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LETTER TO THE EDITOR

Letter on 'Anthropometric Measures and Mortality Risk in Individuals With Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD): A Population-Based Cohort Study'—Authors' Reply

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We appreciate the insightful comments by Clayton-Chubb et al. [1] regarding our recent publication, which evaluated the prognostic performance of body mass index (BMI) and waist circumference (WC)-related indices in individuals with metabolic dysfunction-associated steatotic liver disease (MASLD) [2]. Their letter refers to their recent article [3] and highlights several important points, including the limitations of BMI in older populations, the comparative performance of non-invasive indices in predicting mortality and cardiovascular outcomes, and the potential ethnic variability in anthropometric risk thresholds.

We fully agree with the authors that the utility of BMI as a marker could be particularly limited in older adults, as the body composition and fat distribution change with age [4]. In their study, the Dallas Steatosis Index (DSI) and Framingham Steatosis Index (FSI) demonstrated strong performance in identifying older adults with MASLD and predicting risks of cardiovascular events and physical disability, but not all-cause mortality. This dissociation may reflect the high baseline mortality risk and competing comorbidities in older populations, which can attenuate the prognostic specificity of these indices for overall survival.

The observation by Clayton-Chubb et al. that the Hepatic Steatosis Index (HSI) and other BMI-based indices such as the ZJU index were associated with reduced mortality in their cohort of older adults aligns with the 'obesity paradox'. As we discussed in our study, this paradox may be partly explained by misclassification due to BMI's inability to capture visceral adiposity [5]. Our findings showed that patients with low or normal BMI but elevated WC-related indices had the highest risk of mortality, which underscored the need to move beyond BMI-oriented risk stratification.

We also appreciate the authors' emphasis on the differential impact of ethnicity on anthropometric cutoffs. The ethnic/racial diversity of our multi-cohort design, which included US (NHANES), Chinese (Kailuan), and UK Biobank participants, was intentional to enhance external validity. Nonetheless, we acknowledge that ethnicity/race-specific cutoffs for WC and related indices may further refine risk stratification models [6]. This warrants further investigation.

In our recalibrated models, replacing BMI with WC significantly improved the AUROC for predicting hepatic steatosis. This

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further suggests that abdominal adiposity provides a more relevant physiological correlate. This supports their call for updating conventional indices, such as HSI, to incorporate WC. We fully agree that a re-evaluation of existing indices is needed. While our study focused primarily on mortality prediction, the integration of WC-related indices could have broad applicability. This includes the prediction of cardiovascular events and advanced liver disease, which were not reported in our study. Future work should also explore how dynamic changes in these indices over time influence different health outcomes across different age groups.

Author Contributions

Yee Hui Yeo: writing – original draft. **Philip N. Newsome:** writing – review and editing. **Jie Li:** writing – review and editing. **Vincent L. Chen:** writing – review and editing.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have nothing to report.

Linked Articles

This article is linked to Yeo et al papers. To view these articles, visit https://doi.org/10.1111/apt.70174 and https://doi.org/10.1111/apt.70239.

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