Reviewer’s report

Title: Tumor classification and biomarker discovery based on the 5'isomiR expression level

Version: 0 Date: 22 Oct 2018

Reviewer: Wenying Yan

Reviewer’s report:

The authors proposed a GA/SVM model for tumor classification from isomiR expression data. The method is interesting and useful. It is technically sound. The test results are promising. The paper is well written. But the following concerns need clarification:

1. Any specific reason to use/implement SVM after feature selection by GA? Did you compare the performance of SVM with other alternative algorithms such as random forest? And if they also work well with GA? The authors need to at least provide an explanation of why SVM was chosen.

2. The comparison with other similar models should be provided to show the improvement for tumor classification.

3. For the performance of the GA/SVM model, may be more metrics could provide meaningful results like MCC or F-score.

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.

No

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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