

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 58889

**Title:** Value of shear wave elastography with maximal elasticity in differentiating benign and malignant solid focal liver lesions

**Reviewer's code:** 03003965

**Position:** Peer Reviewer

**Academic degree:** FRCS, MD

**Professional title:** Assistant Technician, Associate Professor

**Reviewer's Country/Territory:** United Kingdom

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-09-18

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-09-24 09:33

**Reviewer performed review:** 2020-10-08 00:01

**Review time:** 13 Days and 14 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

In this study, authors analyzed the 104 solid FLLs of patients and 50 healthy volunteers. The value of SWE in the assessment of liver fibrosis is significant. However, the value of SWE for the differential diagnosis between malignant and benign FLLs is still investigational according to the guidelines of world federation for ultrasound in medicine and biology for liver ultrasound elastography. The previous studies about SWE for FLLs usually used mean elasticity (E<sub>mean</sub>) as the parameter to reflect the stiffness of FLLs. However, as tumors (especially malignant tumors) are usually with inhomogeneous stiffness, maximal elasticity (E<sub>max</sub>) was confirmed to be the best performing SWE feature. And the diagnostic value of E<sub>max</sub> for FLLs was not confirmed yet. In this manuscript, Authors examined all the subjects using conventional ultrasound and Virtual Touch Tissue Quantification (VTQ) imaging. A diagnosis as benign or malignant was made using conventional ultrasound. Ten VTQ values were acquired after ten consecutive measurements for each FLL and each normal liver and the largest value was recorded as maximal elasticity (E<sub>max</sub>). Their results showed that E<sub>max</sub> of malignant FLLs was significantly higher than that of benign FLLs ( $P=0.000$ ) and that of livers in healthy volunteers ( $P=0.000$ ). It is a very interesting research with important clinical relevance due to the convenient and easy method which could provide accurate stiffness information of solid FLLs. Moreover, E<sub>max</sub> was useful for the differential diagnosis of FLLs; combined with conventional ultrasound, the diagnostic efficiency was improved.

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 58889

**Title:** Value of shear wave elastography with maximal elasticity in differentiating benign and malignant solid focal liver lesions

**Reviewer's code:** 03011710

**Position:** Peer Reviewer

**Academic degree:** FACG, MD

**Professional title:** Full Professor

**Reviewer's Country/Territory:** United Kingdom

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-09-18

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-09-24 09:32

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**Review time:** 13 Days and 14 Hours

<b>Scientific quality</b>	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

In this prospective study, 56 malignant and 48 benign solid FLLs in 95 patients and 50 healthy volunteers were examined using conventional ultrasound and Virtual Touch Tissue Quantification (VTQ) imaging. The authors concluded that shear wave elastography was a convenient and easy method which could provide accurate stiffness information of solid FLLs and Emax was useful for the differential diagnosis of FLLs. It is well designed and presented with optimal analysis, discussion, tabulation and graphic display of data. Thank you for giving opportunity to review this study. In my opinion, the "MATERIALS AND METHODS" part is not well-organized and needs revision.

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 58889

**Title:** Value of shear wave elastography with maximal elasticity in differentiating benign and malignant solid focal liver lesions

**Reviewer's code:** 03017792

**Position:** Peer Reviewer

**Academic degree:** FACE, MD, PhD

**Professional title:** Professor, Research Scientist

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** China

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<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

The manuscript entitled "Value of shear wave elastography with Emax as parameter in differentiating benign and malignant solid focal liver lesions" was reviewed. This study is an interesting and will affect upcoming research in the same field. The experiment of the study is designed very well, aims are very clear. Methods are reasonable. Data in figures and tables are very good, and well discussed. The literature quoted appropriately and there are 2 tables and 3 figures, the data is clearly presented. I have the following questions and comments, 1- According to your study, there are 95 patients in the test group and 50 volunteers in the control group. What is the basis for this selection? 2- I recommended to add main exclusion criteria for the subjects included in the study. 3- How is combined diagnosis of conventional ultrasound and Emax performed and evaluated?