Reviewer’s report

Title: Aberrant expression of CD133 protein and its correlation with Ki-67 and prognosis in gastric adenocarcinoma in China

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Reviewer: Holger Kalthoff

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- Minor Essential Revisions

1) I don’t think the focus of the manuscript should be based on analyses of patients from a particular country unless there is a genetic basis for studying the disease in that country. Although China has a high incidence of Gastric Cancer, it is also the same with other Asia-Pacific and Central European countries and the risk factors are largely non-genetic such as diet and socio-economic levels. Therefore I think the title of the manuscript should be changed to remove the focus of the study being performed in the Chinese population. I suggest the title to be ‘Aberrant expression of CD133 protein correlates with Ki-67 expression and is a prognostic marker in gastric adenocarcinoma.’

2) Line 3 of the Background section should take the focus away from China but mention other countries with high risk of Gastric Cancer. It should read something like ‘The prevalence of gastric cancer in China is amongst the highest in the world, along with Japan and Korea. Lowest rates are associated with the more developed regions such as Northern Europe and North America.’

3) Line 16 of the Background section should be rephrased to be more informative on previous study of CD133 in Gastric Cancer. It should read something like ‘Recently, Smith and colleagues have shown that a moderate to high percentage of gastric cancer tumor samples have CD133 expression with moderate to strong membranous and apical expression. No significant association with tumor stage or grade was identified but this conclusion was based on a limited number of cases studied. They identified CD133 as a potential therapeutic target for antibody-drug conjugates in gastric cancer, raising the possibility ……’

4) Line 22 of the Background section should be modified to take into account the study by Smith et al and should read something like ‘Whether CD133 is a prognostic marker in gastric cancer is still unclear since to date no extensive study has been performed correlating CD133 expression with clinicopathological features and prognosis. Ki-67 is a well-recognized ….’

5) Line 26 of the Background section should be rephrased to ‘The relationship between CD133 and Ki-67 in gastric cancer has not yet been investigated.

6) Line 30 should remove ‘Chinese’ and simply ‘336 cases of gastric adenocarcinoma.’
7) In the methods section only the dilution of the Ki-67 antibody is mentioned and not the dilution of the CD133 antibody.

8) Line 18 of results section should mention that correlation of CD133 is made with tumor staging. It should read something like ‘With respect to the TNM tumor staging adenocarcinoma with positive expression…..’

9) Line 3 of discussion should read …promote the formation of tumor. (delete cells)

10) Line 4 of discussion. The word ‘hot’ is somewhat slang and misplaced in the discussion section. It should read something like ‘…hypothesis that has emerged recently. There is currently heightened interest in the utility of using CD133 as a marker to identify the tumor stem cell population for a variety of malignancies.

11) Line 9 of discussion. Sentence should begin with’ However’ ie However, it has also been found…

12) Line 18 of discussion ‘disputes’ is not the appropriate word. It should read ‘…although it is still controversial for ovarian cancer and…..’

13) Line 19 of discussion. Grammatically reconstruct sentence so it reads something like ‘There are no reports on the prognostic significance of CD133 expression or correlation with Ki-67 in gastric cancer.’

14) Line 22 of discussion. Should be rephrased to read something like ‘… prognosis of gastric adenocarcinoma. Our results indicate that the expression of CD133 may be involved in tumor size, invasive depth and histological grade of gastric tumor, which are in agreement with previous reports on colorectal cancer (reference 16 and 17).

Delete the intervening sentence on CD133 and Ki-67 since you repeat it later on in the discussion. Also in line 28 why do you say that this is not associated with previous reports in colorectal cancer (references 16 and 17)? The reference indicates that they are in agreement with previous reports in colorectal cancer. If this is the case it should left as written above and the next sentence then needs to be deleted.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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'