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The Author Response

Comparison of Visceral Fat and Liver Fat as Risk Factors of Metabolic Syndrome

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We appreciate the detailed and valuable comments on our article (1). We would like to clarify some of the points raised about it.

First, among several criteria to define fatty liver, the liver attenuation value ≤ 40 Hounsfield units (HU) represents the most accurate for moderate-to severe disease and is not quite sensitive for mild fatty liver comparing with other criteria (2, 3). However, the subjects in our study were healthy adults who visited health promotion center and those who have moderate-to severe fatty liver were very rare. When the liver attenuation value ≤ 40 HU was used to define fatty liver, the subjects met this criterion were only 4 persons (3 males, 1 female). Therefore, we thought that ≤ 40 HU criterion was not suitable to define fatty liver in our study. Even if fatty liver defined by the liver attenuation value ≤ 40 HU was used as an independent variable during regression analysis, fatty liver was still more important risk factor than visceral fat in our total subjects (odds ratio, fatty liver vs visceral fat; 13.2 vs 7.87).

We could not find any evidence that the ROI size should be relatively small (100-150 mm^2) to measure liver attenuation. When measuring liver attenuation, more representative values can be obtained by making the ROI as large as possible (at least 1 cm^2) and avoiding the inclusion of any large vessels or biliary structure (4).

There were some "typos" in our article as mentioned in the correspondence. We are sorry and would like to correct "the left interior lobe" to "left medial lobe" in the description of the Fig. 1 and "30 to -190 HU" to " -30 to -190 HU" to measure the visceral fat area.

About the diagnostic criteria of metabolic syndrome in our study, we used modified NCEP-ATP III criteria with the exception of waist circumference as described in our article.

Finally, we agree that our study has several limitations including the small sample size as we have mentioned in our article, and those limitations could potentially confound the results. Additional well designed large-scale study is warranted to confirm our study.

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