reviewed

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Reviewer's code: 00003629
Position: Editorial Board
Academic degree: MD

Professional title: Emeritus Professor

Reviewer's Country/Territory: Greece

Author's Country/Territory: India

Manuscript submission date: 2023-07-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-07-29 16:17

Reviewer performed review: 2023-08-08 09:36

Review time: 9 Days and 17 Hours

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
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

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Scientific significance of the conclusion in this manuscript	[Y] Grade A: Excellent [ ] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
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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

General Comments: 1. Too many abbreviations. Some of them can be eliminated. Major Comments: 1. (Page 5, Line 5): The phrase "without liver disease" must be explained: Without evidence of chronic liver disease? Without evidence of current active liver disease with elevated liver enzymes? 2. (Page 6, Line 3): … congested jugular veins and increased liver stiffness… 3. (Page 9, Line 28): "… such as hemodynamic alterations including inferior vena cava compression." 4. (Page 11, Line 3): Please consider changing: "… and rely only to a transjugular option." 5. (Page 11, Line 18): Is a hepatocyte growth factor assay routinely performed at the authors hospital? Please mention, and consider replacing it with "prothrombin time". 6. (Page 16, Line 17 Limitations): Please discuss also the variability of measurements of splenic stiffness compared to liver stiffness measurements by TE. Minor Comments: 1. (Page 3, Line 13): Since no single physiologic variable… 2. (Page 4, Line 8): elastographic. 3. (Page 4, Line 8): Please omit the phrase "or hyperdynamic state". 4. (Page 4, Line 8): …bilirubin elevation, steatosis and intrahepatic… 5. (Page 5, Line 29): "reflects" is probably a better suited term instead of "represents". 6. (Page 6, Line 3): RHF instead of HF? 7. (Page 6,

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Line 16): Please describe the meaning of "CH". 8. (Page 6, Line 20): "RHF" instead of RHC? 9. (Page 6, Line 20): "…non-invasive HF markers"? 10. (Page 8, Line 15): "HF"? 11. (Page 9, Line 15): Please correct.

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RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: *World Journal of Meta-Analysis*

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Provenance and peer review: Invited manuscript; Externally peer reviewed

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Professional title: Doctor, Research Assistant Professor

Reviewer's Country/Territory: Italy

Author's Country/Territory: India

Manuscript submission date: 2023-07-28

Reviewer chosen by: Jing-Jie Wang

Reviewer accepted review: 2023-08-29 06:39

Reviewer performed review: 2023-08-29 07:00

Review time: 1 Hour

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 statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

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SPECIFIC COMMENTS TO AUTHORS

The Authors have satisfactorily replied to the reviewer's comments and made the suggested changes to the manuscript.