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Isiah Thomas on full court press for heart scans

By John Morgan, Spotlight Health, with medical adviser Stephen A. Shoop, M.D.

Isiah Thomas has made a lot of game-winning shots in his storied NBA career. Now the Hall of Fame guard is taking a shot at raising awareness about the early detection of heart disease.



Isiah Thomas, coach of the Indiana Pacers, encourages heart scans for the early detection of heart disease.

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"I'm 42 and when you get to the age of 40 you have to start paying more attention to your health," says Thomas, who coaches the Indiana Pacers. "You want to make sure everything is working right as you enter the next phase of your life. When you're walking around feeling healthy, it's always better to know for sure and get checked because you never know."

But then most victims of first heart attacks never know.

In the past thirteen months, several high profile sports celebrities have succumbed to heart attacks or needed emergency cardiac procedures, including: Daryl Kile, Dave Debusschere and Phil Jackson.

According to James Ehrlich, medical director of preventive imaging facilities in three NBA cities, exercise treadmill tests would have likely been falsely reassuring in the weeks prior to these catastrophic events.

"While stress tests are very valuable for people who are having chest pains," Ehrlich says "they are almost worthless in predicting which apparently healthy individuals are going to have a heart attack. You generally need a 70% blockage to fail a stress test while the majority of coronary events occur when you have less than a 50% plaque that suddenly disrupts."

Technology does exist that could have alerted these men to their heart disease long before it became life-threatening. That's why Thomas has teamed up with Heart Check America to raise awareness about electron beam computed tomography.

EBCT is a CT scanner with no moving parts designed specifically to image the beating heart. Reclined on a table, the patient is fully clothed

while being moved 3mm every heart beat. During one breath-hold, approximately 35-40 images are taken every one-tenth of a second when the heart is essentially still.

"The heart scan was very pleasant, easy and very simple," Thomas says. "I got on the table fully clothed. It took about a minute and a half. And right after that they were giving me the results."

Once the scan is completed, the images are sent to a work station where they are reconstructed in both two and three dimensions for the radiologist or cardiologist to read.

"The most common use of the scanner is to quantify how much calcified plaque is in the coronary arteries," says Ehrlich, who is medical director at Colorado Heart Imaging in Denver.

Seeing is believing

"It's a powerful visual image," Thomas notes. "When they can point to that screen and you can actually see it and look at it from different angles, it is really powerful. You don't really know usually what's going on inside your body and this shows you."

Key advantages of EBCT imaging include its low radiation and its "ultra fast" speed. Compared to the typical spiral CT scanner, it emits lower radiation while acquiring images five times faster.

"EBCT was also uniquely designed to image the heart," adds Ehrlich, who is the inaugural president of the Society for Responsible Preventive Imaging. "Its only advantage is in cardiac imaging, since spiral CT scans perform at least as well in other areas of the body."

Once the data is analyzed and the entire heart is viewed, a calcium score is computed reflecting the total amount of calcified plaque. This score can range from zero to many thousands. The higher the score, the more heart disease is present and the higher the risk. Ehrlich notes that 40% of his patients have a zero score, which is reassuring, but not a 100% guarantee never to have a heart attack.

"We're particularly looking for the people in the top 25th%ile of their age group," Ehrlich notes. "We look at this as a way to identify people years or decades before they have an event and put them on proper medications. With the newer advances in prevention, I believe we can now lower your chances by 60-70% of ever having a heart attack."

The calcium score has turned out to be the most powerful predictor of future cardiac events. "Early plaque is a more powerful predictor of late heart disease than any conventional risk factor, like having high cholesterol, being a smoker or having diabetes," Ehrlich says.

Patients should be referred for EBCT if they have an intermediate risk defined as being middle-aged with at least one conventional risk factor.

"I was interested in the test because I have a family history of heart disease," Thomas explains. "My mother and my father both had heart attacks."

Family history of premature heart disease turns out to be the best single reason to have EBCT. Ehrlich believes that family history is undervalued by current conventional guidelines.

"The new guidelines doctors are being asked to use to calculate your risk of having a heart attack do not value family history," Ehrlich reports. "You get no points for it."

But EBCT is making its point – loud and clear.

Powerful predictor

According to Ehrlich, the key difference between what an office-based doctor can do and what can be done with EBCT is "population-based guessing" rather than "individual" risk assessment.

"We can look at two brothers and a sister whose only history is that their father died at age 49 of a heart attack and we can say to one of them that you have more plaque than 90% of men your age and you need a clinical approach to risk reduction and maybe further testing, but your brother and sister have no evidence of disease so routine lifestyle management is sufficient," Ehrlich says.

In fact, studies show that most people who have sudden unexpected heart attacks have an alarming amount of plaque that can only be detected non-invasively by sophisticated scanning technology.. Yet two-thirds of these people would have sailed through their treadmill tests in the weeks prior to their catastrophic event.

Other studies indicate that coronary calcium is far more predictive than C-reactive protein, high cholesterol, or any combination of risk factors.

"The new paradigm in preventive cardiology is to identify high risk people years or decades before conventional testing becomes abnormal," Ehrlich adds.

The criticism of EBCT scanning is mainly the fact that, in many states, patients can self-refer and self-pay without a physician deciding who are the appropriate candidates for the test.

"Centers need to be responsible about who gets this test," Ehrlich urges. "There are some radiology groups who look at this as simply an extra revenue driver and scan people inappropriately."

Ehrlich feels it is also important to clear up the myth that EBCT heart scans provide false positives or inevitably lead to further testing.

"False positives do not occur," Ehrlich states. "We are measuring plaque and critics are thinking about blockage. Calcified plaque is always

disease. The proper use of this test should actually lead to less testing. Thirty percent of coronary angiograms are normal—all of which could have been predicted by a zero score on this \$395-\$495 procedure. Angiograms can cost from \$4000-\$7000."

Ehrlich says EBCT doesn't tell a doctor who needs an angiogram; it tells them who doesn't need one.

"This is about prevention, not intervention," Ehrlich stresses.

While Thomas is keeping his scan results private, he says he is extremely glad he took the test and that it provided "tremendous peace of mind."

"I am going to stay on the same course and keep doing what I am doing," reports Thomas. "I would encourage more people to go and get their heart scanned because it can be life-altering. It's better to have this kind of information too soon rather than too late."