

## Peer Review File

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### Reviewer A

**Comment 1:** Core needle biopsy and diagnosis of subtype had not been done before the first operation. The reason should be noted. If the right breast cancer was estrogen receptor positive, would you choose endocrine therapy before the operation? If so, preoperative diagnosis was necessary.

**Reply 1:** The large ulcerated, fungating tumor burden that constantly drained and was malodorous, caused the patient great discomfort. She presented to the surgical clinic with bath tissue packed in the wound, created from the superficial tissue invasion, and complained that she was having difficulty keeping the area clean, bathing, and dressing herself. Preoperative imaging included a CT scan of the chest ordered by medical oncology. Core needle biopsy was not performed preoperatively because it was clinical apparent that the mass was malignant given the size and findings on CT (invasion of chest wall and skin). Medical Oncology deemed the patient unfit for chemotherapy. Furthermore, due to her lack of personal transportation and assistance, she proved to be unreliable in adhering to medical appointments. It was believed that she would be unable to meet the demands of a radiation regimen. Mastectomy was performed for patients with the primary goal of improving hygiene and comfort, with hopes of also providing local control of the tumor, given that medical management was not ideal for her. Even if the right breast cancer was found to be estrogen receptor positive preoperatively, we would not have chosen neoadjuvant treatment and it would not have altered our decision to proceed with surgical management. We understand that we were initially unclear in these points. We have made several adjustments to our manuscript to better reflect this.

**Changes in text:** This includes the title of our case report, abstract (page 1, lines 8-13, lines 20-24), and case presentation (page 1-2, lines 63-64, 73-82).

**Comment 2:** Were the imaging examinations for detecting metastatic lesions done before the operation? If they were done, the reason for the operation should be discussed. If not, the reason should be noted.

**Reply 2:** As mentioned in the case presentation section, a CT scan of the chest was done preoperatively and results were reported. The reasons for doing so and electing for mastectomy were discussed in reply 1.

### Reviewer B

**Comment 1:** While uncommon, these fungating masses present a clinical challenge. Was this case discussed with a multidisciplinary team preoperatively? It seems that this fungating mass was not biopsied prior to major surgery with radical mastectomy.

Determination of pathology with biopsy when possible prior to major surgery is standard of care.

**Reply 1:** The case was discussed with medical oncology, who requested salvage mastectomy be performed as the patient was deemed not suitable for chemotherapy. Radiation was also considered but due to patient compliance issues, as well as difficulties with transportation (as she no longer drives) and lack of family support (she received a ride to our surgical clinic from various neighbors), it was determined that the patient would be unable to successfully comply with a radiation regimen. Based on physical exam and CT results, it was clinically apparent that the mass was malignant. At this point, pathological reports from a core needle biopsy would not have altered our management. The decision was made, with approval of the patient, to perform radical mastectomy, with the goal to relieve the burden on such a mass, provide comfort for the patient, and achieve local control that was realistic for a 90 year old woman. We understand that these points were not stressed in our initial manuscript and have made adjustments to better reflect these points.

**Changes in text:** This includes the title of our case report, abstract (page 1, lines 8-13, lines 20-24), and case presentation (page 1-2, lines 63-64, 73-82)

**Comment 2:** Was there consideration of closure with skin graft or autologous flap (lat flap) rather than the lengthy incision used? Could an alternate closure method reduce her risk of necrosis?

**Reply 2:** The use of skin graft was briefly considered. However we were overall satisfied with the closure and did not think the tension on the incision was excessive. In the future we would discuss the possibility of skin graft with the patient preoperatively, obtaining their consent, in the event that the closure was felt to be under too much tension. This may decrease the risk of necrosis. Autologous flap with the latissimus dorsi would have been an acceptable closure technique, as it has proven useful for closure of salvage mastectomy with large skin defect, however there was no plastic surgery coverage available at this time in the small community hospital at which the patient was being cared for. Her previous inability to comply with all her appointments helped to guide our decision away from referring her to a tertiary care center for plastic surgery evaluation. Furthermore, utilizing a flap technique would have added considerable operative time, increasing her risk of morbidity.

**Changes in text:** discussion (page 4-5, lines 43-49)

**Comment 3:** The contralateral recurrence 4 months later was a predictable event. It is not clear why a punch biopsy was not undertaken at presentation rather than excisional biopsy. Additionally, was the perceived benefit to left mastectomy once the lesion was excised on excisional biopsy? What was the rationale for left ALND in the setting of asymptomatic lymph node disease?

**Reply 3:** Contralateral recurrence was not an unexpected event. The cutaneous lesion presented as an ulcerated raised nodule and the patient complained of pain at the site. Excisional biopsy was performed over punch biopsy for patient comfort to completely excise this lesion. At this point the patient was discussed at a multidisciplinary tumor board and it was decided that she could be offered a mastectomy on the contralateral side if she desired. The patient was told that this would likely not affect survivability, but she elected for mastectomy as she desired symmetry and hoped to decrease her risk of future cutaneous manifestations and wound formation. ALND was performed for debulking purposes as the phenotype was triple negative, she was deemed not a candidate for chemotherapy or radiation as discussed previously

**Changes in text:** case presentation (pages 3-4, lines 106-111)

**Comment 4:** The metastatic presentation shortly after her left sided surgery was also a predictable occurrence, and would not have been altered by the surgical intervention.

**Reply 4:** We agree with this comment given her disease presentation. As discussed previously, the primary goal of the left sided mastectomy was not to eradicate the threat of malignancy but rather due to the patient's preference for symmetry and decrease the progression of the cutaneous lesion. We were not initially clear on this matter and have made the adjustments as previously discussed.

**Comment 5:** It would also be worthwhile to include prediction of longevity for this patient prior to major operative intervention. Overall survival for stage 4 TNBC without systemic treatment is low, and comparison of these data with the patient's predicted lifespan would be valuable information.

**Reply 5:** This data would be useful to observe how surgical interventions compare with systemic therapies in this subtype of cancer. However literature regarding the prognosis of a 90 year old female with Stage 4 TNBC and multiple comorbidities is scarce. The average lifespan of a woman in the United States is just below 80 years of age. She has already surpassed that significantly so it is difficult to determine if an oncological intervention has improved her survivability, when patients at such age are likely to experience mortality within a short time period, especially if they already possess comorbid conditions. Overall, given her advanced age, limited treatment options, and disease type, the goal of management was to improve the patient's quality of life more than increasing survivability.

#### **Reviewer C**

**Comment 1:** Was core needle biopsy performed when the patient visited for the first time?

**Reply 1:** The large ulcerated, fungating tumor burden that constantly drained and was malodorous, caused the patient great discomfort. She presented to the surgical clinic with

bath tissue packed in the wound, created from the superficial tissue invasion, and complained that she was having difficulty keeping the area clean, bathing, and dressing herself. Preoperative imaging included a CT scan of the chest ordered by medical oncology. Core needle biopsy was not performed preoperatively because it was clinically apparent that the mass was malignant given the size and findings on CT (invasion of chest wall and skin). Medical Oncology deemed the patient unfit for chemotherapy. Furthermore, due to her lack of personal transportation and assistance, she proved to be unreliable in adhering to medical appointments. It was believed that she would be unable to meet the demands of a radiation regimen. Mastectomy was performed for patients with the primary goal of improving hygiene and comfort, with hopes of also providing local control of the tumor, given that medical management was not ideal for her. Even if the right breast cancer was found to be estrogen receptor positive preoperatively, we would not have chosen neoadjuvant treatment and it would not have altered our decision to proceed with surgical management. We understand that we were initially unclear in these points. We have made several adjustments to our manuscript to better reflect this.

**Changes in text:** This includes the title of our case report, abstract (page 1, lines 8-13, lines 20-24), and case presentation (page 1-2, lines 63-64, 73-82).

**Comment 2:** Considering elder patient, presurgical treatment is preferable based on the phenotype.

**Reply 2:** In addition to being triple negative, the patient was deemed not suitable for chemotherapy preoperatively by medical oncology. Her comorbidities that determined this included advanced age, HTN, CHF, CAD, and Afib. We did not include her other medical history in the initial manuscript and have made the necessary revisions.

**Changes in text:** case presentation (Page2, lines 59-61)

**Comment 3:** Did this patient have any comorbidity to avoid chemotherapy in addition to her age?

**Reply 3:** As discussed in reply 2.

**Comment 4:** Many studies revealed that radical mastectomy does not prolong overall survival. Authors should insist radical mastectomy was performed for improving quality of life.

**Reply 4:** This is correct. We did not clearly stress this in our initial manuscript. We have addressed this as discussed in reply 1.

**Comment 5:** Did authors consider radiation therapy instead of surgery?

**Reply 5:** We did consider radiation therapy. As discussed in reply 1, she was not a good candidate for radiation therapy due to her poor compliance.