Reviewer’s report

Title: POLE mutations improve the prognosis of endometrial cancer via regulating cellular metabolism through AMF/AMFR signal transduction

Version: 0 Date: 04 Nov 2019

Reviewer: Chiju Wei

Reviewer's report:

MGTC-D-19-00463

Using data from the Uterine Corpus Endometrial Carcinoma (UCEC) project, Li et al have provided a very interesting combinational analysis on the relationship between POLE mutations and a favorable prognosis of endometrial cancer. They further identified AMF/PGI and AMFR/gp78 pathway of glucose metabolism affected by POLE mutations was probably the important factor leading to a different prognosis response in endometrial cancer patients. However, some sentences in this manuscript need minor revisions.

1. Title: please add "endometrial cancer" in the title.
2. Abstract, line 32-33. "This study show the POLE mutation, a vital factor in endometrial cancer patients, leading to higher expression of AMF/PGI and AMFR/gp78". Check grammatical errors.
3. Abstract, line 33-34. "These results suggest the combination of these genes …..". It is not clear what "combination of these genes" really means.
4. Introduction, line 43. "with estimated 74,200 new cases and 151,300 deaths in 2017". Check accuracy of the numbers.
5. Introduction, line 74-75. "However, POLE and POLE mutants in carcinogenesis…". Change the sentence to: the role of POLE and POLE mutants in carcinogenesis and the progression of endometrial carcinoma is not fully clear.

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.

Yes

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

Yes

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:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license ([http://creativecommons.org/licenses/by/4.0/](http://creativecommons.org/licenses/by/4.0/)). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal