



HeartCam™
Preventive Heart Care Center

A Service Provided in Collaboration
with PENN Cardiac Care
at Presbyterian Medical Center

215.662.LIFE

WHY CHOOSE HEARTCAM?

HeartCam is the only FDA and AHA approved screening in the tri-state.

HeartCam is located on the 3rd Floor of the Philadelphia Heart & Lung Institute at Penn Presbyterian on 38th & Market Streets in Philadelphia. For appointments call 215-662-LIFE (5433).

The American Heart Association released a statement in October 2006 claiming *“EBCT imaging can be helpful in making the difficult treatment decisions for the millions of intermediate-risk patients, defined as having a 10-20% 10 year Framingham risk score.”*

HeartCam is the only EBCT imaging center in the tri-state providing excellent service since 2002.

HeartCam’s EBCT technology is the ONLY non-invasive test for asymptomatic, intermediate risk patients with reports read by Penn Cardiologists. It doesn’t require beta blockers to slow the hear like other MDCT angiography scanners.

HeartCam has the **LOWEST radiation dose compared to all other MDCT scanners** in the Philadelphia area, some as much as 10X lower.

HeartCam determines progression at a much EARLIER stage than stress tests. Stress tests show only blockages of 70% or greater whereas HeartCam detects actual disease.

HeartCam is a joint service provider with the University of Pennsylvania Health System. *The Best Doctors in America* lists more cardiologists and cardiothoracic surgeons from Penn Health than any other Philadelphia hospital



Testing to Foil Sudden Cardiac Death

Tim Russert might have been helped by coronary calcium scoring but it’s fraught with controversy.

A man in the prime of life, who came to symbolize Everyman, collapses one afternoon at his office and dies suddenly of a heart attack. No warning. No symptoms. Tim Russert, beloved NBC journalist who eased his way into millions of homes every Sunday morning, put a neighborly face on this shocking manifestation of coronary artery disease. Beholding this, raw and up close, in a man who practiced prevention and had good medical care, sends shivers through the baby boomer crowd. And a sense of inevitability and

dark surprise lingers, as if there is no recourse. This conclusion however, needs to be “Russerted,” as pundits described his way of probing issues deeply. **In fact, more** can be done to anticipate and head off such catastrophe. A simple heart scan that measures calcium in the coronary arteries can make all the difference. The scan, which has been around for 20 years and can detect coronary disease in those without symp-

toms, is hotly debated in the medical community. It is fast, uses low-dose radiation similar to a mammogram, and is priced in the hundreds of dollars. But in a turn-off to mainstream medicine, coronary calcium scanning has been marketed directly to consumers by for-profit imaging centers, starting early on, before its usefulness was evident. Government and private health insurers are resistant to paying for it, and it has not been recom-

mended as part of standard care. Russert had the study 10 years ago, but it was not repeated. The approach is beautifully simple. Calcium accumulates in advanced plaques, so calcium visible in the heart’s arteries indicates atherosclerosis. An exploding number of studies in the past few years have unequivocally shown that the calcium score predicts both heart attack and sudden death. As a generalization, patients with scores between 100 and

HeartCam **FAQ'S**

Frequently Asked Questions

What is HeartCam?

HeartCam, located at Presbyterian Medical Center, has brought advanced Electron Beam Tomography (EBT) heart scanning technology to the Delaware Valley. It is the most accurate technology currently available for the early detection of heart disease. EBT heart scanning takes ultra-fast pictures of the beating heart, recording calcium deposits in the coronary arteries, a proven clinical marker for plaque and heart disease.

What is the procedure for HeartCam?

HeartCam is a fast, non-invasive procedure that takes about 15 minutes from start to finish. There is no preparation, no injected dyes, medication or discomfort. As the patient lies still on a table, HeartCam takes ultra-fast images or slices of the beating heart, capturing presence of calcium in the arteries. The slices are then "scored" to determine the total amount of calcium present and compared to a data base of patients of the same age and sex. PENN cardiologists verify all results and generate a report for the patient and referring medical provider within 2-3 days of the procedure.

What is the significance of calcium scoring?

HeartCam can detect the disease in your coronary arteries by measuring the buildup of calcium in your arteries. The more calcium detected, which indicates excessive plaque burden, the higher the "calcium score." The calcium score can range from zero, which indicates minimum plaque burden, into the thousands.

What does a zero score actually mean?

The absence of coronary calcification, or a zero score, very strongly suggests that plaque is minimal and risk is very low for a cardiac event. However, no test is 100% accurate. HeartCam should be used in conjunction with other diagnostic tools and patients are always advised to follow the general health guidelines for primary prevention of cardiovascular disease.

How long does it take to get a HeartCam appointment?

Call 215-662-LIFE (5433) to schedule a HeartCam appointment, Monday through Friday, 9am-4pm. The procedure takes about 15 minutes. HeartCam is located on the 3rd floor of the Philadelphia Heart Institute at the Presbyterian Medical Center at 39th and Market Streets in Philadelphia.

How Do I order a HeartCam test?

To order an EBT scan, simply fill out a prescription like you would for any other test:

Patient:

Diagnosis:

Referring Medical Provider: *Physician*

Rx: EBT of heart to determine coronary calcification

How much does HeartCam cost and does insurance pay for the exam?

The cost for the scan is \$395. Unfortunately, in our area HeartCam test is not currently covered by most insurance plans. Some plans, however, will reimburse the patient for a portion of the cost. The patient should submit a copy of the ordering clinician's prescription as well as copies of receipts of payment when filing a claim. HeartCam can assist the patient with required documentation for insurance company submission. We also accept VISA, Mastercard and Discover as well as personal checks and cash.

How can I qualify the out-of-pocket cost to my patient?

Roughly half of all heart attacks and other coronary deaths occur in people without symptoms of heart disease. HeartCam can offer 99% accurate, non-invasive test to help predict risk level for those people who are in a mid-risk category for disease and may otherwise go undetected. In fact, according to the National Institute of Health, HeartCam's EBT heart scan is "the best available non-invasive technique for quantifying sub-clinical atherosclerosis." Over 2,000 independent studies validating EBT have been published proving it as an invaluable tool for patients in managing their preventive heart care.

EBCT has the lowest dose radiation of any CT scanner and 15 years of data supporting its predictive value; stronger than all standard risk factors combined.

Is HeartCam safe?

Yes. There are no injections and no need for dye. The patient receives only a minimal amount of radiation during the test, similar to a couple of x-rays. The EBT scanner is "open" so there is no worry about claustrophobia. Presently, the EBT technology used at HeartCam is the only FDA approved scanning technique for measuring coronary calcium.

Who is a candidate for HeartCam?

The heart scan may be appropriate for men 30 years or older and women 40 years or older with any of the following risk factors:

- Family history of heart attack or coronary artery disease
- Smoking
- Physical inactivity
- Obesity*
- Diabetes
- High blood pressure
- High cholesterol level
- Adopted individuals who do not have access to their biological family history

*weight limit for machine is 300 lbs.

Who should not have a HeartCam?

Patients with a history of heart attack, angioplasty or bypass surgery should not have the test unless physician has referred them and is monitoring their care. Pregnant women should not have the test and young adults are typically not recommended to undergo the scan unless there is a strong family history of heart disease.

How often should a HeartCam be repeated?

We recommend the HeartCam scan be repeated annually because coronary calcification, the leading indicator of coronary artery disease, advances at the rate of about 25% a year.

How does HeartCam compare to a stress test?

HeartCam detects amount and location of coronary plaque at a much earlier stage than a stress test. HeartCam does not tell you if the plaque is obstructive. Stress tests detect blood vessel blockages of 70% or greater. If a patient has a 50 or 60% obstruction, the stress test may read normal while the patient may be at risk.

What is the difference between a MSCT and EBT scan?

There are several types of scanners used for calcium scoring. HeartCam uses electron beam tomography (EBT). EBT is a breakthrough in medical technology that quickly uncovers Disease in it's earliest stages. Because of its high speed (50-100 milliseconds per exposure), it is capable of photographing the heart while it is beating without the blurring effects of spiral CT scanners. The EBT imaging technology is evidence-based and FDA-approved for the earliest detection of coronary artery and other diseases. The tests are conducted and read by board certified radiological technologists and physicians.

The AHA recommends a calcium score when your Framingham Risk calculates between 10%-20%, and considers EBCT the *gold standard* technology.

Directions to HeartCam

From North: Take I-95 South to I-676 (Vine Street Expressway) to I-76 East (Schuylkill Expressway). Take Exit 345 at 30th Street Station. Turn right at top of ramp, following around train station. Right at first light onto Market Street to 38th Street. Take 2nd left into Presbyterian Medical Center. Parking garage on left.

From Northeast: Take Route 1 South to I-76 East (Schuylkill Expressway) to Exit 345 at 30th Street Station. Right at top of ramp around train station. Turn right at first light on Market Street to 38th Street. Turn right on 38th Street and take 2nd left into Presbyterian Medical Center. Parking garage on left.

From the South: Take I-95 North past Philadelphia International Airport to I-76 West (Schuylkill Expressway). Take Exit 346B at University Avenue, which turns into 38th Street. Follow 38th Street to Market Street. Presbyterian Medical Center is the 2nd left after crossing Market Street. Parking garage on left.

From Ben Franklin Bridge: Take I-676 (Vine Street Expressway) to I-76 East to Exit 345 at 30th Street Station. Right at top of ramp around train station. At first light turn right on Market Street to 38th Street. Turn right on 38th Street and take 2nd left into Presbyterian Medical Center. Parking garage on left.

From Walt Whitman Bridge: Take I-676 West (Schuylkill Expressway) to Exit 346B at University Avenue, which turns into 38th Street. Follow 38th Street straight to Market Street. Presbyterian Medical Center is the 2nd left after crossing Market Street.

From the Main Line and West: Take I-76 East (Schuylkill Expressway) to Exit 345 at 30th Street Station. Turn right at top of ramp around train station. At first light turn right on Market Street to 38th Street. Turn right on 38th Street and take 2nd left into Presbyterian Medical Center. Parking garage on left.

HeartCam

3 Philadelphia Heart Institute
At Penn Presbyterian
38th & Market Streets
Philadelphia, PA 19104
215-662-LIFE (5433)

Validated parking available.

**VISIT OUR WEBSITE
AT**

www.phillyheartcam.com
for discounts

2006

AHA Scientific Statement

"...The majority of published studies have reported that the total amount of coronary calcium (usually expressed as the 'Agatston score') predicts coronary disease events beyond standard risk factors. . . . These studies demonstrate that coronary artery calcified plaque is both independent of and incremental with respect to traditional risk factors in the prediction of cardiac events."

"...In clinically selected, intermediate-risk patients, it may be reasonable to measure the atherosclerosis burden using EBCT or MDCT to refine clinical risk prediction and to select patients for more aggressive target values for lipid-lowering therapies."

**AHA 2006 Scientific Statement:
Assessment of Coronary Artery
Disease by Cardiac Computed
Tomography**

**HeartCam is a joint
service provider with the
University of Pennsylvania
at Penn Presbyterian.**

"Coronary-artery calcified plaque, as determined by cardiac CT, documents the presence of coronary atherosclerosis, identifies individuals at elevated risk for myocardial infarction and CVD death, and adds significant predictive ability to the Framingham score."

According to the American Heart Association, EBCT is the only scanner proven through extensive research (800+ articles) to be 100% accurate at diagnosing heart disease. **EBCT has proven to be the "gold standard"** in screening for heart disease due to its speed and low dose radiation. HeartCam is the only center in the Tri State area using EBCT technology for calcium scoring.

The AHA writing committee has concluded that "EBCT has undergone a 20 year period of testing for reliability and validity and is now established as a useful technique in identifying individuals with or at risk for CHD."

Russert continued from page 1

400 face three to four times the risk of a heart attack **or death compared with others at the same age with a zero score. Over 400, that elevated risk more than doubles.**

Most doctors rely instead on the Framingham calculator, which estimates a symptom-free person's risk of a heart attack in the next 10 years based on smoking history, blood pressure, cholesterol levels, sex, and age. It's available free online from the National Institutes of Health. Most people taking the test will have minimal or no coronary disease, though risk estimates over 9 percent should inspire vigorous preventive efforts. **For some, however, coronary heart disease is sneaky, and Framingham will underestimate what lies ahead. Roughly half of those who suffer a major heart attack or sudden coronary death are symptom free. Calcium scores are additive to Framingham; they pick up the**

individual surprises by using X-ray vision to look inside the heart. No wonder insurance companies are scrambling to use coronary calcium scores—life insurers, that is. For those without heart symptoms, a worrisome Framingham score might make paying for a scan worthwhile, with your doctor's guidance. Knowledge that one's own arteries have become encrusted with plaque—or are clean as a whistle—can be a mighty motivator to get or stay serious about healthful diet and lifestyle and prevention. But beyond motivation, a high calcium score points to next steps that are still noninvasive, including very aggressive preventive therapy, exercise stress testing, or even CT-angiography, a scan of the heart that will provide more detailed information. Without moving all the way to an invasive procedure, the doctor will be able to spot treacherous coronary narrowings such as

the "widow maker" that is often the culprit in sudden coronary death—as it was for Russert. Only at that point would invasive diagnostic studies be indicated, probably followed by coronary bypass surgery or stenting. Critics will say the role of screening is still unknown. Follow-up procedures might be done on too many who don't need them, so scans might not actually save lives or be cost-effective. Only a randomized controlled trial can provide certain answers, however, and that would take more than a decade. Edward Shapiro, a cardiologist at Johns Hopkins who is a leader in heart imaging, points out that for today, doctors caring for patients have to use logic based on data that are available. And for someone who feels good but knows his waist is too large, his diet too grand, his stress level too high, and his risk factors out of whack, what we have so far is compelling.