

How Coronary Artery Calcium Testing can Guide Management Decisions for Primary Cardiovascular Prevention

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Abstract

The use of traditional risk factors and laboratory markers to estimate 10-year risk for atherosclerotic cardiovascular disease (ASCVD) remains the cornerstone of clinical decision making for primary prevention of ASCVD in asymptomatic persons. Emerging guidelines suggest measurement of subclinical atherosclerosis provides the strongest risk stratification to guide management decisions. In this regard, coronary artery calcium (CAC) testing is preferred over other imaging methods as provide greater prognostication, discrimination, and reclassification of ASCVD risk. Apart from identifying those truly high-risk persons in whom most ASCVD events occur, an absence of CAC confers a very low risk for future events. A CAC score of 0 has been established to reclassify borderline- to intermediate-risk patients into a category in which lipid-lowering therapy is no longer recommended, a concept termed *the power of zero*. In summary, CAC testing is now a guideline-endorsed decision aid for borderline- to intermediate-risk patients who seek more definitive risk assessment as part of a clinician–patient discussion. This testing can reduce low-value treatment and focus primary prevention therapy on those most likely to benefit.

Keywords

CVD, prevention, CAC, statin, risk stratification, guidelines