Author’s response to reviews

Title: CD1d- and PJA2-related immune microenvironment differs between invasive breast carcinomas with and without a micropapillary feature.

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Responses to the reviewers’ comments:

Thank you very much for your careful review of our manuscript and helpful comments. Following the reviewers’ suggestions and comments, we have modified our manuscript.

Reviewer #1:

1. We actually did microdissection. We corrected Methods.
   Paraffin sections were cut from the blocks and deparaffinized. They were stained with toluidine blue. Under microscopy, the tissue was separated to the IMPC area and the ICNST area of each case by scalpal blade.

2. We added the case number and percentage in Table 4.

3. We corrected Table 5.

4. We added sentences in Methods.

ER and PgR were judged using 1% cutoff [14]. For HER2, HercepTest 3+ or HercepTest 2+ and FISH positive were regarded as positive [15].
Reviewer #2:

1. We are also afraid that DNA microarray cases are insufficient, additional DNA microarray cases should have improved the efficiency of our immunohistochemical study. We added a paragraph in Discussion.

One of the limitations of this study is that our DNA microarray data was obtained from only two mixed IMPC cases. We thought that the candidate markers for micropapillary feature were well narrowed down by just two cases. However, four (CAMK2N1, RPL5, SAMD13, and TCF4) of eight markers showed contradictory results, and TXNIP did not show a significant difference by immunohistochemistry. Additional DNA microarray would be promising to increase the accuracy, and should have improved the efficiency of our immunohistochemical study. Our DNA microarray data should be interpreted with caution.

2. We modified Table 1 and 2 as heat map style.

3. Table S1 was removed.

4. Figure 1 and 2 were reproduced with scale bars.