To the Editor:

We read the recent article by Irie et al.1 with great interest. The study showed the association between the clustering of metabolic risk factors and cardiovascular mortality in a population of community-dwelling men and women in Japan. They concluded that the clustering of metabolic risk factors increases the risk of cardiovascular disease, irrespective of the presence or absence of overweight. While we agree with their conclusion, we are concerned about the rationale for using the body mass index (BMI) ≥ 25.0 kg/m^2 as a surrogate criterion for the waist circumference (WC) ≥ 90 cm (i.e., abdominal obesity) in men. They stated that these values are reported to correspond well in Asian men, but the cited reports do not appear to mention this issue. In this regard, according to our data, which were obtained from male workers (age range; 40–65 years) during a health examination at 2 companies in Japan, the BMI closely correlated with the WC (r=0.89) and a linear regression analysis showed the BMI levels corresponding to the WC of 90 cm in men to be 25.6 kg/m^2 (Figure 1). A receiver operating characteristic curve analysis also revealed the optimal cutoff level of BMI to be 25.0 kg/m^2 for identifying participants with a WC ≥ 90 cm (Figure 2). Although our data were not collected from the general population, these findings at least partially support the methodology in the report by Irie et al.

The Japanese criteria of metabolic syndrome define abdominal obesity as the WC ≥ 85 cm in men.2 However, a recent study demonstrated a WC of 90 cm to represent both the visceral fat area of 100 cm^2 and the clustering of metabolic risk factors in Japanese men.3 Moreover, the Hisayama study showed the optimal cutoff level of WC to be 90 cm in men for predicting cardiovascular events.4 We therefore accept the concept by Irie et al, which adopted the WC ≥ 90 cm for the diagnosis of abdominal obesity. However, when diagnosing abdominal obesity using the BMI as a surrogate measure of WC, it is necessary to demonstrate its validity.

References


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