Reviewer’s report

Title: MiR-9, miR-21, and miR-155 as potential biomarkers for HPV positive and negative cervical cancer

Version: 1 Date: 30 Nov 2016

Reviewer: Cheng Chang

Reviewer’s report:

The authors investigated three novel markers for cervical cancer, mir9, mir21, mir155 and found positive correlation of these miRNA markers with the risk of cervical cancer. The merit of the paper is that it presented a clear message and showed clean data demonstrating their points on on the diagnostic values of these 3 miRNAs. Still, I suggest a minor modification in the conclusions and some minor changes in the manuscript.

To enumerate,

1) It is well-known that HPV positive patients have a high chance in getting cervical cancer, which is indicated in your table 2 that showed a 100% specificity and PPV for HPV proteins. Thus, the MOST interesting question would be, could you use additional markers, which are miRNAs in your paper, to further figure out these HPV negative patients' chance of getting the cancer. However, this data is lacking in Table 2. Showing additional markers that have lower specificity and PPV than the existing HPV method would not add too much to diagnostic field, unless it has other benefits and the authors should say them clearly. Thus, I don't buy the conclusion that these miRs are valuable in prediction of HPV positive patients.

2) Following the above point, even the authors have done clean analysis in Table 4, to me it is still unclear whether one combines HPV and/or mir21 and/or mir155 can improve diagnosis in HPV negative patients, if yes, how much. I would suggest the authors also calculate the AUC for a combination of HPV+mir21, HPV+mir155 or HPV+ mir21 and mir155 and see whether they can find a minimal list of markers for those patients with HPV negative results.

3) In your conclusion, you said Mir-9 may be helpful in the prediction of HPV negative cases of cervical cancer. However, your figure 2 does not support this conclusion.

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.

No

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Acceptable

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