Reviewer's report

**Title:** Microvolt T wave alternans in adults with congenital heart diseases characterized by pathology within right ventricle or single ventricle physiology: a case control study

**Version:** 1  **Date:** 28 January 2013

**Reviewer:** Ami Bhatt

**Reviewer's report:**

Excellent concept and an important topic in CHD. No Major Compulsory revisions. However a few minor essential revisions which I think will strengthen the paper and make it much more well received in the ACHD community:

1. Pulmonary hypertension in individuals with potential shunt lesions may not be accurate at a PAP>37mmHg based on echo. Please add a sentence explaining your rationale, or a quote of another research article which uses such a cutoff in ACHD.

2. In the TOF population, were there any QRS >180ms and did these correlate with non-negative MTWA? Mentioning this in the discussion may strengthen your conclusions and add validity for the predictive value of this testing.

Discretionary revisions:

1. It is surprising that your population had so many NYHA Class I patients. In general, in moderate to severe CHD in adults as the population you describe, true NYHA Class 1 patients are rare. The pVO2 in the 50% range, speaks again such high NYHA classes and perhaps patient self misrepresentation/lack of awareness. You may want to address this in the discussion or study limitations with a sentence.

2. Was there a pVO2 or VE/VCO2 cutoff of significance which correlated with positive MTWA? This would be interesting to the ACHD population.

3. All periods have come across as commas in the tables and numbers listed.

4. Please use the terms univariate and multivariate.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests