NOTICE: This document contains correspondence generated during peer review and subsequent revisions but before transmittal to production for composition and copyediting:

- Comments from the reviewers and editors (email to author requesting revisions)
- Response from the author (cover letter submitted with revised manuscript)*

**The corresponding author has opted to make this information publicly available.*

Personal or nonessential information may be redacted at the editor's discretion.

Questions about these materials may be directed to the *Obstetrics & Gynecology* editorial office: obgyn@greenjournal.org.

Date: 01/27/2023
To: "Sarah L. Cohen Rassier" [redacted]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-22-2146

RE: Manuscript Number ONG-22-2146

Radiofrequency ablation of fibroids: A review

Dear Dr. Rassier:

Thank you for sending us your work for consideration for publication in Obstetrics & Gynecology. Your manuscript has been reviewed by the Editorial Board and by special expert referees. The Editors would like to invite you to submit a revised version for further consideration.

If you wish to revise your manuscript, please read the following comments submitted by the reviewers and Editors. Each point raised requires a response, by either revising your manuscript or making a clear argument as to why no revision is needed in the cover letter.

To facilitate our review, we prefer that the cover letter you submit with your revised manuscript include each reviewer and Editor comment below, followed by your response. That is, a point-by-point response is required to each of the EDITOR COMMENTS (if applicable), REVIEWER COMMENTS, and STATISTICAL EDITOR COMMENTS (if applicable) below.

The revised manuscript should indicate the position of all changes made. Please use the "track changes" feature in your document (do not use strikethrough or underline formatting).

Your submission will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by 02/17/2023, we will assume you wish to withdraw the manuscript from further consideration.

EDITOR COMMENTS:

Please note the following:

Thank for your Narrative Review submission. During the Editors' discussion, the group agreed the submission would benefit from some figures or a video demonstrating the procedure.

* Help us reduce the number of queries we add to your manuscript after it is revised by reading the Revision Checklist at https://journals.lww.com/greenjournal/Documents/RevisionChecklist_Authors.pdf and making the applicable edits to your manuscript.

REVIEWER COMMENTS:

Reviewer #1: The authors present a narrative review of RFA for treatment of leiomyoma. The manuscript is generally well written but would benefit from figures demonstrating the procedures, additionally this manuscript does not add much more beyond what is already reported in systematic reviews and meta-analyses.

line 13-15: I think this paragraph could be expanded to include just a broad statement on prevalence, then a little more detail on existing treatments,, before diving in to the RFA portion

line 17-29: I don't think this level of historical background is necessary, information on RFA physics (brief) and current uses should be sufficient

line 43-44: I don't think this is necessary here

line 44-64: this portion may benefit from figures demonstrating how RFA technology causes tissue death as well as how this technology specifically affects fibroids, and I would particularly focus on the issue of heat sinks since many fibroids are

quite vascular vs others which may be fed by only a single vessel

line 66-97: this section may benefit from figures or a video description of the procedures

line 101-102: for these procedures MRI is ideal because it requires clear delineation of the fibroids as well as providing a vascular map, similar to what is done for UFE

line 105-107: please clearly describe why this type of fibroid is of concern, similar concerns were raised for UFE but seem to be less worrisome now

line 140-185: breaking this up with headings like preoperative antibiotics, anatomic considering and technical consideration would enhance readability, as would figures to demonstrate the various techniques

remainder of manuscript is well written

Reviewer #2:

Overall the manuscript is organized fairly well. A few spelling/grammatical errors are noted which are minor. Please see comments below:

1. Under the description of L-RFA it would be useful to place more detail as to how the proper placement of the tines of the array are confirmed (lines 78-79).

2. In line 95, it states that once the ablation is complete with the TC-RFA system that the RF generator automatically turns off and the needle electrodes and introducer can be retracted. Does the same automatic turn-off occur with L-RFA system?

3. The review explains that care should be taken to avoid treating an exophytic fibroid with thin stalk. Can this be explained further in the manuscript.

4. In lines 127-128 lower than average estimated blood loss with RFA procedures is referenced. This data on the estimated blood loss should ideally be stated in the manuscript.

5. In addition to describing the techniques for RFA of fibroids, any data on learning curves, time to competence for this procedure and training programs for this procedure would be useful to include in this review.

6. Pictures and videos may add more to explaining the components of the system, how the system works and procedure is done than the information presented in this section.

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Sincerely,
Jason D. Wright, MD
Editor-in-Chief

The Editors of Obstetrics & Gynecology

Response to Review

To the Reviewers and Editors: Thank you very much for your attention to our manuscript. Below please find a line-by-line response to review. We appreciate the opportunity to improve our work.

EDITOR COMMENTS:

Please note the following:

Thank for your Narrative Review submission. During the Editors' discussion, the group agreed the submission would benefit from some figures or a video demonstrating the procedure.

Thank you, we have included 2 new illustrative figures demonstrating the key components of both LSC RFA and TC-RFA with this revision. Please advise if you feel additional images are needed and we are happy to work together with Green Journal medical illustration team to create any additional content requested. Please note that these 2 new images are provided with permission from Mayo Clinic, and a permission letter is uploaded with our submission.

REVIEWER COMMENTS:

Reviewer #1: The authors present a narrative review of RFA for treatment of leiomyoma. The manuscript is generally well written but would benefit from figures demonstrating the procedures, additionally this manuscript does not add much more beyond what is already reported in systematic reviews and meta-analyses.

Thank you, we have provided additional figures demonstrating the procedures. We acknowledge that this manuscript does not contribute original research to the topic, but we do feel it is very useful to the Green Journal reader as a summary of background, technique tips and data for both laparoscopic and trans-cervical RFA.

line 13-15: I think this paragraph could be expanded to include just a broad statement on prevalence, then a little more detail on existing treatments,, before diving in to the RFA portion

We have added a discussion and recent reference about frequency of use of conservative treatments for fibroids. Further discussion of the full spectrum of treatment choices was not included in the interest of brevity, but we are happy to expand even further should the Editorial Team request.

line 17-29: I don't think this level of historical background is necessary, information on RFA physics (brief) and current uses should be sufficient

With respect, the Authors feel this information is both informative and of interest to the reader and request to keep as is. It has already been significantly trimmed for length.

line 43-44: I don't think this is necessary here
Noted and deleted.

line 44-64: this portion may benefit from figures demonstrating how RFA technology causes tissue death as well as how this technology specifically affects fibroids, and I would particularly focus on the issue of heat sinks since many fibroids are quite vascular vs others which may be fed by only a single vessel

We have provided additional figures with this submission that we believe helps illustrate the technology. Thank you for the suggestion to expand on the topic of heat sinks; additional explanation has been added to this section along with an excellent reference on the physics of RFA.

line 66-97: this section may benefit from figures or a video description of the procedures

Additional figures have been added to this submission.

line 101-102: for these procedures MRI is ideal because it requires clear delineation of the fibroids as well as providing a vascular map, similar to what is done for UFE

We have added clarification that MRI provides greater soft tissue and vascular detail. Although MRI is the preferred pre-operative imaging of many, several of the authors of this study perform only U/S in the less complex cases prior to RFA procedures.

line 105-107: please clearly describe why this type of fibroid is of concern, similar concerns were raised for UFE but seem to be less worrisome now

We have expounded on this by clarifying that necrosis of the stalk and avulsion of the fibroid could result in pain or infections complications.

line 140-185: breaking this up with headings like preoperative antibiotics, anatomic considering and technical consideration would enhance readability, as would figures to demonstrate the various techniques

We have taken this suggestion under advisement and attempted to reformat this section as suggested however it seems to read better using the current sub-headings of Peri-operative and Intra-operative Considerations. The authors are happy to switch to the recommended headings if Editorial Team request this.

remainder of manuscript is well written

Thank you.

Reviewer #2:

Overall the manuscript is organized fairly well. A few spelling/grammatical errors are noted which are minor. Please see comments below:

Thank you. We have carefully proofed the revision for spelling/grammatical errors.

1. Under the description of L-RFA it would be useful to place more detail as to how the proper placement of the tines of the array are confirmed (lines 78-79).

We have added the clarification that “Prior to initiating the ablation, proper placement of the tines of the array is confirmed with both laparoscopic visualization of adjacent structures and ultrasound evaluation from various angles in order to ensure that unintended tissues are not included.”

2. In line 95, it states that once the ablation is complete with the TC-RFA system that the RF generator automatically turns off and the needle electrodes and introducer can be retracted. Does the same automatic turn-off occur with L-RFA system?

We have clarified in this section that L-RFA requires a manual shut off, as opposed to the TC-RFA which has automatic shut off when ablation is completed.

3. The review explains that care should be taken to avoid treating an exophytic fibroid with thin stalk. Can this be explained further in the manuscript.

Please see reply above; the discussion of this has been expanded by clarifying that necrosis of the stalk and avulsion of the fibroid could result in pain or infections complications.

4. In lines 127-128 lower than average estimated blood loss with RFA procedures is referenced. This data on the estimated blood loss should ideally be stated in the manuscript.

We were unable to find more than one reference directly comparing myomectomy/hysterectomy to both L-RFA and TC-RFA in terms of surgical blood loss and therefore have deleted this comment which was made on the basis of Authors’ consensus experience.

5. In addition to describing the techniques for RFA of fibroids, any data on learning curves, time to competence for this procedure and training programs for this procedure would be useful to include in this review.

An additional reference and discussion was added to the section where learning curve is mentioned that supports 2-5 proctored cases at minimum for L-RFA. The Authors are

not aware of similar data for TC-RFA.

6. Pictures and videos may add more to explaining the components of the system, how the system works and procedure is done than the information presented in this section.

Thank you, additional figures have been added to complement this submission.