Reviewer’s report

Title: A method to reduce ancestry related germline false positives in tumor only somatic variant calling

Version: 0 Date: 06 Mar 2017

Reviewer: Hongtao Li

Reviewer's report:

In this article, the authors first examined the relationship between the germ-line false positives in tumor only somatic variant calling and ancestry, then they presented their tumor only caller -- LumosVar. The "LumosVar" can leverage differences in allelic frequency between somatic and germ-line variants. They further examine the affecting factors of the caller with simulated data as well as real data. The authors need to address the following questions before considering for publication:

1) Page 4, the second paragraph, the ending sentence is ambiguous in terms of structure and meaning, please also double check the reference (#9) accuracy in the context;

2) Page 21, the "Evaluation Data-set" paragraph, the second sentence made a mistake in the number calculation, the sum is not nine samples according to the number details listed;

3) Page 29, Table 1 has nine samples, it does not include a sample from an Asian ancestry, is it possible to add at least one sample of Asian ancestry?

4) In Figure 4, why do listed samples have only eight samples included now? Should GBM1-EA also be included?

5) Although there are some kind of explanation about "N" and "M" for Figure 3 in the result part, it is the best to add the explanation to the figure 3 legends as well.

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

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