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## Cut Points of Waist Circumference

Response to Oda

We are grateful for Dr. Oda’s comments (1) on our recent reports (2,3) regarding the utility of waist circumference cutoff values in clinical risk assessments for cardiovascular disease. We agree with his point that the current Japanese criteria for abdominal obesity (85 cm for men and 90 cm for women in waist circumference) (4) are problematical, notwithstanding their adoption by the International Diabetes

Federation (IDF) (5) and the American Heart Association (AHA) (revised version by the National Cholesterol Education Program [NCEP]) (6) in their definitions of metabolic syndrome.

We recalculated the risk of metabolic syndrome, as defined by the IDF and the NCEP, for cardiovascular events applying the Asian cutoff for waist circumference (90 cm for men and 80 cm for women) (7) and found that the hazard ratio (HR) of metabolic syndrome in female diabetic patients improved to some extent but that waist circumference alone was still not predictive for cardiovascular disease. In female patients, the HR of NCEP–metabolic syndrome for stroke improved to become significant (2.68 [95% CI 1.20–5.97]), and the HR of NCEP–metabolic syndrome and IDF–metabolic syndrome for combined cardiovascular events (either of coronary heart disease or stroke) also improved to become significant (2.02 [1.13–3.62] and 1.91 [1.07–3.42], respectively) using the Asian waist cutoff. The HRs for male patients did not change significantly under this modification. Consequently, modifying the IDF and the NCEP definitions by substituting the Japanese for the Asian cutoff value significantly improved the prognostic implications for female Japanese patients with type 2 diabetes, although it is notable that the HRs were still lower than those obtained using the World Health Organization definition (3).

An important limitation to the waist cutoff data (both Japanese [4] and Asian [7]) is that the values were determined from cross-sectional observations rather than from prospective cohort studies. Before undertaking any further discussions on the most appropriate cutoff value for waist circumference, further large-scale prospective studies are necessary to determine whether waist circumference per se is in fact a significant risk factor for cardiovascular events and/or mortality in East Asian diabetic and nondiabetic populations.

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