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## Low-cost preventive screening using carotid ultrasound in patients with diabetes

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### Abstract

Diabetes and atherosclerosis are the predominant causes of stroke and cardiovascular disease (CVD) both in low- and high-income countries. This is due to the lack of appropriate medical care or high medical costs. Low-cost 10-year preventive screening can be used for deciding an effective therapy to reduce the effects of atherosclerosis in diabetes patients. American College of Cardiology (ACC)/American Heart Association (AHA) recommended the use of 10-year risk calculators, before advising therapy. Conventional risk calculators are suboptimal in certain groups of patients because their stratification depends on (a) current blood biomarkers and (b) clinical phenotypes, such as age, hypertension, ethnicity, and sex. The focus of this review is on risk assessment using innovative composite risk scores that use conventional blood biomarkers combined with vascular image-based phenotypes. AtheroEdge™ tool is beneficial for low-moderate to high-moderate and low-risk to high-risk patients for the current and 10-year risk assessment that outperforms conventional risk calculators. The preventive screening tool that combines the image-based phenotypes with conventional risk factors can improve the 10-year cardiovascular/stroke risk assessment.

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