Reviewer's report

Title: ER, PgR, Ki67, p27Kip1 and histological grade as predictors of pathological complete response in patients with HER2-positive breast cancer receiving neoadjuvant chemotherapy using taxanes followed by fluorouracil, epirubicin, and cyclophosphamide concomitant with trastuzumab

Version: 3 Date: 12 September 2014

Reviewer: James Morden

Reviewer's report:

Major Compulsory Revisions

• The manuscript is lacking detail on the participants of the study. Were the patients included all of the patients treated with that NAC regime between 2005 and 2011? Or were some patients excluded, due to compliance with trial treatment or for any other reason?

• The authors consider a number of factors separately but clearly some of these are correlated and will not independently predict pCR. Did the authors consider multivariable analysis using e.g. logistic regression to determine which factors are independently associated with pCR?

• The pCR prediction score suggested is attractive in its simplicity but assigns equal weight to all factors when clearly some will be more important than others. As mentioned above, some may not even provide any additional information, e.g. does PgR add anything once ER has been accounted for?

• How many of the patients received Paclitaxel and how many Docetaxel? This is important information and could be added to Additional File 1. Did the authors look to see if there was a difference in pCR according to agent used?

• While the focus of the manuscript is clearly on outcome, it would be useful to at least have an idea of how many of the 129 patients completed treatment as per protocol and how many had dose reduction/delays or discontinued early.

• Likewise, no mention is made of adjuvant treatment which is clearly related to RFS and OS and may have changed between 2005 and 2011. Were patients treated according to a standard centre policy and if so, what was this?

Minor Essential Revisions

• Please provide definitions of OS and RFS

Discretionary Revisions

• Where hazard ratios has been provided, suggest including the 95% confidence intervals for these

• In table 2, odd ratios (and confidence intervals) could be used to display the increased chance of pCR with the addition of more predictive factors
• Suggest adding numbers at risk and events underneath the K-M plots
• Did the authors consider looking at the markers of interest (ER, PgR, etc) as continuous variables as well as categories?

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

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests