Reviewer's report

Title: Complete Pathologic Response of HER2-Positive Breast Cancer Liver Metastasis with Dual Anti-HER2 Antagonism

Version: 1
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Reviewer: Shreyas Roy

Reviewer's report:

The authors present a case of locally advanced breast cancer with liver metastasis at presentation. Both sites are ER/PR negative, HER2 positive, and poorly differentiated. The patient responds well to systemic chemotherapy with docetaxel, trastuzumab, pertuzumab and proceeds to MRM with radiation for the primary and liver resection for BCLM. The pathologic specimens reflect complete pathologic response in both sites (although DCIS is present in the primary site).

The case has intriguing and potentially important implications regarding tumor biology in HER2 positive breast cancer and BCLM. Specifically they cite that although prior trials have documented complete pathologic response in HER2 breast cancer treated with dual modality targeted anti-HER2 agents, no trials have reported eradication of BCLM. Furthermore the case illustrates the rapidly evolving multimodal, biologically targeted approach to breast cancer that is becoming the standard of care in the struggle against cancer in the 21st century. This diversified strategy incorporates systemic chemotherapy, in vivo assessment of tumor response and appropriately timed surgical intervention to dramatically expand options for patients suffering from advanced disease. The authors should be commended for addressing an important problem and understanding the implications of the natural history of this case. That said there are a few important concerns that should be addressed.

Major Compulsory Revisions: None

Minor Essential Revisions: None

Discretionary Revisions:

1. Case presentation- paragraph 1: No detail is given regarding the patients comorbidities or demographic data. Please add some of this detail.

2. Case presentation- paragraph 3: The dose and schedule of pertuzumab is described in detail, however the schedules for docetaxel and pertuzumab are not provided. Please provide these schedules.

3. Case presentation- paragraph 3: Please detail the dose and schedule of radiation the patient received.

4. Case presentation- The overall timeline of the patient's course of care is unclear. From the time of diagnosis to resection of primary, to resection of BCLM.
Please clarify the temporal course of the patient’s care.

5. Case presentation- The authors cite literature validated rationale for all clinical decisions taken in the course of the patients care except one. Why was the patient continued on Trastuzumab/Pertuzumab for a year following successful resection of BCLM?

Overall there are no major limitations to this manuscript. The case is well presented and the discussion is well referenced and well written.

Level Of Interest: Due to the potentially important implications of this case and due to the fact that major trials tend to exclude specific subcategories of metastatic disease this manuscript is of interest in its field and should be published.

Quality of Written English: well written and at the level of most native speakers.

Statistical Review: Not applicable.

Declaration of Competing Interests: Given.

What Next? The manuscript should be published with discretionary revisions recommended.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare I have no competing interests