

## **CROSS-SECTIONAL ASSOCIATION OF SERUM CYSTATIN C AND PERIPHERAL ARTERIAL DISEASE**

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Recent evidence suggests that cystatin C may be an alternative to creatinine and creatinine-based estimates of renal function for measuring glomerular filtration rate (GFR). Cystatin C is also an independent predictor of cardiovascular events and mortality. The aim of the present study was to measure the association between serum cystatin C and peripheral arterial disease (PAD).

Data from participants aged  $\geq 40$  years from the 1999-2002 National Health and Nutrition Examination Survey were analyzed to evaluate the associations between PAD, defined as ankle-brachial index  $< 0.9$ , and elevated cystatin C (dichotomized at highest tertile:  $\geq 1.05$  mg/L). We used multivariable logistic regression analysis, weighted to account for the survey design and adjusted for selected potential confounders.

Among the 2972 study participants, mean age ( $\pm$  SD)  $56.3 \pm 13.3$  years, 46.7% male, 77.3% non-Hispanic white, 9.6% non-Hispanic black, 4.5% Mexican American, and 8.6% other. Prevalence of PAD was 5.2% ( $n=309$ ). Participants with PAD were significantly older, more likely to have diabetes, a history of cardiovascular disease, more likely to be taking lipid-lowering medication, and to be physically inactive than those without. Levels of cystatin C, homocysteine, serum creatinine, and albuminuria were all higher in patients with PAD. Multivariable logistic regression models adjusted for potential confounders of PAD found a significant association between PAD and elevated cystatin C (odds ratio [OR]: 2.94; 95% confidence interval [CI]: 1.59, 5.43;  $p < 0.001$ ). The association persisted excluding those at higher risk for PAD with  $eGFR < 60$  ml/min/1.73 m<sup>2</sup> (OR: 2.98; 95% CI: 1.61, 5.54;  $p < 0.001$ ).

Elevated cystatin C is independently associated with peripheral arterial disease.