

## Peer Review File

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### Reviewer A

Comment 1: I recommend major revision due to language and phrasing

Reply 1: Please accept my apology for my poor language. The marked text was rephrase according to your suggestion.

Comment 2: Include the existing RCT and meta-analysis studies and re-write the introduction and discussion section

Reply 2: The RCT and meta-analysis comparing WGL and RGL were included in the references. However, I prefer not to put so much detail on comparing the pros and cons of them because the focus of this case report was not to comparing the two methods. Instead, it is a case in which we had chosen two different wireless localization techniques to aid the surgical resection of a multifocal cancer.

### Reviewer B

Comment 1: Change “ Combine to “Combined” in title and “in” to “for”

Reply 1: Thanks. The title was changed accordingly.

Comment 2: Last sentence paragraph 1 change “presented” to “present”

Reply 2: I am sorry. I am not very sure about which sentence you are referring to.

Comment 3: Second sentence of case description paragraph: Would greatest linear dimension be more accurate than “diameter” to describe the size of each of the lesions?

Reply 3: Thanks. It was changed accordingly

Comment 4: Can the authors please include the distance separating the two lesions in the same quadrant of the breast and comment on the separation needed to discern two discrete lesions for each of the localization techniques they describe?

Reply 4: The distance separating the two lesions was mentioned in the section of case presentation (line 15-16 on pages 5). It was measured 3 cm apart on ultrasonography. Therefore, it is quite close together and injection of radioisotopes into these 2 foci will have significant interference to each other. I am sorry that I cannot answer the exact separation needed to discern

two discrete lesions for ROLL. However, if we are using two different technique with different signal, there will be no problem on it.

Comment 5: Can the authors present the final pathology report including tumor size and tumor-free margin widths? Perhaps adding the dimensions of the resected breast specimen would be informative as well

Reply 5: It was presented in the last few sentence of the second paragraph in the section of case presentation. It was an en bloc resection of the 2 foci. The size of the specimen measured 5 cm x 8 cm and it was shown in Figure 2. Pathological examination of the specimen confirmed the presence of two foci of invasive ductal carcinoma, measured 11 mm and 7 mm in diameter. The main foci was closest to the inferior margin by 8 mm and it was more than 1 cm from other resection margin. There was also high grade ductal carcinoma in situ component found in the adjacent areas

#### Reviewer C

Comment 1: this patient could easily have been indicated using a cheap reliable method medical carbon (1-2) injected with the patient prone arms extended mimicking the position on the operating table and with ultrasound technique.

Reply 1: I am sorry that I did not aware of this method before. Although it is cheap, I think this is not a widely used method in modern medicine. Despite I did not observe or perform a single case of surgery using this method, I am worried that it may have some drawbacks. Most importantly, if only the medical carbon is injected into tumor, the surgeon would need to rely on the coloring effect of carbon particles which may not be obvious until we are very close to the tumor.

Particularly for cancer surgery, a negative resection margin is of paramount importance. Can you share with us the rate of achieving a negative margin of using this method for localization?

Secondly, will the carbon particles diffuse in the breast parenchyma after injection? This may significant affect the precise location of the tumor.

Comment 2: All pictures should be taken in a standardized fashion where any trace of identifying the patient should be secured. This is not the case with the submitted pictures. The first taken on the operating table does not at all match the following pictures.

Reply 2: I am sorry that I am not understanding about this comment. Does the pictures provide any information of the patient's identity? I admitted that they were taken at a more casual way but it successfully illustrated the locations of the 2 tumor foci in the preoperative photo and the cosmetic outcome in the postoperative photos.

Comment 3: why the excision included a vast portion of the skin? And on what principle the surgical method was based upon.

Reply 3: The inclusion of the skin is related to the oncoplastic technique used for reconstruction of the defect. As the tumors are located in the lower inner quadrant of the breast in which there is not much surrounding breast parenchyma can be used to cover the defect. In V-mammoplasty, the lateral breast parenchyma is rotated to the lower inner quadrant. If the skin were not excised, there will be excessive redundant tissue left which may also affect the cosmesis after the wound healed. You are corrected that skin is not a necessary component to be included in some cases but sometime excising excessive skin may make the cosmesis better.

Comment 4: As the post op picture shows there is a substantial asymmetry which remains 1 year post op. A comment on discussing reduction of the contralateral breast could have been appropriate

Reply 4: This is a valid suggestion. We can always discuss with the patient about surgery on the contralateral side for cosmetic reason. However, she was already satisfied with the shape except the right breast is slightly smaller compared to the normal side. In our locality, convincing our patient to have surgery on the unaffected side is not easy as they usually don't want to have any surgery to it as long as the cosmetic outcome is not too bad.

Comment 5: more recent population based studies demonstrate its superiority combined with adjuvant radio- and chemotherapy

Reply 5: Yes, some recent population based studies demonstrate BCT combined with adjuvant radio- and chemotherapy when compared to mastectomy alone. However, they are just observational studies and there are many different biases and confounding factors that are not adjusted i.e. use of chemotherapy as you mentioned. In contrast, I think everyone will agree that wide local excision followed by adjuvant RT is at least as effective as mastectomy on the local control of breast cancer.

Comment 6: what does ref 19 internet refer to. Please use published series on magseed.

Reply 6: Thanks. A new reference was used. (Constantinidis F, Sakellariou S, Chang SL, Linder S, MacPherson B, Seth S, Gill N, Seth A. Wireless localisation of breast lesions with MagSeed. A radiological perspective of 300 cases. Br J Radiol. 2022 May 1;95(1133):20211241. doi: 10.1259/bjr.20211241. Epub 2022 Feb 24. PMID: 35201906.)