Reviewer’s report

Title: Identification of key pathways and genes in PTEN mutation prostate cancer by bioinformatics analysis

Version: 2 Date: 24 Oct 2019

Reviewer: Kourosh Zarringhalam

Reviewer's report:

Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format. Please overwrite this text when adding your comments to the authors.

1) The authors have improved the paper. Particularly, the newly added discussion section is informative. However, I am still not clear as what the new biological insight that can be backed by strong evidence is. Lower mRNA levels and higher mutation rated of PTEN in prostate cancer are previously well documents. Enrichment analysis on DEGs is fairly standard and points to the usual suspects. I do however appreciate the discussion on potential drug targets and therapeutics. Maybe the authors can highlight that a bit further in separate paragraph in the discussion.

2) I still feel the grammar and the use of language can be improved. For example the phrase "to dig out" is overused, please consider alternatives. As another example, the last paragraph of the discussion "In our study, we can only make an investigation ...." Needs to be reworded.

3) Are correct p-values indicated in Figures 3A and 3B?

4) The statement in the Discussion "The mRNA expression and clinical affair analyses showed lower expression level of PTEN, higher Gleason score and poorer prognosis " Seem to contradict earlier statement in Results section that the "However, PTEN mutation were not found correlate with Gleason "

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:

Needs some language corrections before being published

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/). 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