## **Peer Review File**

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## **Reviewer Comments**

## Reviewer A

**Comment 1**: The authors needed to register this study to PROSPERO before the analysis.

Thanks, we have registered this now.

The objective of this meta-analysis is not clear. I don't understand the value of evaluating the effects of different drugs on various types of cancer through meta-analysis. The authors should restrict the cancer type to breast cancer or narrow down the drugs to one (P4).

**Reply 1**: Thanks, we now restrict the cancer type to breast cancer now.

**Comment 2**: The authors incorrectly use the term '(treatment of) physicians' choice' (L47P3).

"Treatment of physicians' choice" in a clinical study refers to a treatment regimen selected by the participating physicians based on their clinical judgment and expertise. For example, the DESTINY-Breast04 study is a clinical study compared the T-DXd and Treatment of physicians' choice (capecitabine, eribulin, gemcitabine, paclitaxel, or nabpaclitaxel) in HER2-low bc. In EMILIA, T-DM1 was compared with capecitabine and lapatinib. Therefore, EMILIA is not a study that compared T-DM1 and TPC.

Reply 2: Thanks, we have corrected this term in the overall manuscript.

**Comment 3**: Tables 1, 3, and 4 are cut off, and some parts are not visible. Please ensure that everything is visible when converted to PDF.

**Reply 3**: Thanks, that may be the reason for the online conversion that make these parts invisible.

**Comment 4**: Table 1 should include the treatment regimen of the standard arm.

Reply 4: Thanks, we have included this arm now.

## Reviewer B

**Comment 1**: It would be necessary to know which are treatment regimens considered as physician choice (only limited to chemo are also included targeted therapies or CPI) as this is a very heterogeneous group with different toxicities and efficacy.

**Reply 1**: Thanks, yes, the treatment of physician's choices are usually the regimens for clinical guideline recommendation, which includes chemotherapy, targeted therapy, or combination, but not ADCs.

Comment 2: This is because this publication did not meet the search criteria listed above. Reply 2: Thanks, yes, this is the reason.

**Comment 3**: It would be also useful to explain the main reasons for this removal.

**Reply 3**: Thanks, we have explained these reasons in the first paragraph of the results section.

**Comment 4**: Is there any association with the payload or the antigen selected for the ADC? Not only for efficacy but also for toxicity?

**Reply 4**: Thanks, as I know, these payloads and antigens must be approved by FDA first, then they can be used to synthesize the ADCs.

**Comment 5**: What Kind of therapies? platin based mainly? **Reply 5**: Thanks, yes.

**Comment 6**: Is this because of the tumor type cuch breast with impact in the PFS but not on the OS?

Reply 6: Thanks, I think it is.

**Comment 7:** It may also be good to explain the control arm therapies to explain the AEs listed and their frequency.

**Reply 7:** Thanks, we have explained it.