

Noninvasive Imaging

SHAPE Task Force proposes near-universal cardiac imaging

Asymptomatic men aged 45 to 75 and asymptomatic women aged 55 to 75 could be screened to detect their near-term risk.

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Heart disease prevention should take an approach similar to cancer prevention, with near-universal screening of all men and women of a certain age, according to the SHAPE Task Force proposal.

The Association for the Eradication of Heart Attack released its SHAPE (Screening for Heart Attack Prevention and Education) practice guideline, which is scheduled for publication in an upcoming issue of the *American Journal of Cardiology*.

“Screening for early-stage asymptomatic cancers (eg, breast and colon) to prevent late-stage malignancies has been widely accepted. However, although atherosclerotic cardiovascular disease accounts for more death and disability than all cancers combined, there are no national screening guidelines for asymptomatic atherosclerosis,” the task force wrote in its consensus statement.

The SHAPE guideline proposes noninvasive screening to detect subclinical atherosclerosis in asymptomatic men aged 45 years to 75 years and asymptomatic women aged 55 years to 75 years who are not considered very low risk. This accounts for approximately 50 million people in the United States.

Those people who then test negative for atherosclerosis would be classified as lower risk or moderate risk, with reassessment recommended within five to 10 years. Those who test positive for atherosclerosis would be stratified according to the magnitude of atherosclerotic burden into further risk categories.

“Thus, the 1st SHAPE Guideline emphasizes titrating the intensity of risk factor modification and treatment goals proportional to the risk,” the document states.

Traditional risk assessment

“The SHAPE guideline makes a good case for the limitations of traditional risk assessment,” said Roger Blumenthal, MD, director of the Johns Hopkins Ciccarone Center for the Prevention of Heart Disease and editorial board member of *Today in Cardiology’s* Preventive Cardiology section. Blumenthal was a member of the SHAPE review committee.

“What you want to find out is whether a patient at risk should be on life-long aspirin or cholesterol medication,” Blumenthal said.

“In my view, this is more of a call to action for people to look at all of the data that we have about subclinical atherosclerosis, C-reactive protein and other tests that can help in this broad intermediate risk category.”

Jay Cohn, MD, professor of medicine at the University of Minnesota and editorial board member of *Today in Cardiology’s* Myocardial Disorders, Heart Failure and Transplantation section, was a member of the task force editorial committee.

“I am a strong proponent of the idea that we should evaluate screening as a possible strategy for everyone over a certain age range, but the SHAPE task force has taken it a little too far too quickly,” Cohn said. “We don’t have good enough data to suggest that community screening of everyone with these particular methods is cost-effective.”

Rather than viewing the document as a “guideline,” Cohn said it should be promoted instead as a “call to arms” that emphasizes that “heart attacks and strokes and advanced heart failure can, in fact, be prevented if we identify the people at risk and intervene early.”

Vulnerable plaque, vulnerable patient

The SHAPE guidelines are based on the concepts of the vulnerable plaque and the vulnerable patient, which involve testing for subclinical arterial disease.

One of the testing methods available for measuring subclinical atherosclerosis is the assessment of coronary artery calcification by computed tomography. Ultrasonography can also measure carotid artery intima-media thickness.

“Both of these imaging methods provide prognostic information of proven value regarding the future risk of heart attack and stroke,” AEHA officials wrote. “Careful and responsible implementation of these tests as part of a comprehensive risk assessment and reduction approach is warranted.”

Other tests, such as MRI of the great arteries, studies of small and large artery stiffness, and assessment of systemic endothelial dysfunction are emerging and will need further validation, according to the report.

“The screening results (severity of subclinical arterial disease) combined with risk factor assessment are used for risk stratification to identify the vulnerable patient and initiate appropriate therapy. The higher the risk, the more vulnerable an individual is to a near-term adverse event.

“Since less than 10% of the population who test positive for atherosclerosis will experience a near-term event, additional risk stratification based on reliable markers of disease activity is needed and is expected to further focus the search for the vulnerable patient in the future.”