Reviewer's report

**Title:** Dietary antioxidant capacity of the patients with cardiovascular disease in a cross-sectional study

**Version:** 1  **Date:** 14 November 2014

**Reviewer:** Ock K. Chun

**Reviewer's report:**

The following are my comments on the paper "Dietary antioxidant capacity of the patients with cardiovascular disease in a cross-sectional study:"

1. How was the number of subjects determined and what age range was used when selecting participants from the total study sample?
2. How many days of dietary recall were used to estimate intake?
3. One point of concern is that the authors do not mention selection bias; patients with cardiovascular disease may have been more likely to die and thus excluded from this study - since the study is cross sectional - thereby introducing bias. Subjects excluded in this manner could have had different dietary patterns or food preferences compared with subjects without cardiovascular disease. Furthermore, recall bias was not discussed as possibly affecting the results of the study; it may be that subjects diagnosed with cardiovascular disease were more likely to recall eating "heart healthy" foods, and this this may explain the greater TAC and certain food preferences (e.g. nuts and seeds) among subjects with cardiovascular disease. The authors seem to have overlooked or ignored these and other potential sources of bias.
4. I think it is good to explain the reason why the analysis was conducted with men and women separately. I wonder what the result of the analysis for all (men and women) was.
5. Lacking in appropriate explanation about the reason why the CVD patient’s diet was better balanced in terms of antioxidant protection in comparison to healthy subjects. Of course, the people with CVD may have a possibility of changing their diet rightly because of the diagnosis of CVD. However, we cannot find any evidence and data that the patients with CVD have more dietetic knowledge and have changed their diets in right way in this paper.

In addition, the paper has a lot of grammatical and sentence structure errors, I don’t think 24 hour recall is an accurate representation of food intake to determine antioxidant compounds or to make the conclusion that the author did. The authors also did not mention reasons as to why CVD patients had a better balance diet, could it be due to their diagnosis? They also did not clearly explain how they matched the two groups, in one section a control group was mentioned but I didn’t see anywhere that defined what the control group was.
Errors

Abstract:
In conclusions it should saw which evidences.

Second paragraph of background should read “which is much higher than all other classes”

First paragraph of Methods. Sentence describing the 1661 subjects is worded weird.
Second paragraph of methods, first sentence is very confusing.

First paragraph of discussion should read, “that may protect against damage, reducing risk of various diseases”

**Quality of written English:** Not suitable for publication unless extensively edited

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

**Declaration of competing interests:**

'I declare that I have no competing interests’