Reviewer's report

Title: Optimal cutoff of Waist-to-Hip Ratio for Predicting Cardiovascular Risk Factors among Han Adults in Xinjiang

Version: 2 Date: 28 May 2014

Reviewer: Crystal Lee

Reviewer's report:

Major Compulsory Revisions
1. As this is a cross-sectional study, the authors should be aware that the data cannot be used to predict cardiovascular risk. It can only be used to discriminate/detect these risk factors. Furthermore, in paragraph 5 of Discussion, the authors used ‘incidence’ to describe the proportion of diabetes and hypertriglyceridemia, the cross-sectional nature of this study means ‘prevalence’ should instead be used. Please make changes to the manuscript accordingly, which includes the title.

2. In Discussion, the authors compared their results to those from other Asian studies, which included a Jordanian study. Is there a reason for studying only the Han population and not the Uighur and Kazakh populations? The sample sizes for these two populations are not much smaller than for Hans.

3. Waist circumference is more widely used as an abdominal measure than waist-to-hip ratio. Is there a reason for investigating WHR and not WC, or both, in this study?

Minor Essential Revisions
1. Abstract, Methods: “... participants were selected using a 4-stage...”
2. Abstract, Methods: “... Han participants were included in...”
3. Background, paragraph 1: “... classified as overweight or obese.”
4. Background, paragraph 2: “... apply the regional optimal...”
5. Sample design: “All participants...”
6. Sample design: “... Hetian Prefecture, and Yili Prefecture.”
7. Discussion, paragraph 4: “... Thailand and Jordan.”
8. Discussion, paragraph 4: “... Asian population in other regions.”
9. Discussion, paragraph 4: Besides of the ethnic...” change to “Apart from ethnic...”
10. Table 1 and 2: “Categorical variables are expressed as n and percentages.”
11. Tables: Apart from the p-values, please round the values to 1 decimal place.
12. Tables: What are the p-values referred to? Difference between groups or overall trend? It is not clear from the Tables, Methods or Results.
13. Figure 1 and Results: What is the area under the ROC curve for the respective ROC curves? The curves in Figure 1 suggest that the discriminatory power of WHR for diabetes in men, and dyslipidaemia for both men and women are not much better than chance.

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

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests