

Capsule Commentary on Wilhelm-Leen et al., Phase Angle, Frailty and Mortality in Older Adults

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This article highlights the need to better define frailty status, factors associated with it, and biomarkers for early and more focused preventative strategies, as well as the need to screen and stratify general populations.

This article examines the use of a novel biomarker for frailty: bioelectrical impedance (BIA). BIA is a non-invasive test used in laboratory settings to estimate total body water and percent body fat, and in the evaluation of elderly frail women.¹ Phase angle, a value calculated from BIA, reflects the overall vitality of living tissue.^{2,3} The authors tested whether there was a relationship between phase angle (or tissue vitality), frailty status and mortality. The widely validated frailty index by Fried was used to identify and stratify frail patients.⁴

Using information from the National Health and Nutrition Examination Survey (NHANES), the authors found an interesting direct correlation between narrow phase angle and both frailty and mortality in both women and men. Interestingly, these correlations were consistent even after accounting for age, race-ethnicity and comorbidity.

The unique correlation between phase angle and comorbidities deserves special consideration. As the authors suggested, phase angle could predict mortality in patients with chronic medical conditions (dialysis, HIV infection etc.). Therefore, this tool may be used as screening test in both healthy patients and those with chronic disease.

A potential limitation of this study is the absence of longitudinal data on BIA and incident frailty from this group of patients; does worsening BIA predict worsening

frailty over time? Further longitudinal studies are warranted to verify and validate these findings.

The meaning of these findings, their use in clinical practice, and the applicability of narrow phase angle in clinical settings is still unknown. It would be interesting to combine this valuable tool with clinical indices and early biomarkers of frailty and disease to be able to identify populations at risk and target preventative strategies. Whether using phase angles would allow clinicians to successfully intervene during the progression from health to frailty or after patients have become frail is worth testing.

Conflict of Interest: The author declares that he does not have a conflict of interest.

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