Reviewer's report

Title: Prostate tumor overexpressed 1 overexpression correlates with tumor progression and predicts poor prognosis in breast cancer

Version: Date: 1 April 2014

Reviewer: Chunhong Yan

Reviewer's report:

The authors investigated PTOV1 expression in breast cancer. They report that PTOV1 is overexpressed in breast cancer, and its expression appeared to be positively associated with progression of breast cancer. They suggest that PTOV1 could be a useful prognostic marker for breast cancer. Overall, this is a well-written manuscript. The study was well designed, and the conclusion is generally supported by the results. A few minor revisions are needed before considered for publication.

A. Major Compulsory Revisions:

1. Fig 1. MCF10A is an immortalized "normal" breast epithelial cell line. The authors stated that this is breast cancer cell line. This needs to be corrected. Since the tested cell lines vary in their ER status, mutant p53 status, and they belong to either luminal or basal-like type, it would be helpful if the authors can comment on whether the PTOV1 expression level is correlated with these differences.

2. Fig 2B. The authors must clarify how they normalized PTOV1 mRNA amounts against GAPDH. They stated that this was done by "normalized to the geometric mean of housekeeping gene". Here only one housekeeping gene was investigated. What does "geometric mean" mean? Does this mean "geometric mean" of expression levels of several housekeeping genes including GAPDH?

B. Minor Essential Revisions

Although the manuscript is generally clearly written, the authors need to carefully check their grammar and correct errors which were found throughout the manuscript. A few examples:

1. Abstract/Results: line 2, "human breast epithelial" ; line 3, "protein level(s)"
2. page 4, line 12, "further enhanced..."
3. Authors' contributions: line 2 "and editing of..."
4. Discussion: page 2, line 4 and line line 7, "PTOV1 plays an important role in cell proliferation status", "could contribute to the proliferative status". "Proliferation status" does not seem to be a right phrase.

The title may also need to be modified - "prostate tumor overexpressed 1 overexpression"; it would be better to change to "overexpression of the prostate
tumor overexpressed 1 gene"

**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, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.