Reviewer's report

Title: The Cutoff Values of Visceral Fat Area and Waist Circumference for Identifying Subjects at Risk for Metabolic Syndrome in Elderly Korean: Ansan Geriatric (AGE) Cohort Study

Version: 1 Date: 12 August 2009

Reviewer: Rie Oka

Reviewer's report:

This is a meaningful paper in that the optimal cutoff points for the indicators of abdominal obesity were calculated in the elderly. The results would help clinicians and health care workers to assess abdominal obesity in elderly Asian men and women.

Major Compulsory Revisions

1. One of the main findings of this study is that the optimal cutpoints were similar between men and women. As authors described in Discussion, page 12, para 3, this result would comes from the similar WC and even slightly higher BMI in women compared to men. Generally, in younger generations, men are more obese than women but this study sample shows the opposite pattern. Please discuss whether this pattern (women have comparable or even higher BMI or WC) is consistent with the reports on other population-based study in Koreans or other Asian populations (for example, ref. 16and 25). If this pattern is universally seen in other elderly populations, the finding of this study might be potentially more generalized to other elder populations.

2. Another main finding of this study is that the AUC for VFA was not statistically different from that of WC. Whether VFA is really superior to WC for predicting multiple risk factors have not been clearly known in general populations; some studies on younger cohorts also have found no superiority of VFA to WC. Please discuss on the other studies reporting on the comparison of AUC between VFA and WC for predicting multiple risk factors and for individual risk factors.

3. Page 12, the last sentence. The citation of ref.6 is not adequate. The ref 6 have demonstrated that VFA increased prior to the onset of menopause, stating that the notion that abdominal fat gains occur after menopause must be re-examined. Please revise the related sentences or delete ref.6.

4. Page 14, para 3, line 2-3. The sentence “This suggest that~” is not appropriate. The results of this study suggest that VFA is not superior to WC and not more. In order to state that VFA was sufficiently reflected in WC, the correlation between VFA and WC should be shown. Is there sufficiently strong correlation between them in elderly women?

5. As authors described in the limitation, this study did not have comparative data
between young and elderly subjects to estimate the optimal cutpoints. Accordingly, the conclusion should be confined to the elderly Koreans. The last sentence of the Conclusions and also in Abstract, "should be considered", should be changed to "might be considered". Or, please consider to delete this last sentence at all.

Minor Essential Revisions

Method, page 8, para 2. Please describe more details on the measurement methods of VFA. For example, the software used for quantification of VFA, a scanning protocol of CT, and the condition of the patient.

Abstract, the last sentence of page 3, the statement that was not better than WC is rather subjective. Please consider to revise to the statement such as "The AUC value for VFA to predict the presence of >2 components of MetS was not significantly different from that for WC"

Abstract, line 4, The sentence "the cutoff value of WC may different according to~" lacks the verb. It should be revised to "may be different" or "may differ".

Discretionary Revisions

None.

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

**Quality of written English:** Acceptable

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