ease)[1] of 15 or higher was observed in half of patients in both the standard-care and CTA groups and essentially drove both the event rates and the lower rate of death from coronary heart disease or nonfatal myocardial infarction in the CTA group versus the standard-care group (6% vs. 3%). A high risk score alone should have provoked a similarly targeted uptake in preventive therapies in both groups. Without knowing the uptake, timing, and relative proportions of preventive therapies provided in the high-risk subgroups on the basis of the ASSIGN score, one could speculate that appropriate preventive therapy in the standard-care group would have attenuated the benefit attributed to coronary CTA, obviating any need for systematic coronary CTA.

Peter Bogaty, M.D.

Laval University
Quebec, QC, Canada
peter.bogaty@fmed.ulaval.ca

James Brophy, M.D., Ph.D.

McGill University
Montreal, QC, Canada

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TO THE EDITOR: Rates of heart-healthy lifestyles and preventive therapies remain suboptimal.[1] Among U.S. adults, only 55% with an indication for the receipt of statins actually receive this therapy, 52% with hypertension have a blood pressure below 140/90 mm Hg, 22% use tobacco products, and 29% engage in minimal physical activity. Finding ways to improve cardiovascular risk-factor control is critical. The SCOT-HEART trial suggests that noninvasive coronary imaging improves risk-factor control, thereby reducing the risk of myocardial infarction.

CTA provides simple, visual confirmation of patient risk to physicians debating whether to initiate preventive therapy. Statin medications and healthy lifestyle are safe, low-cost interventions that some argue should be adopted universally, without additional imaging-based risk stratification. However, many patients prefer to avoid medications, and lifestyle changes are difficult to initiate and sustain.[2,3] Personalized medicine with the use of imaging may be the necessary nudge to motivate statin initiation and healthy behaviors. Coronary-artery calcium imaging may provide similar motivation at lower cost.[4] Implementation trials are urgently needed to help us understand the best way to leverage the power of imaging to improve the measures taken against cardiovascular disease.

Alexander T. Sandhu, M.D.
David J. Maron, M.D.

Stanford University School of Medicine
Stanford, CA
ats114@stanford.edu

No potential conflict of interest relevant to this letter was reported.

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TO THE EDITOR: The latest publication from the SCOT-HEART investigators shows that performing coronary CTA in patients who presented with angina pectoris resulted in a rate of the primary end point, nonfatal myocardial infarction or death from coronary heart disease, that was 41% lower than that among patients who did not receive coronary CTA. Although this strategy worked, the authors have not determined how it worked. The Scottish participants were suitable candidates for risk-factor manipulation; the prevalence of obesity, smoking, and hypercholesterolemia was approximately 50%. The authors of the accompanying editorial noted perceptively that the increases in the use of medications such as statins and aspirin in the CTA group were modest.[1] However, rates of smoking and levels of cho-

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lesterol and blood pressure during the trial were not reported. In my experience, a 50% stenosis in a single vessel, ineligible for intervention, has the most devastating effect on patients, who often believe that they have one foot in the grave. We need to ensure that we are not merely using this costly[2] and hazardous (owing to exposure to contrast material and radiation) procedure as a scare tactic.

Bernard M.Y. Cheung, Ph.D., F.R.C.P.
University of Hong Kong
Hong Kong, China
mycheung@hku.hk

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THE AUTHORS REPLY: Several correspondents questioned how modest overall changes in preventive therapies (with the use of these therapies approximately 10% higher in the CTA group than in the standard-care group) could have such a substantial effect on outcome. We reported overall rates of preventive-therapy use, but these rates belie the changes in therapy (discontinuations and initiations) that occurred in one in four of the patients randomly assigned to receive CTA.[1] Moreover, aspirin therapy and early coronary revascularization markedly reduce coronary events in patients with unstable disease: a significant proportion of our patients had recent-onset angina pectoris. We have undertaken treatment-effect modeling, applying the observed changes in preventive therapies, and this action has demonstrated the plausibility of the effect size.

Korosoglou and Giusca highlight the reductions in late coronary revascularizations with CTA. Beyond 1 year in the CTA group, 8 revascularizations were performed that were triggered by myocardial infarction and 25 elective procedures were performed, as compared with 18 and 41, respectively, in the standard-care group. Thus, both urgent and elective revascularizations appeared to be reduced, which suggests the avoidance of both acute events and progressive disease.

Bogaty and Brophy make an important point regarding the implementation of risk scores. By design,[1,2] we prompted clinicians who were using either the CTA result (CTA group) or the cardiovascular risk score (standard-care group) to address the concern that merely providing a risk score could achieve the same outcome as CTA. However, as intimated by Sandhu and Maron, we did observe in the CTA group that for any given level of cardiovascular risk, patient receipt of a diagnosis of coronary artery disease was associated with a use of aspirin and statin therapy that was two to three times as high as in patients without such a diagnosis. Unfortunately, we currently do not have data on lifestyle changes, lipid concentrations, or blood pressure, although we are collating these data. We suspect that patient awareness of CTA-defined coronary artery disease may improve compliance with recommendations for both preventive medication and lifestyle interventions.

We acknowledge Cheung's point that we may cause some anxiety by declaring the presence of disease,[3] but the cost of CTA is fairly low, CTA is not associated with major hazard,[4] and CTA better targets the use of costly investigations, invasive procedures, and preventive therapies: the goal of precision medicine. Finally, we agree with Sandhu and Maron that we need more evidence regarding the effect of CTA as compared with risk scores on improvement in the prevention of cardiovascular disease, especially in asymptomatic patients. This will be our goal in the SCOT-HEART 2 trial.

Michelle C. Williams, M.D., Ph.D.
Philip D. Adamson, M.D., Ph.D.
David E. Newby, M.D., Ph.D.
University of Edinburgh
Edinburgh, United Kingdom
d.e.newby@ed.ac.uk

Since publication of their article, the authors report no further potential conflict of interest.

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