Reviewer’s report

Title: Validation of continuous clinical indices of cardiometabolic risk in a cohort of Australian adults.

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Reviewer: Altan Onat

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Comments to the Editor

This manuscript compares the predictive accuracies of two constructed continuous indices (cCICRs) for 10-year incident CV disease and diabetes, and for a composite endpoint of both diseases (cardiometabolic risk, CMR) with Framingham Risk Scores, using ROC curves. The five MetS components were used as continuous clinical indices in a cohort of nearly 4000 middle-aged men and women. CVD status was self-reported. Lacking data at follow-up amounted to 39%. Cardiometabolic disease was identified in 312 subjects. Authors concluded that the cCIRCs provided a suitable alternative to current indicators of risk and may have the advantage of easier use especially regarding a combined outcome as CMR.

The manuscript is clearly written; the methodology is sound. However, in view of utilizing no different variables relative to proinflammatory status, HDL dysfunction or autonimmune activation (please consult Onat A, Curr Pharma Design 2013 Apr 2 [Epub]), the proposed tool has inherent limitations as the ones it is compared to.

Following few points need addressing.

1. Please, comment on the comparative predictive ability between MetS status and cCICR, especially with respect to diabetes and cardiometabolic risk, particularly with reference to the age-adjusted OR.

2. A comment deserves also the sex difference: CT-assessed visceral adiposity in men and body fat mass in women were of greater relevance for the prediction of cardiometabolic risk (Onat A, et al. Nutrition 2010; 26:382-9). Furthermore, please, discuss why cCICR seems weaker than MetS status in women.

3. Definitions of abbreviations are missing in the footnote of Table 3.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.