Reviewer's report

Title: Analysis of EGFR, HER2, and TOP2A gene status and chromosomal polysomy in gastric adenocarcinoma from Chinese patients

Version: 3 Date: 1 October 2008

Reviewer: Wei-Ting Hwang

Reviewer's report:

This is a statistical review.

- Major Compulsory Revisions

1. It is still not entirely clear about the study samples.

1.1 If the 100 samples were just what the authors could get that fit the selection criteria (e.g., intact clinical data, tissues available for 20 slides), during that period of 2000-2005 (see the response letter), then it is really not a “randomly” selected sample as the author noted on page 6, 2nd paragraph.

1.2 Overall, the inclusion and/or exclusion criteria were not clearly described in the texts and would require improvement. In addition, (if there were really some kind of selection process) it should include the information on the TOTAL number of patients that underwent surgery for gastric adenocarcinoma during the study period (and/or the proportion of patients that eventually to be included in the study out of the total number of patients underwent surgery) should be included.

1.3 And the concern about whether there are potential biases associated with the fact that selected samples were patients with larger tumor size that large enough to make 20 slides (therefore patients with smaller tumor size were not selected for study) is not yet addressed. For example, one can evaluate the biases by comparing patient demo and tumor characteristics between selected and unselected samples. If this can not be done (e.g., data were not available), then the report should at least acknowledge the potential selection biases as a limitation of the study (if it is biologically plausible).

All these should be better explained and described in the texts.

2. The issue of multiple comparisons is not yet addressed and incorporated in the actual texts. If the Bonferroni adjustment was made to adjust for multiple of 10 tests (should it be 13 tests?), then the p-value that to be considered statistically significant will be 0.005, rather than the stated 0.05 on page 10, 2nd paragraph. Currently it shows “Differences at P < 0.05 were considered significant”. In all the following texts in the Results section wrt p-value and significance should also be checked for consistency and accuracy. That is, you will only claim a significant association when p<0.005. The authors should provide a sufficient explanation if they do not wish to adjust for multiple comparisons. Other alternative adjustment
method can be considered if the Bonferroni correction is thought to be too conservative for the purpose of the study.

Again, all changes/revision should be incorporated in the texts.

- Minor Essential Revisions
  None

- Discretionary Revisions
  None

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests.