

Peer Review File

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Review Comments

Reviewer A

Comment 1:

There are a couple of typos. Would be careful on no ADM as long term historical data was not good in regards to this approach. Would like to see some longer-term data. Great job. Thanks for your work. Love the paper.

Reply 1:

Thank you for your review. We are pleased that you found the paper enjoyable to read and hopefully it is a good addition to the literature. And we agree, more long term data is required to definitely compare ADM and no-ADM.

Changes in text:

Typos were corrected.

Reviewer B

Comment 2:

- The submission is thorough and very well written.
 - The downside of more cohesive or form stable implants , flipping ,should probably be mentioned , especially with larger implants [Jong et al ,khan UD , Leibl et al , Kuruoglu et al]
 - Although I do not have a reference, prepectoral reconstruction should have a lower hematoma because of limited dissection during the reconstruction.
- " fist" in line 381 should be first.

Reply 2:

Thank you for your review. We are pleased that you found the paper enjoyable to read and hopefully it is a good addition to the literature.

The hematoma point is a good one and it makes sense. In the papers cited in the manuscript some specifically address the hematoma rate, others bundle it together with the overall complications, but they do address the rate of complications, and as you can see, there is less overall complication rates in prepectoral reconstruction, just as you mentioned.

Change in text:

The typo was corrected, thank you.

Reviewer C

Comment 3:

It is a research paper worthy of reading. To enhance the paper, I suggested some minor revision.

- Introduction and discussion: a complete state of art of implant placement decision making is mandatory, you need to take into consideration the recent studies on mastectomy skin flap

thickness and mastectomy skin flap necrosis.

- Materials and methods: How did you perform your review? Is the review systematic? Did you follow PRISMA guidelines? When did you perform your review? Which sources did you use?

- Results: How many articles did you find? How did you select the articles to review?

- Pay attention to the use of abbreviations: they need to be explained at their first use

- Discussion:

♣ Among the DTI prepectoral reconstruction solutions, polyurethane implants must be mentioned

♣ You cannot mention BIA-SCC that has gained attention after the recent FDA's alert

- A review of the grammar is mandatory

- Please include the following references:

♣ Pagliara, D., Montella, R. A., Garganese, G., Bove, S., Costantini, M., Rinaldi, P. M., Pino, V., Grieco, F., Rubino, C., & Salgarello, M. (2023). Improving Decision-making in Prepectoral Direct-to-implant Reconstruction After Nipple Sparing Mastectomy: The Key Role of Flap Thickness Ratio. *Clinical breast cancer*, 23(2), e37–e44.
<https://doi.org/10.1016/j.clbc.2022.11.007>)

♣ Pagliara, D., Schiavone, L., Garganese, G., Bove, S., Montella, R. A., Costantini, M., Rinaldi, P. M., Bottosso, S., Grieco, F., Rubino, C., Salgarello, M., & Ribuffo, D. (2023). Predicting Mastectomy Skin Flap Necrosis: A Systematic Review of Preoperative and Intraoperative Assessment Techniques. *Clinical breast cancer*, S1526-8209(22)00312-3. Advance online publication. <https://doi.org/10.1016/j.clbc.2022.12.021>

♣ Salgarello M, Pagliara D, Barone Adesi L, Visconti G, Wild JB, Matey P. Direct to Implant Breast Reconstruction With Prepectoral Micropolyurethane Foam-Coated Implant: Analysis of Patient Satisfaction. *Clin Breast Cancer*. 2021;21(4):e454-e461. doi:10.1016/j.clbc.2021.01.015

♣ Pagliara, D., Grieco, F., Cuomo, R. et al. Breast implant-associated squamous cell carcinoma: an evidence-based systematic review. *Eur J Plast Surg* (2023). <https://doi.org/10.1007/s00238-023-02078-w>

Reply 3 : Thank you for your review. We are pleased that you found the paper enjoyable to read and we hope this is a good addition to the literature.

We have adjusted the introduction to include the methods of paper selection.

We value your feedback. While we appreciate your literature recommendation and found the papers very interesting, this study is restricted to papers from the USA therefore the review of the papers suggested is out of the scope of this study.

Change in text: last paragraph from the introduction.

“Pubmed database was searched using search terms: implant-based breast reconstruction, prepectoral, subpectoral, direct-to-implant breast reconstruction, tissue expander breast reconstruction. The authors sought to review the literature specifically emanating from North America that pertains to this topic and provide an up-to-date assessment of the current practices of the prepectoral and submuscular technique. A total of 41 papers were reviewed.”

Comment 4:

Excellent review of major series reported.

A recent mesh Durasorb is not mentioned perhaps the article was submitted prior to it being released, it may be worthy of mention.

Reply 4: Thank you for your review. We are pleased that you found the paper enjoyable to read and hopefully it is a good addition to the literature.

We were not able to find literature on Durasorb as it pertains to prepectoral or submuscular implant based reconstruction.

Change in text: none

Comment 5:

The manuscript focuses on the state of pre-pectoral and sub-pectoral implant techniques in the United States, with a review of the literature from North America.

The manuscript is divided into different topics to facilitate reading and understanding.

The topic is treated comprehensively and is an excellent compendium on the state of the art of implant-based reconstruction.

In spite of this, I would like to ask the authors for some small insights into:

- the use of pectoralis major muscle denervation techniques in subpectoral reconstruction as a technique for reducing animation deformity;

-the use in the USA of scores based on patient characteristics that can help the surgeon choose the correct implant placement site (e.g. BRA score, the ACS-NSQIP calculator, the modified frailty index, the Pre-BRA score);

-the state of the art on techniques and timing of contralateral symmetrization.

Reply 5: Thank you for your review. We are pleased that you found the paper enjoyable to read and we hope this is a good addition to the literature.

While we appreciate your feedback, and find the suggestions very interesting for a future study, we feel that the suggestions are beyond the scope of this supplement.

Change in text: none