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BODY COMPOSITION MARKERS AND MORTALITY RISK IN A PROSPECTIVE HEMODIALYSIS COHORT

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### BODY COMPOSITION MARKERS AND MORTALITY RISK IN A PROSPECTIVE HEMODIALYSIS COHORT: Connie

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Large population-based studies have shown that lower body mass index (BMI) levels are independently associated with higher mortality risk in hemodialysis patients. While lower BMI levels may be representative of reduced muscle and/or fat mass, the associations of these individual body composition markers with survival in hemodialysis (HD) patients remain uncertain.

Among 846 hemodialysis patients from the prospective Malnutrition, Diet, and Racial Disparities in Chronic Kidney Disease study, we examined the association of body composition markers with mortality risk. Over 2011-17, patients underwent measurement of biceps and triceps skinfold (proxy of subcutaneous fat), mid-arm circumference (MAC) and mid-arm muscle circumference (MAMC) (proxies of muscle), near-infrared (NIR) body fat interactance (proxy of total body fat), and waist circumference (proxy of visceral fat) every six months. We examined the relationship of repeated measures of each body composition marker with all-cause mortality using time-varying Cox models.

In expanded case-mix+laboratory adjusted analyses, the lowest triceps, MAC, MAMC, and NIR body fat level tertiles were each associated with higher mortality risk (ref: highest tertile): HRs (95%CI) 1.85 (1.24-2.76), 1.82 (1.15-2.88), 1.51 (1.00-2.27), and 2.18 (1.19-4.00), respectively. There was a trend towards an association between the lowest triceps tertile and higher mortality: HR (95%CI) 1.44 (0.98-2.11).

These data suggest that lower levels of muscle, subcutaneous fat, and total body fat are associated with higher death risk in HD patients.