Reviewer’s report

Title: HER2 overexpression and correlation with other significant clinicopathologic parameters in Ivorian breast cancer women

Version: 0 Date: 23 Sep 2018

Reviewer: Endale Gebregzabher

Reviewer's report:

Reviewer report (Endale Hadgu Gebregzabher):

The authors report on a study conducted in a total of 608 cases of breast cancer in Ivory Coast for the analysis of the frequency of HER2 and its association with clinicopathologic factors. In this paper, breast cancer patients were examined for ER, PR, and HER2 receptor status using immunohistochemistry.

There are critical concerns that need authors to address and major modifications are needed before accepted for publication.

1. One of major concern is the molecular sub-typing criterion which is not described in the method part but molecular sub-typing result is presented in table I. Therefore, I would suggest that authors either remove this data from table I or clearly indicate the sub-typing criterion used.

2. Another concern is the reliability of the association study. The authors reported that HER2 overexpression is associated with high tumor grade. However, their data on table II page 6 indicates the opposite. According to the result summarized on table II, HER2 negative tumors had high tumor grade or grade III (21.8%) than HER2 overexpressing tumors (11.7%).

Therefore, I suggest authors look at this discrepancy and correct the manuscript.

3. I also have a concern on the title of the manuscript "HER2 overexpression and significant clinicopathologic parameters in Ivorian women with breast carcinomas"

The reason for the emphasis on HER2 overexpression while the other two standard hormone receptors were also assessed in the study is not clear. It would have been acceptable had there been a unique finding in the expression of HER2 among Ivorian than patients elsewhere in the continent or worldwide.
I would suggest that authors report on all of the hormone receptors and modify the title accordingly.

4. HER2 equivocal cases are considered as negative by previous authors in the absence of FISH to confirm the results hence it would be good to include these cases under the HER2 negative results.

5. The discussion on page 8 second paragraph line 25 to line 45 describes methodological issues related to HER2 immunohistochemistry which is unrelated to the work presented by the authors. Therefore, remove this part and rewrite the discussion part with only supporting studies related to your current work.

6. The conclusion sentence should be restated once the association between HER2 overexpression and high tumor grade is confirmed.

7. Typos and editing:
   - Page 2 background paragraph 3 line 42-45 has a language error
   - Page 3 methods paragraph 1 (patients) "needle core biopsies" should change to "core needle biopsies"
   - Page 5 table I line 18 IDC-NST percentage should be 84.1 not 841
   - Page 6 table II line 48 and 49 has a typing error ER/PR+ and ER/PR- are the correct abbreviations
   - Page 7 discussion paragraph 2 (patients) line 23 "the type of used antibody" should change to "the type of antibody used"

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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