

**First Reviewer: 03765506**

**Conclusion:** Accept (High priority)

**Scientific Quality:** Grade B (Very good)

**Language Quality:** Grade B (Minor language polishing)

**1) I think its a very nice paper for publication**

**Answer:**

Thank you for your positive comments on the article. The language was polished, as suggested.

**Second Reviewer: 02468626**

**Conclusion:** Major revision

**Scientific Quality:** Grade B (Very good)

**Language Quality:** Grade B (Minor language polishing)

The authors presented an innovative simulator for EUSelastography using the mechanical properties of polyvinyl alcohol hydrogel for simulating organs and digestive lesions. The study is interesting and well documented.

However, a few remarks need to be raised.

Major remarks

**1) The term “endosono” should be replaced with the more common endoscopic ultrasound (EUS)**

**Answer:**

The word “Endosono” was changed by Endoscopic Ultrasound (EUS) and since elastography was also used, it was indicated as Endoscopic Ultrasound Elastography (EUS-E).

**2) It is not clear if the phantom was used for EUS-elastography or EUS (B-mode) and EUS-elastography. With the current version of the title and text, one is led to think that it is all about EUS-elastography. However, description and images made me think you wish to refer to both B-mode EUS and EUS-elastography. Please make everything clear in the title and text.**

**Answer:**

The terms EUS and EUS-E were placed in the title and paper body to avoid confusion. The images of the phantoms were obtained for both EUS and EUS-E. Studying EUS phantoms

was to assess the shape and structure of different lesions, and the EUS-E-phantoms was to evaluate the degree of tissue stiffness in solid and semisolid lesions.

**3) Abstract, 1st line. Instead of "This..." I think that the authors wish to refer to previous models that have been reported in the literature.**

**Answer:**

The word "This ...." was removed

**4) Introduction, 1st paragraph. The sentence is not clear, please rephrase. 2nd paragraph. Please eliminate "This" at the beginning of the sentence. I would suggest "Simulators may reduce the learning curve..." In the paragraph beginning with "The DH effectiveness for diagnosing..." you are referring to the results of a single study, which were not been confirmed with the same high figures by subsequent studies. Please rephrase this whole section of the introduction in order to refer to the literature in general and not just limited to a single study**

**Answer:**

The 1<sup>st</sup> paragraph sentence was rephrasing. From the 2<sup>nd</sup> paragraph, "This" was removed and applied the suggestion. Added sentence a paragraph end "The effectiveness of DH in diagnosing ..." referencing that results were not confirmed with the same high figures by subsequent studies. As the objective of the work is the characterization of the phantom to be able to simulate it with different lesions, whether solid or liquid, we do not include more studies, although we are aware of it. However, we believe that it is necessary to add more studies to reinforce the work as suggested. For this reason, we include the references and debate it in the discussion section.

**5) The technique of observation by the two endosonographers should be reported under a different chapter than "Statistical analysis".**

**Answer:**

The observer technique was published in a separate section than statistical analysis

**6) Results. "Cystic lesions were created...degree of satisfaction". As far as I know, cysts are not a good target for elastography. Please clearly explain if these were used only for B mode EUS. Moreover, what do you mean with "degree of satisfaction"? Please explain. Finally, I cannot find any correspondence between the legend of figure 6b and the figure itself.**

**Answer:**

The cystic lesions images only were obtained by EUS and not for EUS-E. The degree of satisfaction refers to the 4-point Likert scale, semiquantitative scale, to evaluate the degree of satisfaction between observers. The legend in figure 6b has been rephrased to relate to itself.

**7) A picture of the actual phantom would be greatly preferable over the drawing in figure 1**

**Answer:**

The illustration in figure 1 was changed by one of the real phantoms

**8) Is the phantom reusable?**

**Answer:**

Yes, it is reusable. As long as the phantom must be maintained under adequate temperature and humidity conditions. This was added in the discussion

**9) If possible, please give us an idea of the putative costs for producing such a simulator.**

**Answer:**

We gave an approximate value of the phantoms used in the works; these costs will vary according to the size and sophistication that is required. It was included in the discussion section of the paper

**10) Some important references are missing:...**

**Answer:**

We thought it would be wise to discuss and include the proposed references in the discussion section.

We are grateful for all the comments of the reviewer because this made it possible to improve the quality of the paper.

**Third Reviewer: 03026750**

**Conclusion:** Major revision

**Scientific Quality:** Grade D (Fair)

**Language Quality:** Grade C (A great deal of language polishing)

Important topic. However, I have many comments:

**1. Some paragraphs in the introduction and discussion are not clear and need**

## **paraphrasing**

### **Answer:**

Some paragraphs of the introduction and discussion were paraphrased to improve the paper. Information was even added to the discussion.

## **2. Great deal with language polishing**

### **Answer:**

We polish the language of the paper

## **3. Role of elastography in cystic lesions**

### **Answer:**

The cystic lesions images only were obtained by EUS and not for EUS-E

## **4. Using term endosono (better with popular term endosonography or endoscopic ultrasound).**

### **Answer:**

The terms Endoscopic Ultrasound (EUS) and Endoscopic Ultrasound Elastography (EUS-E) was used in the title and paper body so as not to confuse.

We are grateful for all the comments of the reviewer because this made it possible to improve the quality of the article.