

Insights in Genetics and Genomics

Review Report

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Article Title: New Score Tests for Equality of Variances in the Application of DNA Methylation Data Analysis

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Review Status: Revision Required

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Review Report

In this study, you evaluated the performance of the AWvar test and proposed three improved AWvar tests for DNA methylation data analysis, which may help identify DNA methylation marks that could potentially uncover the molecular differences between diseased samples and normal samples. However, some questions should be explained clearly in the manuscript as follows.

1. Why do you choose AWvar test for DNA methylation data analysis? What are advantages of this test for DNA methylation data?
2. For the event of DNA methylation, it usually occurs on CpG island regions. There are some linkages between single CpG sites inside of CpG islands. How do you consider this situation?
3. How do you think different methylation levels at single CpG sites between case and control samples caused by genetic variations such as SNPs?
4. Your method may help for calling peaks that could be positive DNA methylation regions. Please extend the significance of your study in the Discussion Part.

I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.