**Rebuttal Document**

**Editorial comments:**   
  
1. **Please take this opportunity to thoroughly proofread** the manuscript to ensure that there are no spelling or grammar issues. The JoVE editor will not copy-edit your manuscript and any errors in the submitted revision may be present in the published version.

Reply: the manuscript has be revised by an english mather language teacher .

2**. Please revise lines 59-62, 182-185, and 260-262 to avoid previously published text**.

Reply: all lines mentioned above have been revised and cancelled

3. **Please obtain explicit copyright permission** to reuse any figures from a previous publication. Explicit permission can be expressed in the form of a letter from the editor or a link to the editorial policy that allows re-prints. Please upload this information as a .doc or .docx file to your Editorial Manager account. The Figure must be cited appropriately in the Figure Legend, i.e. “This figure has been modified from [citation].”

Reply: explicit copyright permission to reuse Figure 4 and 5 from previous publication [see reference 18] is enclosed (see file “permission”)

4. **Figures 4 and 5: Please combine all panels** of one figure into a single image file.

Reply: all panels of one single figure have been combined into a single image file. Please kindly note that the entire list and number of pictures have been modified due to inclusion of new figures, according to the suggestions of reviewer 3.

5**. Figures: Please define all labels** (ut, sc, bl, sv, etc.) in the figure legend.

Reply: all labels in the figure legends have been defined.

6. **Please provide a title and a description of Table 1** in Figure legends after the Representative Results of the manuscript text.

Reply: the title of Table 1 has been provided and renumbered as Table 2, due to inclusion of a new Table 1.

7. **Please revise the title to be more concise**.

Reply: the title has been shortened.

8. **Please rephrase the Summary** to clearly describe the protocol and its applications in complete sentences between 10-50 words: “Here, we present a protocol to …”

Reply: the short abstract now includes the protocol and its application

9. **Abstract should include a statement about the purpose of the method.** A more detailed overview of the method and a summary of its advantages, limitations, and applications is appropriate. Please revise the Abstract accordingly.

Reply: the abstract has been modified according to the suggestions of the editor.

10. **Please include an ethics statement** before the numbered protocol steps, indicating that the protocol follows the guidelines of your institution’s human research ethics committee.

Reply: the ethics statement has been included.

11. **Please revise the protocol text** to avoid the use of any personal pronouns (e.g., "we", "you", "our" etc.).

Reply: the use of personal pronouns has been eliminated.

12. Please revise the Protocol steps so that individual steps contain only 2-3 actions per step and a maximum of 4 sentences per step. Use sub-steps as necessary. For example, 3.2, 4.4, etc.

Reply: the description of the Protocol steps now follows the suggestions of the editor

13. **Please ensure that the highlighted steps (2.75 pages or less) form a cohesive narrative** with a logical flow from one highlighted step to the next. Please highlight complete sentences (not parts of sentences). Please ensure that the highlighted part of the step includes at least one action that is written in imperative tense.

Reply: the highlighted portions of the protocolos now are coherent and cohesive and written in imperative tense.

14. Discussion: **Please also discuss any limitations** of the technique.

Reply: the limitations of the technique have been included

15. JoVE article **does not have a Conclusion section**. Please move information in the Conclusion section to Results or Discussion section.

Reply: the “Conclusion” section has been cancelled

16. Please **include an Acknowledgements section**, containing any acknowledgments and all funding sources for this work

Reply: an Acknowledgements section has been included. No need to cite any funding sources-

.  
17. References: Please **do not abbreviate journal titles**. Please include volume and issue numbers for all references.

Reply: The References now are written according to the Editor’s guidelines.

18. Please **upload a table of the essential supplies**, reagents, and equipment. The table should include the name, company, and catalog number of all relevant materials in separate columns in an xls/xlsx file.

Reply: a Table of the essential supplies (numbered as Table 1 ) has been included

**Reviewers' comments:**   
  
  
**Reviewer #1:**  
Manuscript Summary:   
This manuscript describes pelvic organ prolapse evaluation on dynamic MRI sequences. Manuscript also describes data acquisition and how to perform standard measurement in both man and women. Method is well described and figures seems to be represent clinical conditions.   
  
Major Concerns:   
none   
  
Minor Concerns:   
none   
  
  
**Reviewer #2:**  
Manuscript Summary:   
The article presents a new way of measuring the levator ani hiatus size using multiple MRI images. Also, the changes due to resting and straining were quantified. Several techniques are listed based on the prolapse quantification standard for extracting area calculation information from images. Also, on MR images, levator ani defect including thinning, discontinuity, geometrical deformity were characterized. While this method may serve as a possibly better standard over crude pelvic examination or transperineal sonography as stated, it may have several flaws with respect to the accuracy of information obtained using 2D images.   
  
Major Concerns:   
The very reason MRI image segmentation based 3D computational models of the pelvic system are developed is to obtain anatomical information of organs which are missing in 2D. Thus **the limitations of this work should be clearly acknowledged**. Also, it is recommended **to include and cite the following articles:**   
i) Rostaminia, Ghazaleh, and Steven Abramowitch. "Finite element modeling in female pelvic floor medicine: a literature review." Current Obstetrics and Gynecology Reports 4.2 (2015): 125-131.   
ii) Chanda, Arnab, et al. "Computational modeling of the female pelvic support structures and organs to understand the mechanism of pelvic organ prolapse: a review." Applied Mechanics Reviews 67.4 (2015): 040801. 

Reply: the limitation and the inferiority of the protocol, compared to 3D computational model have been mentioned in the text. At the same time, the two articles mentioned above have been included in the list of references.

What is **the basis of selecting the MRI images** captured in each plane for analysis? There can be thousands of images captured on each plane, with different quantity of anatomical information. Why specific images were selected should be explained.

Reply: reasons for selection of scan planes have been included in the text.   
  
Minor Concerns:   
Significant differences have been observed in previous studies using 2D images acquired from the the same patient and during the study of the same physiological process across patients. **Limitations with respect to errors and variability across measurements** should be discussed.

Reply: the issue of limitation of intraobserver variation has been mentioned in the text.  
  
The wording in several sections such as the abstract and protocol section should be mainly in third person (i.e. use "was" or "were") and not as instructions which should be followed in general.   
  
Reply: the choice of imperative tense follows specific indications of “authors guidelines”

**Reviewer #3:**   
Manuscript Summary:   
I believe this is a good work, and might allow radiologists to approach a field that is considered quite complex. Also, male pelvic floor failure is seldom described in literature but is not uncommon in clinical practice.   
  
Major Concerns:   
I think **putting more images** might be useful, displaying normal structures, i.e. pelvic floor muscles, signs of fascial integrity/disruption and more examples of slight-moderate pelvic floor failure. This would be in keeping with the assumption of an integrated mechanism of pelvic floor insufficiency and tribology.

Reply: more images have been included