Reviewer's report

Title: Expression of tumor-specific antigen MAGE, GAGE and BAGE in ovarian cancer tissues and cell lines

Version: 2 Date: 13 January 2010

Reviewer: Yao-Tseng Chen

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Major Compulsory Revisions:

This study aims at analyzing the frequency of CT antigen expression in ovarian cancer. The 6 cases of so-called "metastatic ovarian cancer" were not "ovarian cancer that have metastasized to other sites", but rather "primary tumors--including 4 GI cancers--that have metastasize to ovary". These created several problems:

1. Metastatic cancers will have a CT-expression frequency closer to their primary tumor, and it makes absolutely no biological sense to compare the frequencies of CT expression in this group to the frequencies of CT expression in the primary ovarian cancer. [For example, melanoma is a tumor type that very frequently (>50%) expresses CT antigens. When melanoma metastasize to lung, they still express CT antigens very often. On the other hand, colon cancer expresses CT antigen much less frequently (<10%), even when they metastasize to lung. And it makes no biological reason to compare CT expression frequency in primary lung cancer to that of a mixture of colon cancer, melanoma, and other tumors, that have metastasized to lung, as the frequency in the metastatic lesions will be purely decided by what primary tumors they are from].

2. Also, if there were 6 cases of metastatic disease, these cases would automatically be Stage IV disease, and yet the authors claimed that there were only 4 stage IV cases. This is simply impossible.

3. Also, since these 6 cases were not even ovarian primary, they should not be graded based on the ovarian cancer grading system into G1, G2 and G3, so the grading does not make sense.

For these three reasons, particularly the first one, it is absolutely mandatory that these 6 cases of metastatic lesions be excluded from the series, and all the numbers in the text and tables should then be revised and re-calculated based on the data on 41 cases of PRIMARY ovarian cancer only, not on 47 cases. If this revision is not carried out, this paper should be considered as unacceptable for publication.

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:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests.