Abnormal ankle-brachial index (ABI) predicts primary and secondary cardiovascular risk and cancer mortality

Eur J Intern Med. 2020 Jul;77:79-85. doi: 10.1016/j.ejim.2020.02.033. Epub 2020 Mar 6. PMID: 32151490

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Background: An abnormal ankle-brachial pressure index (ABI) is a marker of the risk for increased total and cardiovascular (CV) mortality. However, it is not clear whether it is associated with an even worse prognosis in patients with previous CV events or with cancer mortality.

Materials and methods: Consecutive subjects undergoing ABI assessment for suspected peripheral artery disease or for stratification of CV risk in ten centers in the Veneto Region (northeast Italy), between 2011 and 2014 were enrolled. The ABI was expressed as normal  $\geq 0.9$  to  $\leq 1.3$ , and abnormal < 0.9 or > 1.3. All-cause mortality and CV or cancer mortality and hospitalizations for CV disease were collected from administrative databases up to December 2018.

Results: The study enrolled 1,177 patients. ABI was abnormal in 57.2%. Median follow-up was 61.6 months (53.4-70.1). All-cause, CV and cancer mortality were higher in patients with abnormal than normal ABI, with hazard ratios (HR) respectively 2.0 (95% CI 1.48-2.69), 1.98 (95% CI 1.24-3.17) and 1.85 (95% CI 1.09-3.15). Among subjects with abnormal ABI, the risk of overall mortality, HR 1.57 (95% CI 1.17-2.12), and CV mortality, HR 2.39 (95% CI 1.43-3.99), was higher in those with previous CV events. These latter also had a higher risk of hospitalization for myocardial infarction and stroke: HR 1.85 (95% CI 1.023.37) and 2.17 (95% CI 1.10-4.28).