Peer Review File

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<mark>Reviewer A</mark>

Comment 1: While the English is mostly good, there are some grammatical oddities that make sections unclear. I recommend changing the sentence starting on page 3 line 5 from passive to active i.e. "Previously in 2008, the patient was diagnosed with right side breast cancer and underwent a right side radical mastectomy in the treatment of this". AME offer an English Language Editing service which might be helpful.

Reply 1: We feel great thanks for your professional review work on our article. According to your suggestion, we have changed the sentence from passive to active.

Change in the text: We have modified our text as advised (see Page 3, line 11).

Comment 2: Likewise, when explaining the timeline for treatment this is not straightforward, from the second paragraph on page four. Beginning with the time-frame before explaining the treatments and findings might help clarify this section. Referring to the treatment schedule in figure 6 earlier would also be beneficial.

Reply 2: According to your nice suggestions, we have put the reference to figure 6 earlier, and have edited our figures' order.

Change in the text: We have modified our text (see page 4, line 12), and have edited figures' order (figure 6 to figure 2, figure 2 to figure 3, and so on).

Comment 3: Page 4 line 2. Was the ovarian mass also biopsied and examined for the immunohistochemical markers as with the breast and pelvic masses? The diagnosis of this as a metastasis of the breast cancer a bit of a stretch without looking at these markers.

Reply 3: We feel sorry that we did not make it clear. We've looked up the original records of core-needle biopsy, confirmed that pelvic mass punctures included both the left adnexal regions mass and the left lower abdomen mass. We've added the

explanation in the text.

Change in the text: We've added the explanation in the text (see page 4, line 20).

Comment 4: The abbreviations pCR and TP should be explained in full at their first appearance.

Reply 4: According your suggestion, we have explained TP and pCR in full at their first appearance.

Change in the text: We have modified our text as advised (see page 5, line 9, and Page 9, line 11).

Comment 5: Please fix figure captions so they are not repeated

Reply 5: We are sorry for our carelessness. We have deleted the excess parts of the figure.

Change in the text: We have deleted the excess parts of the figure (see Fig1 to Fig 6).

Comment 6: Please check the magnification for figures 2, 3 and 5. A scale bar would make this clearer

Reply 6: According your suggestion, we have added scale bar in each figure. Change in the text: We have re-edited these figures and added the scale bar.

Comment 7: Please increase the contrast in figure 4, this will be very difficult to see if printed.

Reply 7: According your suggestion, we have increased the contrast in figure 4.

Change in the text: We have increased the contrast in figure 4, which is figure 5 now.

Comment 8: Figure 6 is not very clear. The treatments with no y-axis overlapping with the Ca-125 and Ca-153 tumour markers is over complicating the figure. Separating these into two figures (A+B) would clarify things. The timeline would be more

appropriate as a Gantt chart.

Reply 8: Thanks for your suggestions. We have re-edited Figure 6 (now is Figure 2) as you suggested, separated these into two figures (A+B) and edited figure A using Gantt Chart.

Change in the text: We have re-edited Figure 6 (now is Figure 2).

Comment 9: BRCA1 and BRCA2 genes are mentioned at several times in the discussion, were these examined for the patient? This should be included in the findings in the case presentation.

Reply 9: We are sorry for our carelessness. We have added relevant content in the case presentation.

Change in the text: We have added relevant content in the case presentation (see page 4, line 22).

Comment 10: On page four the authors determine that the previous breast cancer from 2008 was unrelated due to the differences in the immune histological markers, but on page eight its concluded that the left side breast cancer is the primary tumour and the pelvic and ovarian cancers are metastases because of the history of breast cancer among other reasons. This should be clarified.

Reply 10: We feel so sorry that we did not explain it clearly. We have modified it, and we hope it would be more understandable.

Change in the text: We have modified our text (see Page 8, line 18).

Comment 11: Throughout the discussion the authors seem to grapple with whether the ovarian mass is a primary tumour or metastasis. If this is something that cannot be definitively determined this should be stated.

Reply 11: Your suggestion really means a lot to us. Yes, it would be more understandable if we express it firmly.

Change in the text: We have modified our text (see Page 8, line 18).

Comment 12: Page 8 lines 6-8: "This patient has been menopausal 7 for three years and was diagnosed with ovarian and pelvic metastases as well as 8 opposite breast cancer four years ago." These details do not match those given in the original case presentation.

Reply 12: We feel sorry that we did not make it clearly. We have corrected it and we also feel great thanks for your point.

Change in the text: We have modified our text (see Page 9, line 1).

Reviewer B

Comment 1: Many paragraphs in the discussion section show the essential results (e.g., family history) of this case. The authors should transfer them to the results section.

Reply 1: We feel great thanks for your professional review work on our article. According to your suggestion, we have modified our text.

Change in the text: We have modified our text as advised (see Page 3, line 11).

Comment 2: The authors should show standard treatments of breast cancer and ovarian cancer and explain how they planned the therapy for this patient.

Reply 2: Thanks for your suggestions. We have added standard treatments of breast cancer and ovarian cancer.

Change in the text: We have modified our text as advised (see Page 5, line 5). We have added 2 references (see Page 11, line 21).

Comment 3: The author had better explain the details of the follow-up method of right breast cancer after 2008.

Reply 3: Thanks for your suggestions. This patient had a regular reexamination in another hospital, but the results were not clear.

Change in the text: We have modified our text as advised (see Page 3, line 15).

Comment 4: In the reviewer's country, we recommend germline BRCA testing for patients with triple-negative breast cancer. How is it in the authors' country?

Reply 4: Because patients need to pay for the BRCA test themselves, we will recommend BRCA testing for young patients or patients with family history.

Comment 5: To show that pelvic cancer derived from primary peritoneal cancer related to hereditary breast and ovarian cancer, the authors should show some evidence, including immune histological results such as TP53 and WT-1.

Reply 5: According to your suggestion, we checked the pathology report again. Except for WT-1 positive, immunohistochemical results and the morphology of tumor cells were consistent with those of left primary breast cancer, and there was no transition between the tumor and ovarian tissue. Therefore, pathologists believed that the tumor was metastasized from left breast cancer.

Change in the text: We have modified our text as advised (see Page 5, line 18).

Comment 6: The patient complained about the irregular vaginal bleeding. If the authors checked estradiol or estriol, they should describe them to show the bleeding was a symptom of metastatic lesions or hormonal effects on the uterus.

Reply: We feel sorry that we did not check estradiol or estriol.