Reviewer's report

Title: Multiple Gene Aberrations and Breast Cancer: Lessons from Super-Responders

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Reviewer: David Shao Ping Tan

Reviewer's report:

This is a mainly descriptive paper which unfortunately is limited by the following issues:

1) NGS and profiling was performed on primary tissue rather than the recurrent tumour which limits the extent to which one can say these mutations are still biologically relevant in mediating tumour response especially since the extent of prior therapy was different for each of these patients.

2) There is no comparative data on "poor responder" patients with phenotypically similar tumours for which differentially mutated genes may provide firmer clues regarding the drivers of treatment response and resistance in these patients.

In the absence of aforesaid data, this case report is of limited interest but if being considered for publication may be improved by inclusion of the following:

Major Compulsory Revisions:

1) To include comparative data on NGS of tumours from "poor responders" in the study (i.e. from the other 28/32 patients) if available.

2) It would have been useful if the authors could provide additional information on the genotype for the relevant gene mutations identified e.g. in the PIK3CA mutant tumour was it a kinase domain mutation H1047R etc? which may shed more light on the relevance of these mutations in predicting response to everolimus. This should be presented in the supplemental table of molecular alterations.

3) Please include allelic frequency of each of the mutations as well.

Level of interest: An article of limited interest

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