Reviewer's report

Title: Ventilatory abnormalities in patients with cystic fibrosis undergoing submaximal treadmill exercise test

Version: 3  Date: 7 April 2015

Reviewer: David Ngan

Reviewer's report:

Major Compulsory Revisions

1. Thank you for clarification on how your data were analyzed and what your intentions were. In the figure legends of Figures 1, 3, and 4A, "cluster analysis" results are reported to compare between moments for each group. In order to do this most appropriately, the Friedman (non-parametric, repeated measures) test should first be used followed by post hoc tests only after a significant difference is detected. Was this done? For post hoc analysis, the different combinations can then be compared using separate Wilcoxon signed-rank tests with a Bonferroni adjustment for multiple comparisons (as you have described).

Minor Essential Revisions

2. In the "Statistical Analysis" section and figure legends of Figures 1, 3, and 4A, the authors should clarify that the Wilcoxon signed-rank test was used if that is correct (to avoid confusion with the Wilcoxon rank-sum test).

3. In the figure legends of Figures 1, 3, and 4A, Moment 4 is described as "4 to 6 min of activity." Should this be 5 to 6 min, as described in the "Statistical Analysis" section?

4. The new panel for Figure 3D should display the y-axis as decimal numbers rather than using commas (e.g. 0.26).

5. The new addition of R2 values in Figures 2, 4B, and 4C should display them as decimal numbers rather than using commas (e.g. R2 = 0.0495).

6. The description under Supplementary S3 refers to the Kruskal-Wallis test. Is this an error since you explained that this test was actually used for a previous analysis between males and females that has been excluded?

7. My previous review contained 24 points, and it appears that the authors only addressed the first 18 points (missing 2 additional minor revisions and 4 discretionary revisions that were on the next page of the attachment).

Discretionary Revisions

8. My copy of Figures 2 and 3 were cut off (extended past the page margins). I
assume these will be fixed.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests