Reviewer's report

Title: Waist circumference and insulin resistance: a cross-sectional study of Japanese men

Version: 2 Date: 16 October 2008

Reviewer: eunjung rhee

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Major point:

1. Why were only men analyzed? Why are not women analyzed. The paper would be improved if the analyses were done in both sexes.

2. In background, the reason for the re-analyses for the waist circumference cutoff, is not clear. That is, as far as I know, the background for the waist circumference cutoff definition for Japanese was sufficient enough. Why the cutoff have to be re-analyzed? Stronger explanation is needed.

3. In the methods section, were the subjects with diabetes included in the study? If so, the result could have been biased by the diabetes subjects. The analyses have to be done in normal population without diabetes or prediabetes to draw a meaningful conclusion.

4. Medication hx should be included in the result.

5. How were the waist circumference measured? As we all know, waist circumference measurement depend on the measurer, and a lot of intra-measurer variations. Please explain how the WC was measured and how the quality control and consistency was controlled.

6. Lipid levels of the participants should be included in the analyses.

7. Why were the insulin resistant subjects defined. You've explained in the discussion, but I haven't seen many papers that defined insulin resistant subjects with the highest quintile. Add the references of the studies that used same definition as you, in the statistical section.

8. You've explained that these subjects could be representative of Japanese population. However, the rationale for this assumption is not sufficient. Mean age is 51 years old, relatively old population. Prove that the population is representatives of Japanese population (for example, compare your data with the National Survey or some study that were performed in the nationwide Japanese population).

9. You are insisting that optimal WC cutoff for various HOMA-IR levels is 85 cm. This doesn't make sense from the results you provided. You'd better show all the ROC results with various sensitivity and specificity with various HOMA-IR levels.
This manuscript will need major revision.
I wouldn't comment on minor points.