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EMBARGOED FOR RELEASE, 9 A.M. ET, March 31, 2003

ARMING PATIENTS WITH INFORMATION DOES CHANGE BEHAVIOR

Seventy-five percent significantly changed their lifestyle or took medication when given high coronary calcium score

Salt Lake City, Utah (March 31, 2003) -- A new study shows that high coronary artery calcium scores are directly related to significant vessel narrowing, and asymptomatic people with high scores will make significant lifestyle changes to prevent heart disease and atherosclerosis if they have this information, according to data presented here today at the 28th Annual Scientific Meeting of the Society of Interventional Radiology. "As interventional radiologists, we routinely treat people who have the end results of atherosclerosis – clogged arteries throughout the body that cause heart disease, peripheral vascular disease, ruptured abdominal aortic aneurysms and stroke. It's really gratifying to intervene at this early stage, when action can be taken to prevent these events," says Michael Mastromatteo, MD, interventional radiologist at Beth Israel Deaconess Medical Center.

Coronary calcium scoring is a relatively new, painless diagnostic test that can help patients and their doctors determine if a person is at significant risk for atherosclerosis and if they need to take action. It is performed using very fast CT imaging, which is a safe test with low radiation exposure, similar to that of a mammogram. The entire examination and consultation with the radiologist takes less than an hour and is painless. The test results are reported using the Agatston scoring system, which relates the calcium score with the total atherosclerotic plaque burden, and compares the results to a baseline normal matched for age and gender. The results are reported by percentiles and compared to a healthy person of that age and sex.

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About the Study

Seventeen hundred asymptomatic patients (1206 males and 394 females) ages 25 to 70+ had the test. All completed a questionnaire related to past medical history, diet, amount of exercise and lipid levels.

Three hundred sixty seven patients had calcium scores greater than the 75th percentile, and of those 98 (30 percent) returned follow-up questionnaires. Questionnaires included the following: symptoms experienced since the scan, if they underwent any further recommended testing; and if steps were taken to lower their lipid levels and stop progression of atherosclerosis. Of these 98 asymptomatic patients:

- The total cholesterol was elevated in 73% pre- and only 25% post-scan
- The low density lipoprotein cholesterol (LDL) was elevated in 84% pre- and 31% post-scan
- 25% were on statin (cholesterol lowering) therapy pre- and 58% post-scan
- 75% reported lifestyle changes in diet, exercise and weight reduction
- 30% reduced their total and LDL cholesterol by lifestyle changes alone
- 69% then had treadmill tests for further evaluation and 10% of these (9 patients) required further intervention – coronary arteriography with stenting or coronary bypass surgery.

“The study shows that the vast majority of patients with high coronary calcium scores – 75 percent – will change their lifestyle to halt or slow the progression of atherosclerosis and coronary artery disease.

These changes include adding or increasing statin medication, altering their diet, and exercising. Ninety percent reported lower and near-normal cholesterol levels post-scan. This is a very powerful tool,” say Mastromatteo.

Many primary care physicians and internists are referring their patients with hyperlipidemia for the test to see how much their high cholesterol has affected the coronary arteries. “The physicians that have sent their patients to us are really satisfied with the test. They are able to give their patients specific information about their risk and what’s happening to them internally. Their patients are much more motivated to take action or medications if needed,” says Mastromatteo. We provide a consult with patients and their referring physicians. It’s a good partnership for better health care, says Mastromatteo.

Many people request the test themselves if they have risk factors for heart disease and most of the people who have the test have two or three risk factors. An in-depth consult with the patient is provided, including a review of risk factors and lifestyle changes.

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Test Availability

The test is widely available at radiology departments with fast CT scanners in hospitals throughout the U.S. It is not currently covered by insurance and costs about \$400. “Although the insurance industry wants more proof of its utility as a screening test, we are seeing a tremendous increase in its use in just the past year, as physicians and patients are finding it valuable, and finding out it is available,” says Mastromatteo.

About the Society of Interventional Radiology

An estimated 5,000 people are attending the Society of Interventional Radiology 28th Annual Scientific Meeting in Salt Lake City. The Society represents interventional radiologists — physicians who specialize in minimally invasive, targeted treatments performed using guided imaging. Interventional radiology procedures are a major advance in medicine that do not require large incisions — only a nick in the skin about the size of a pencil tip — and offer less risk, less pain and shorter recovery times compared to surgery. Interventional radiologists pioneered modern medicine with the invention of angioplasty, the first catheter-delivered stent and the coronary angiography technique most used worldwide -- state of the art treatments that are commonplace in medicine today. More information can be found at www.SIRweb.org.

Interviews are available by contacting the press office on site at 801-534-4753.

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