Reviewer's report

**Title:** Brain metastases from breast cancer: prognostic significance of HER-2 overexpression, effect of trastuzumab and cause of death

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**Reviewer:** Shaheenah Dawood

**Reviewer's report:**

Scodan et al look at the prognostic significance of HER2 and trastuzumab among women with breast cancer and brain metastases. My comments are as follows:

1. In the results section the author states that 10 patients with HER2 positive disease treated with trastuzumab had CNS progression however 11 died of CNS progression. The author needs to clarify this.

2. The author has discussed in detail cause of death specifically related CNS progression among women with HER2 positive disease. However the author only mentions that 30 patients with HER2 negative disease had a follow up brain CT. Its important to elaborate on this cohort as well. How many had CNS progression?

3. How many of these patients had triple negative disease and what was the overall survival and cause of death in this cohort in comparison to the her2 positive cohort? The author has only eluded to this in the univariate analysis.

4. Time to brain metastases is also important. The author states this for the whole group. It should also be mentioned split into the three groups. An accompanying figure would also be good.

5. The author needs to information on hormone receptor status and trastuzumab treatment in table 1.

6. Numbers at risk should be inserted in figure one.

7. The authors states that patients with HER2 positive disease who stopped trastuzumab before BM had OS of 9 months compared to those who continued (20m). This would make an interesting point of discussion as the group that stops trastuzumab still does better than the non treated group.

8. How many patients who had documented CNS progression stopped trastuzumab before BM and how many continued it?

**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 that I have no competing interests' below.