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IMPACT OF RACE AND ETHNICITY UPON MALNUTRITION INFLAMMATION SCORE AND MORTALITY RISK IN A PROSPECTIVE HEMODIALYSIS COHORT:

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Protein-energy wasting (PEW) is a highly prevalent disorder and a strong predictor of death in hemodialysis (HD) patients. As commonly used nutritional scoring tools may be limited by their semi-quantitative grading scale and non-consideration of objective nutritional measures, the Malnutrition Inflammation Score (MIS) was developed from the Subjective Global Assessment tool, as well as body mass index (BMI), serum albumin, and total iron binding capacity, in order to estimate PEW (i.e., higher levels indicate worse PEW).

We examined the association of MIS with mortality in a diverse cohort of HD patients, and whether these associations differed by race/ethnicity. Among 846 HD patients from the prospective Malnutrition, Diet, and Racial Disparities in Chronic Kidney Disease study, we examined the association of MIS with mortality risk. Information on MIS was collected from patients every six months over 2011-17.

We examined MIS categorized as quartiles with all-cause death risk using Cox models. In expanded case-mix analyses, incrementally higher MIS quartiles (Q) were associated with higher death risk (ref: Q1): 1.48 (0.90-2.44), 1.79 (1.12-2.86), 3.59 (2.31-5.58) for Q2, Q3, and Q4, respectively. In analyses stratified by race/ethnicity, point estimates of the highest MIS quartile (Q4) indicated higher death risk across all racial/ethnic groups, particularly amongst those of Hispanic and Other racial/ethnic background (ref: Q1): 4.01 (0.88-18.4), 5.83 (2.85-11.9), 1.86 (0.99-3.48), 6.53 (1.34-31.8) for non-Hispanic White, Hispanic, Black, and Other racial/ethnic groups (p-int=0.04).

Worse MIS levels were associated with higher death risk in HD patients of all racial/ethnic backgrounds. Further studies are needed to determine whether correction of PEW improves survival in these subpopulations.