

## Peer Review File

Article information: <https://dx.doi.org/10.21037/gc-21-338>

**Reviewer A:** Interesting study, however please make changes according to my suggestions below

**Comment 1:** Page 3, Line 3 ...years (add reference)., ...results (add reference).

**Reply 1:** Thank you for your helpful considerations. References have been added.

Changes in the text: See page 3, line 3

**Comment 2:** Lines 14-17, This section is unclear, please rephrase.

**Reply 2:** Thank you for your comment. We admit the phrases were unclear. We revised the sentence for clarity.

Changes in the text: See page 3, from line 21 to 23

**Comment 3:** Line 22...patient (add reference).

**Reply 3:** Thank you for your suggestion. The reference has been added.

Changes in the text: See Page 3, line 30

**Comment 4:** Line 24-25, This sentence is unclear, please rephrase.

**Reply 4:** The phrases were in a wrong order, so the sentence has been revised.

Changes in the text: See page 4, line 1 and 2

**Comment 5:** Page 4, The study can per definition not be both retrospective and prospective. If it were to be a prospective study you would have had to state a research question prior to the study, calculate a sample size and suggest a null hypothesis to be rejected. Thus the study is retrospective.

**Reply 5:** We appreciate your insightful comment. The control group was analyzed retrospectively, while the SNR group was analyzed prospectively.

Changes in the text: See page 4, line 10 to 12

**Comment 6:** Operative technique, Use past tense instead of present tense throughout the section, for instance “was” instead of “is”. 19 cases of present tense should be altered to present tense. (Page 4 and 5)

**Reply 6:** We apologize for misusing the tense. We were to deliver generalized operative technique rather than describe what we did. However, past tense must be appropriate as you pointed out.

Changes in the text: See from page 5, line 7 to page 5, line 26

**Comment 7:** Line 19 place the word only after reconstruction

**Reply 7:** We revised the sentence as suggested.

Changes in the text: See page 5, line 6

**Comment 8:** Line 23 “an implant” instead of “the implant”

**Reply 8:** The phrase has been revised.  
Changes in the text: See page 5, line 11

**Comment 9:** Line 24 “an” antibiotic

**Reply 9:** The article has been added, thank you for your delicate advice.  
Changes in the text: See page 5, line 12

**Comment 10:** Line 25 “was used to irrigate” instead of “are irrigate”

**Reply 10:** The phrase and tense have been revised as suggested.  
Changes in the text: See page 5, line 13

**Comment 11:** Line 26 “an ADM” instead of “the ADM”

**Reply 11:** The article has been changed into proper one., Thank you for your suggestion  
Changes in the text: See page 5, line 14

**Comment 12:** Page 5, Three month with a nipple cap is a rather long time?

**Reply 12:** We suggest patients to maintain the nipple cap for at least - months to protect and preserve the shape and height of the nipple. The period is sometimes longer if needed.

**Comment 13:** Data collection, line 15, why VAS 1-5 and not 1-10?

**Reply 13:** With an ordinary VAS score of 1 to 10, some patients, especially the elderly, complained about the hardships in exactly scoring the each category. Thus we simplified the scoring system, which we assumed to be more easier and more reliable. We added the word “modified” to avoid confusion with the classic VAS score.

**Comment 14:** Results, Line 23 ILC short for?

**Reply 14:** Sorry, It stands for invasive lobular carcinoma. We added the full term on the text.  
Changes in the text: See page 6, Line 13

**Comment 15:** Line 24 IDC short for?

**Reply 15:** Sorry, It stands for invasive ductal carcinoma. We added the full term on the text.  
Changes in the text: See page 6, Line 14

**Comment 16:** Page 6, Discussion, Line 15...increasing (Please add reference).

**Reply 16:** A reference has been added, thank you for your comments  
Changes in the text: See page 7, line 6

**Comment 17:** Line 17 ...reconstruction (Please add reference).

**Reply 17:** A reference has been added.  
Changes in the text: See page7, line 8

**Comment 18:** Line 18 ...5%-15% (Please add reference).

**Reply 18:** A reference has been added, and the percentage range has been revised into 5%-12%.

Changes in the text: See page 7, line 9

**Comment 19:** Line 21 What do you mean by “postoperative wound”, there should not be any wound?

**Reply 19:** I understand your comment. “postoperative scar” would be more proper.

Changes in the text: See page 7, line 12

**Comment 20:** Line 22 ...reconstruction (Please add reference)

**Reply 20:** A reference has been added.

Changes in the text: See page 7, line 13

**Comment 21:** Line 25 ...secured (Please add reference)

**Reply 21:** The reference was added

Changes in the text: See page 7 line 16

**Comment 22:** Line 27 ...satisfactory (Please add reference)

**Reply 22:** The reference was added

Changes in the text: See page 7 line 18

**Comment 23:** Page 7, Discussion, Line 7-8 You have not compared your technique to other techniques and cannot makes a statement that your technique is “considerable greater than... other procedures”, this remains to be shown in another study! Please rephrase to a more moderate statement, which you can substantiate.

**Reply 23:** We apologize for the exaggeration of the statement. Our new technique showed greater residual nipple projection than previous techniques. The sentence has been revised moderately.

Changes in the text: See page 8, line 5 and line 6

**Comment 24:** Line 13 “biggest portion”?, unclear please rephrase

**Reply 24:** The statement has been rephrased into a clearer one. Thank you for your comment

Changes in the text: See page 8, from line 10 to line 11

**Comment 25:** Line 15 ... “On the extend..”, unclear please rephrase

**Reply 25:** The phrase has been revised.

Changes in the text: See page 8,line 14

**Comment 26:** Lines 26-27 unclear, please rephrase

**Reply 26:** The phrase has been revised.

Changes in the text: See page 8,line 27 to line 29

**Comment 27:** Line 29 ...techniques (Please add reference)

**Reply 27:** The sentence has been revised.

Changes in the text: See page 8 line 30

**Comment 28:** Line 32 ...satisfaction (Please add reference)

**Reply 28:** A reference was added

Changes in the text: See page 8 line 32

**Comment 29:** Page 8, Line 2 change “randomized pedicle of” to “random pedicled skin..”

**Reply 29:** The phrase has been revised, thank you for your suggestion.

Changes in the text: See page 9 line 3

**Comment 30:** Line 2 use other more descriptive word than previous

**Reply 30:** The sentence has been supplemented

Changes in the text: See page 9 line 3

**Comment 31:** Line 3 ...ischemia (please add reference)

**Reply 31:** A reference has been added

Changes in the text: See page 9 line 4

**Comment 32:** Line 3 What do you mean by “Incision-less”, is there no incision when this surgery is applied?

**Reply 32:** The phrase has been used to highlight the incision-less surface of the nipple after reconstruction. The phrase may cause confusion, so it has been deleted.

Changes in the text: See page 9 line 5

**Comment 33:** Line 4 ... “better aesthetic outcomes and less projection reduction”, compared to what?

**Reply 33:** The phrase has been revised to avoid confusion.

Changes in the text: See page 9 line 6

**Comment 34:** Line 8 ... “advantages”, compared to what?

**Reply 34:** We meant the advantage itself, without comparison in this sentence. We will revise this phrase if it is unclear.

**Comment 35:** Lines 20-22 ...unclear, rephrase

**Reply 35:** The sentence has been rephrased for clarity, Thank you for your suggestion

Changes in the text: See page 9 from line 21 to line 22

**Comment 36:** Lines 23-24 unclear, rephrase

**Reply 36:** The sentence has been rephrased

Changes in the text: See page 9 from line 24 to line 26

**Comment 37:** Line 25 change “with contralateral” to “with the contralateral”

**Reply 37:** It has been revised, thank you.

Changes in the text: See page 9 line 26

**Comment 38:** Line 32 ...volume (Please add reference)

**Reply 38:** A reference has been added.

Changes in the text: See page 10 from line 1 to line 2

**Comment 39:** Page 9, Line 1... “elaboaration”, unclear, please rephrase

**Reply 39:** It was rephrased, thank you

Changes in the text: See page 10 line 3

**Comment 40:** Conclusion, Lines 10-11 “is more cost effective”, maybe but you have not examined this in the study and cannot conclude this.

**Reply 40:** Following this comment, this phrase has been deleted.

Changes in the text: See page 10 line 26

**Comment 41:** Page 15, Figure 5, Please remove the lines as the variables are not continuous variables.

**Reply 41:** We apologize for confusion. Although the width and projection isn't continuous variables, we intended to visualize the change in width, projection and its ratio between the simultaneous and delayed nipple reconstruction group in a glance. We considered linear graph to highlight the difference in the reduction.

**Reviewer B:** The authors have done an interesting study, but there are some important problems.

**Comment 1:** Surgical method or terminology is inaccurate and confusing.

I recommend you to review the script with your co-authors. (especially with breast surgeon)

**Reply 1:** Sorry for making confusion, we revised the surgical method and terminology through co-author breast surgeon.

Changes in the text: See page 4 from line 29 to page 5 line 4

**Comment 2:** The purpose of this study is confusing.

I cannot understand whether it is to confirm the satisfaction of the patient or to show that the results of SNR surgery are superior to the results of two stage reconstruction. The process leading to the conclusion that SNR is a reliable technique is also poorly logical.

In particular, Table 2 showed patient satisfaction, but it is doubtful whether the title is appropriate for the table contents.

Is it reasonable to check whether the patient is satisfied with variables such as nipple height and width using a questionnaire?

(Isn't it objective to evaluate the overall satisfaction level or show the results of

comparing each variable with the opposite side?)

**Reply 2:** First of all we appreciate you for kind review. This study was to systematize the algorithm of nipple reconstruction, which is recognized the final step of breast reconstruction, and to share our surgical technique depending on patient's original nipple size. There are various technical reports of nipple reconstruction, however, the projection loss is the biggest complication in those techniques and clear solution is absent.

We want to highlight our projection flow described in Figure 5. showing remarkably less projection loss compared with delayed classic nipple reconstruction techniques. The modified breast Q questionnaire applicable to Asian patients was used to evaluate satisfaction level. The questionnaire was simplified to score and evaluate the survey intuitively. As a result, the SNR technique was scored high which we are preparing for extended study including comparison with opposite nipple as you mentioned. Thank you for your opinion, we will submit better study in close future. To make our aim clear, we deleted the 'technique' phrase on the background of abstract and deleted the phrase mentioning patient satisfaction on the conclusion to objectify the statement.

Change in the text: See Page 2 line 5

**Comment 3:** The study design is confusing.

Judging by the context, it is a retrospective study, however the method (page 4, line 1) was expressed as a retrospective and prospective study.

**Reply 3:** We apologize for making confusion. The prospective SNR experimental group was basically prospective, while the control group was compared and analyzed with past data retrospectively. Two groups were evaluated and followed up with protocol in common, which was approved by IRB. The follow up period was overlapped between to groups and it facilitated the analysis. We referred to other references of analyzing the retrospective control group in the past and the prosepctive experimental group. Would it be better to rather state this study prospective if our reply and the revised manuscript is still confusing. Thank you for your delicate comment.

Change in the text: See page 4 from line 9 to line 17.

**Comment 4:** There are so many sentences written without reference. There is insufficient basis for facts or claims.

**Reply 4:** Other reviewers mentioned the same point. We added the reference sentence by sentence. Thank you for raising the quality of our study.

**Comment 5:** Overall English proofreading is absolutely necessary. It is impossible to clearly understand the content due to the structure of the paragraph as well as the tense.

**Reply 5:** Sorry, we passed through professional English proof reading before submission but medical terms and English expressions were immature. We revised the overall manuscriprt as commented by reviewers and went through english proofreading again. Thank you for delicate consideration.

**Reviewer C**

**Comment 1:** I congratulate the authors for the paper: "simultaneous nipple reconstruction in autologous breast reconstruction". Here the authors describe the differences of performing immediate vs delayed nipple reconstruction in patients who underwent skin sparing mastectomy, in addition to describing the psychological benefits of finishing all the reconstruction in one stage. However, there are several concerns regarding the methodology of the paper. There is no clear explanation of why performing nipple reconstruction immediate vs delayed using the same technique can have different outcomes. If based on the authors description of the superiority of this technique, the results in an immediate vs a delayed fashion should be the same. On the other hand if two different techniques were used and compared, there can be no point of comparison, as two different techniques are compared and at different time points. Many issues can play a main role regarding outcomes (projection), such as swelling during the immediate approach, flat necrosis of the flap, or simply atrophy of the latissimus dorsalis flap due to the devascularization technique described by the authors.

**Reply 1:** We appreciate your sincere comment. Sorry for causing confusion in the methodology section. We integrated the nipple projection and technique aspect in the algorithm and followed up its progress. This study aimed to have a reasonable algorithm of nipple reconstruction, considering the original nipple size and evaluating it by time flow rather than comparing different operation techniques. We apologize for this confusing description. The projection and width of the nipple flow size were compared and analyzed from the operation time until after 1 year. The SNR technique showed definite differences in nipple size flow by time compared to previous delayed nipple reconstruction techniques. In some patients, the reduction in nipple size was lesser than expected, so an additional reduction procedure was needed. This part is the point of this study.

Sustaining a round nipple mound avoiding flat phenomenon, as described in this study, by elevating the flap from a different blood supply is reliable in this simultaneous technique. Because an autologous tissue (LD flap) that has thick skin and forms a low nipple projection is limited by a classic nipple reconstruction technique, we are introducing a new technique and its algorithm that enables the reconstruction.

**Comment 2:** I believe this can be a potential good study, but oranges have to be compared to oranges and not apples. The methodology and the analysis was done incorrectly. In addition, there are several grammatical errors and adequate terminology was not used. For the main reason of methodology, this paper creates confusion and is not practical for the reader. I think in a positive note, has great figures, diagrams and pictures. I believe has good potential but has to be well executed and not in this current form.

**Reply 2:** We deeply appreciate your positive comment. We highlighted the figures because we consider visualization an important factor in every study. This also be applied in the future to have better studies. Thank you.

#### **Reviewer D**

**Comment 1:** Please cite and comment the following studies:

1. Boccola, M.; Savage, J.; Rozen, W.M.; Ashton, M.; Milner, C.; Rahdon, R.; Whitaker, I.S. Surgical Correction and Reconstruction of the Nipple-Areola Complex: Current Review of Techniques. *J. Reconstr. Microsurg.* 2010, 26, 589–600.
2. Farhadi, J.; Maksvytyte, G.K.; Schaefer, D.J.; Pierer, G.; Scheufler, O. Reconstruction of the nipple-areola complex: An update. *J. Plast. Reconstr. Aesthetic Surg.* 2006, 59, 40–53.
3. Gougoutas, A.J.; Said, H.K.; Um, G.; Chapin, A.; Mathes, D. Nipple-Areola Complex Reconstruction. *Plast. Reconstr. Surg.* 2018, 141, 404e–416e.
4. Nimboriboonporn, A.; Chuthapisith, S. Nipple-areola complex reconstruction. *Gland. Surg.* 2014, 3, 35–42.
5. Winocour, S.; Saksena, A.; Oh, C.; Wu, P.S.; Laungani, A.; Baltzer, H.; Saint-Cyr, M. A Systematic Review of Comparison of Autologous, Allogeneic, and Synthetic Augmentation Grafts in Nipple Reconstruction. *Plast. Reconstr. Surg.* 2016, 137, 14e–23e.
6. Sisti, A.; Grimaldi, L.; Tassinari, J.; Cuomo, R.; Fortezza, L.; Bocchiotti, M.A.; Roviello, F.; D’Aniello, C.; Nisi, G. Nipple-areola complex reconstruction techniques: A literature review. *Eur. J. Surg. Oncol. (EJSO)* 2016, 42, 441–465.
7. Sisti, A.; Tassinari, J.; Cuomo, R.; Brandi, C.; Nisi, G.; Grimaldi, L.; D’Aniello, C. Nipple-Areola Complex Reconstruction. In *Nipple-Areolar Complex Reconstruction Principles and Clinical Techniques*; Shiffman, M.A., Ed.; Springer Science Publishing: Berlin/Heidelberg, Germany, 2017; pp. 359–368.

**Reply 1:** The references have been added.

#### **Reviewer E**

**Comment 1:** My congratulations for this simple and effective innovation. I am familiar with cited techniques in your paper and I’ll try apply yours.

**Reply 1:** Thank you for your honorable comment. We’ll try more extended study in close future.