

Peer Review File

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Reviewer A

Thank you for the comprehensive review and article. I think overall the article is well written, well researched, and well-explained. My overall concern really comes from the audience. I am unsure if this has a place in a medical journal whose audience is mainly breast or plastic surgeons as I believe the majority of the data is already common knowledge to this group of surgeons. It is possible, that there exist a discrepancy in the practice patterns where I work (ie. large cancer institute in a larger urban city) and the rest of the country or world.

1. NSM has also even reached such a popularity that some plastic surgeons do a breast reduction before then performing a NSM. Perhaps the authors could discuss this because this is really the frontier of this surgery
2. If possible, do the authors have videos etc of their techniques?
3. What about a

Reply: Thank you for your comments. We have responded to your comments by

- 1) Comparing the practice patterns in different parts of the world, such as Italy, Singapore and Hong Kong
- 2) Highlighting existing large cancer institute data. We cannot find any data on 'rural vs urban areas' after extensive literature search, however data from existing single centre studies show very promising outcomes in NSM.
 - Breast reduction before NSM: Please read the newly added subsection on Frontiers in NSM: Staged breast reduction, which is a section under 'Indications for nipple sparing mastectomy'.
- 3) Unfortunately, we do not have videos of our techniques. We hope the above amendments would be sufficient. Thanks so much!

Reviewer B

This is an interesting review article on nipple sparing mastectomy. The author reviews the indications, techniques, incisions and oncological safety of nipple sparing mastectomy. The manuscript is worthy of publication with the suggested inclusions.

Comment 1: There are recent papers which has expanded the indications for nipple sparing mastectomy. One paper is referenced below.

In cancer patients, all patients who are eligible for skin sparing mastectomy could be offered nipple sparing mastectomy provided the cancer is away from the nipple (2 cm away from the nipple) and those without grade 3 ptosis. In high-risk patients (BRCA),

even patients with grade 3 ptosis could have nipple sparing mastectomy as a delayed option following breast reduction surgery or mastopexy procedures.

Reply 2: Thank you for your kind suggestion. We have included this paper in the section under the 'Indications for nipple sparing mastectomy' , and also as a subsection of 'Frontiers in NSM: Staged breast reduction'

Comment 3:

John Mathew. Can we safely accommodate larger volume implants in inframammary fold nipple sparing mastectomy compared to nipple sacrificing mastectomy in implant-based reconstruction with acellular dermal matrix? JPRAS Open 2020;27:1-6.

Need to mention regarding nipple shave, and council the patient before operation that if found to be positive, will need to sacrifice the nipple. Reference the study below.

Monica G. Valero MD, Shirin Muhsen MD, Tracy-Ann Moo MD et al Increase in Utilization of Nipple-Sparing Mastectomy for Breast Cancer: Indications, Complications, and Oncologic Outcomes. Annals of Surgical Oncology volume 27, pages344–351(2020)

Reply 3: Thank you for your suggestions and detailed feedback. We have incorporated John Matthew's publication into the section under 'Different incisions for the NSM'. We have also provided an extra section on counselling of the patient prior to operation. Thanks so much for your input, we really appreciate it!

Reviewer C

Comment 1: Different incisions for the Nipple Sparing Mastectomy: in these paragraphs, should mention about incision using endoscopic and robotic.

Reply 1: Thank you so much for your feedback! We have expanded our paragraph on 'Different incisions for the Nipple Sparing Mastectomy'. Please refer to the final section under this paragraph.

Reviewer D

Comment 1: A thorough review by an English editor may help clarify this manuscript, right now there is a lot of inaccurate statements that may be secondary to a language barrier. Specifically, line 47-48 and 84-86 don't make sense, maybe a language issue? The criteria described for patient selection are extremely outdated and would not be considered the standard of care in any US academic centers and therefore I recommend updating the patient selection criteria to match modern practice (lines 62-68).

The paragraph including lines 137-148 is really confusing, talks about prophylactic NSM but then discusses therapeutic NSM. Lines 153-157 is very confusing as well, talks about BCT for BRCA carriers then states this can expand NSM criteria. This manuscript needs a significant amount of improvement and updating to be considered reasonable for publication in my opinion.

Reply 1: Thanks for your feedback. As per your request, we have made the following amendments:

- (1) Re: Patient selection criterion – we have included the most updated guidelines and included an in-depth discussion on staged breast reduction for patients who previously were contraindicated to NSM
- (2) Re: Lines 137-148 We have separated the topics of prophylactic and therapeutic NSM into two paragraphs to minimise confusion