

**Q & A**  
featuring Lourdes  
interventional cardiologist:

**Thierry Momplaisir, MD**  
South Jersey Heart Group

**My colleagues and I continue to see a lot of pain and debilitation, and sometimes limb loss, among our patients who have peripheral vascular disease. How do you recommend approaching PVD?**

PVD is getting increased attention, and deservedly so, given how serious the condition can be and how prevalent, underdiagnosed and undertreated it is. Type of care for each patient is dictated by the severity of the disease. And here, symptoms are a good indicator. If they are modest, such as mild cramping or pain at rest, then conservative measures, such as exercise and medication, are appropriate. If the symptoms include difficulty walking or severe pain, then vascular studies are called for. These usually reveal stenotic arterial blood flow in the femoral artery or below the knee, and indicate the vessel locations that need treatment.

Clinicians who care for diabetes or foot wounds need to stay vigilant for patients who have both claudication symptoms and nonhealing ulcers or necrotic wounds. Collaboration with a first-rate wound center and vascular service, such as those at Lourdes, is important. Newer catheter-based revascularization procedures in interventional cardiology—using lasers, angioplasty and stents—are helping to save more limbs. For high-risk patients, referral for evaluation for this specialty care is smart preventive medicine. These services should offer multidisciplinary solutions and options.



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Nearly 100 cardiologists and cardiovascular surgeons staff the New Jersey Heart Institute at Lourdes, one of the largest providers of cardiac services in the Delaware Valley. The NJHI team evaluates and cares for cardiac problems using a complete array of the latest and most innovative techniques and interventions.

NJHI's staff conducts cardiac catheterization at labs at Our Lady of Lourdes Medical Center, Lourdes Medical Center of Burlington County and Kennedy Memorial Hospital in Cherry Hill. NJHI also offers peripheral angioplasty and open-heart surgery, as well as comprehensive options for heart rhythm disorders. It provides advanced heart failure treatment and cardiac rehabilitation and pursues a broad range of research activities. For more information or to find a Lourdes cardiologist, call the NJHI at 856-365-4072 or go to [www.lourdesnet.org](http://www.lourdesnet.org).

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# CardiologyLog

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## Expanding Use of Carotid Stents

Medicare and insurance companies cover carotid artery stenting for only a limited group of patients. But with recent safety results for the procedure, and with more trial registries tracking this approach, carotid stenting continues its likely advance to a mainstream alternative for carotid endarterectomy.

Findings released this year from a 10-year NIH study showed that carotid angioplasty with stenting has similar outcomes to surgery. At most medical centers, however, the procedure's availability remains limited to patients who, due to co-morbidities, are at high-risk for the surgery.

"But through our participation in the ACT I trial and various registries, we are fortunate at Lourdes to provide this option to more patients, including healthier, asymptomatic patients," says Lourdes interventional cardiologist Ronald Cohen, DO, FACC.

The incidence of periprocedural stroke due to plaque fragments has been a question with the endovascular approach. However, stenting has become safer with use of techniques to prevent debris from passing downstream from the interventional site. For this cerebral protection, Lourdes takes advantage of a distal mesh filter.

**Broader reimbursement for stenting could make hundreds of thousands of Americans potentially eligible for a choice in carotid treatment.**

"We know that revascularization reduces risk for asymptomatic patients who have significant stenosis," notes Lourdes interventional cardiologist Randy Mintz, MD, FACC. "And carotid stenting is an option that comes with all the benefits of a minimally invasive procedure. It could lead to more screening and treatment for carotid disease."

Lourdes is the only center in New Jersey and the Delaware Valley participating in the Asymptomatic Carotid Trial (ACT I), which randomizes asymptomatic patients who are at low or

### Affordable CT Calcium Scan Improves Assessment for CAD

Imagine you have a middle-aged patient with a single risk factor for heart disease and no symptoms of the condition. Both you and the patient are considering how aggressive to be in terms of behavior modification and, especially, medical treatment.

Dependably at such a juncture, many experienced cardiologists consider a fairly simple test that has been available for more than 10 years: the CT calcium scan. Most hospitals with a modern CT unit can provide the test, which may require a patient to pay a few hundred dollars, at most, out of pocket (because it's rarely covered by insurance) but may provide critical assurance in deciding the next step of care.

"I recommend it to certain patients considering medical therapy, because it's a completely noninvasive test that may provide evidence of coronary artery disease even before symptoms develop," says Lourdes cardiologist David Schlessel, MD.

Also known as electron beam CT (EBCT), calcium scans are a quick test that measures the amount of calcification, and thus calcified plaque, in the heart. Though it does not reveal soft plaque, a score of zero has been shown to be a fairly good indication that the patient does not have significant atherosclerotic disease.

"A score of anything other than zero indicates greater need for treatment," explains Dr. Schlessel. "And a score of, say, 400 or more indicates a need for an even more aggressive approach. It's very helpful for a doctor to have, because many of these patients don't have blockages or severe narrowing yet, and therefore have negative results on a stress test."

Because a calcium scan is not necessarily a predictor of near-term events but also not



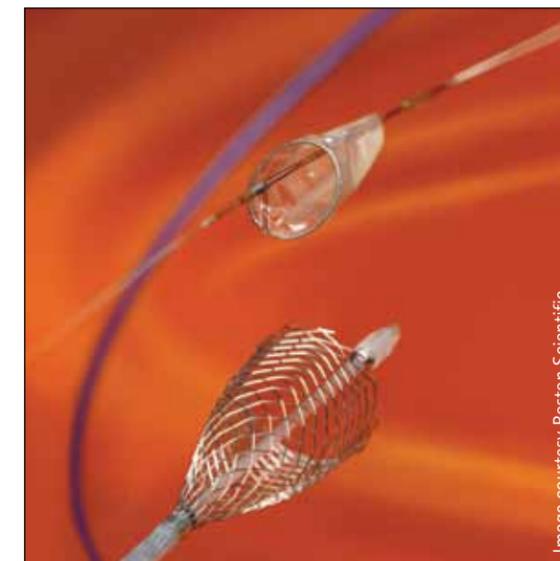
Sometimes referred to as "ultrafast CT" or "multi-detector CT" (MDCT) when delivered by newer-generation CT scanners such as this 64-slice unit at Lourdes, the coronary calcium scan—or figuratively the "heart mammogram"—is a useful metric for coronary artery disease.

the test of choice for patients who already have symptoms, it has not garnered third-party coverage, and yet it provides sometimes very important information for the right patient.

"We add a calcium scan on, at no cost, for every patient who is already undergoing a CT angiography," notes Kathleen V. Greatrex, MD, chief of radiology and nuclear medicine at Our Lady of Lourdes Medical Center. "It's inexpensive and quick, adds relatively little radiation, and the score can be an important piece of information."

Drs. Greatrex and Schlessel indicate that the test's greatest value can be as a motivator to patients who may need to be proactive about CAD. And, it helps the physician risk stratify intermediate-risk patients, especially younger ones.

■ For more information, or to refer a patient, call **1-888-LOURDES**



**A partially expanded carotid stent and downstream filter.** With Lourdes' vascular surgery ranked first in the state by HealthGrades®, and with its depth of experience in carotid stenting—as well as its participation in the most current registries for broader trial application of carotid stenting—Lourdes is in a special position to offer patients the best options for intervening in carotid disease.

standard risk for surgery to either carotid stenting or endarterectomy. (See page 3.)

"Our understanding of whether surgery or stenting might have some relative advantages for subgroups of patients based on age, symptoms if any, and co-morbidities continues to be refined," explains Lourdes cardiovascular interventionalist Audrey H. Sernyak, MD, FACC. "But with either approach, the experience of the interventional or surgical team remains paramount, and here Lourdes has distinct advantages with its volume and staff—and the close collaboration of its surgeons and interventionalists."

■ For more information, or to refer a patient, call **1-888-LOURDES**

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## clinical pearls

### Rheumatoid Arthritis Hits the Heart

Recent reports indicate that rheumatoid arthritis raises the risk of heart disease as much as diabetes does.

Source: Harvard Heart Letter, Feb. 2009

### Vitamin C, E Protection Not Found

The Physicians' Health Study II reinforces other recent studies finding that supplements of vitamin C or E offer no more protection against heart disease than a placebo.

Source: JAMA, Nov. 12, 2008

### Give the Heart the Sleep It Needs

A 2008 study links too little sleep to calcium deposition in the heart, reinforcing other findings that chronic sleep deprivation also exacerbates related factors such as blood pressure, inflammation and stress hormones.

Source: JAMA, Nov. 24, 2008

### Emotions Protect from Heart Disease

Emotional vitality, as assessed by a measure of sense of energy, positive well-being and effective emotion regulation, protects against coronary heart disease (as measured by coronary incidents). The effect is significant even when controlling for health behaviors and depression.

Source: Arch Gen Psychiatry, Nov. 24, 2008

### Meat Intake and Mortality

A study using an NIH-AARP cohort, of some 500,000 individuals, found a positive association of higher dietary intake of red meat and processed meat with increases in cardiovascular mortality, cancer mortality and total mortality.

Source: Arch Inter Med, March 23, 2009

### Toward Fixes for the Damaged Heart

Intraperitoneal injection of a growth factor into mice starting one week after heart attack stimulated heart cells to proliferate, promoting heart-tissue regeneration.

Source: Cell, July 24, 2009

Patients who received injections of purified adult mesenchymal stem cells after heart attack had significantly improved overall cardiac function compared to control subjects.

Source: J Am Coll Cardiol, Dec 8, 2009

## Laser a Safer, More Effective Option for Lead Extraction

With more and younger patients receiving cardiac pacing devices in recent years, more are also requiring lead removal due to lead fracture or infection. Failed leads can cause system malfunction, chronic pain and vascular problems—and can obstruct replacement.

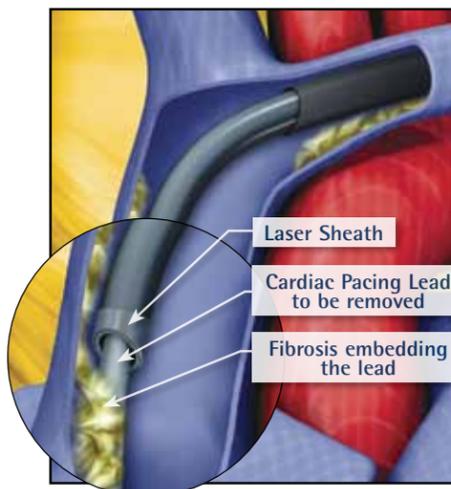


Image courtesy of Spectranetics

A ring of laser energy ablates binding tissue around the circumference of the lead. Short bursts of ultraviolet energy vaporize this scar tissue.

Lourdes has become the first center in its area to use advanced excimer-laser technology to safely and effectively extract such leads.

Fibrous tissue that grows around pacemaker and defibrillator leads challenges cardiac electrophysiologists. The growth makes the leads progressively more difficult and dangerous to remove the longer they remain in the body. In manual extraction, the specialist pulls the lead from the body, which can increase the risk of bleeding or incomplete lead removal, and additional surgery. But with the excimer laser, a ring of ultraviolet light energy gently dissolves scar tissue that has embedded the lead.

"The laser dramatically improves our chances of successfully removing these leads without exposing our patients to increased risk," said Lourdes electrophysiologist George Mark, MD, FACC. According to Dr. Mark, the average lead lasts 10 to 15 years, with a one-to-two-percent annual risk of failure.

Lourdes is one of only a handful of hospitals in the region to also employ the excimer laser for peripheral artery disease and coronary artery disease.

■ For more information, or to refer a patient, call 1-888-LOURDES.

## Give Patients the ABCs of Managing Diabetes

"Patients with diabetes have to be their own best caretakers," says Lourdes endocrinologist Parveen Verma, DO, FACE. "But the disease is not simple to grasp and manage. Healthcare providers can set up a care plan, but it's the patient who must make daily decisions on diet, exercise and drugs."

To help such patients improve their lives, reduce complications and avoid frequent hospitalizations, the Lourdes Health System has partnered with Achieving Better Control, Inc. for its ABC Diabetes Education Program. Certified diabetes educators lead the series, in classes with convenient weekend and evening hours. The American Diabetes Association recognizes the program of interactive discussions that teaches insulin-dependent and noninsulin-dependent individuals about blood-sugar highs and lows; managing medicines; blood-sugar testing; food facts; weight loss; reversing the need for medication; and more.

"We partnered with ABC because the instructors personalize the education to meet each participant's needs, and do so in a supportive, relaxed setting," explains Dr. Verma. "For example, patients are welcome to bring along a family member or friend to these user-friendly sessions."

Lourdes' ABC Diabetes Education Program is not a replacement for the primary healthcare provider's care, but rather a supplement to it. At the conclusion of classes, the physician receives a report on the patient's participation.



■ The program is covered by most health insurance carriers, and is given in both English and Spanish. Classes are held at Our Lady of Lourdes Medical Center, Lourdes Medical Center of Burlington County, the Lourdes Wellness Center in Collingswood and at other community sites. To enroll your patient, call 1-877-533-4222.

## CASE STUDY

# Carotid Stenting in Lower-Risk Patient

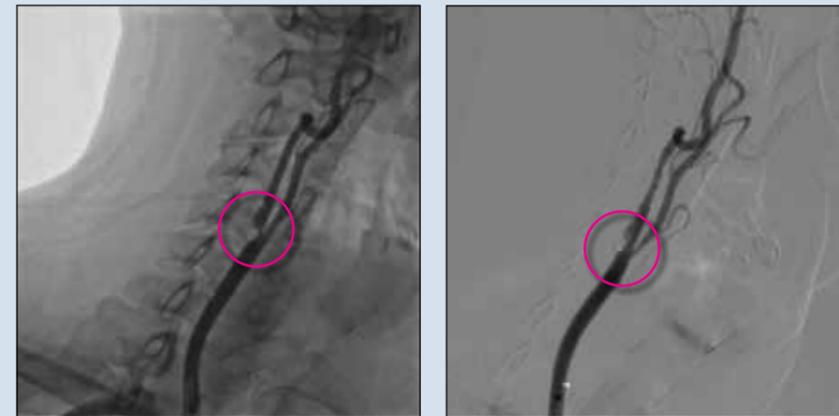
In April 2009, a primary care physician detected a bruit in the right carotid artery of a 61-year-old female patient from Vineland, New Jersey. Several weeks later, the patient underwent a carotid angiogram at Cooper University Hospital that revealed a 90 percent stenosis in the artery.

The patient was interested in pursuing a nonsurgical intervention if possible, but was not eligible for a carotid stent under Medicare/insurance guidelines because she was not deemed high risk for surgery. As a result, Cooper referred her to the cardiovascular service at Our Lady of Lourdes Medical Center for evaluation for the Asymptomatic Carotid Trial (ACT I, [www.act1trial.com](http://www.act1trial.com)).

ACT I randomizes, to carotid stenting, asymptomatic patients who are not high risk for surgery.

The neurologist on the Lourdes team confirmed that she had no indications of previous TIA or stroke. Because she was also at standard risk for surgery, she met enrollment criteria for ACT I, which randomizes (to carotid stenting) asymptomatic patients who are not at high risk for surgery. Three out of four patients receive a stent instead of surgery. The trial system randomly designated this particular patient for stenting.

Lourdes interventional cardiologist Kartik Giri, MD, had undergone special training to offer the treatment under the trial. On the day of the procedure in the interventional laboratory at Our Lady of Lourdes



Pretreatment angiogram (left) shows severe carotid narrowing. Patient was randomized to carotid angioplasty and stenting, in a trial available at Lourdes for nonsymptomatic, surgical-low-risk patients. Post-procedure angiogram (right) shows normalized carotid blood flow.

Medical Center, Dr. Giri made an incision in the patient's femoral artery and advanced the catheter system to the compromised carotid. He performed balloon angioplasty and stent placement on the stenotic location, and used a filter, antegrade to the site, for embolic protection.

Percent residual stenosis targeted by the team in these procedures is 0 to 20, with 10 percent a typical result—an outcome on par with that obtained by carotid endarterectomy. With the stent placed, the patient's angiogram in the lab showed 15 percent residual stenosis.

Although many patients may be discharged the next day following carotid stenting, this patient—who suffered from hypertension and had received an anti-hypertensive as a standard pretreatment—remained two days in the hospital as a precaution to ensure that her blood pressure was stable before release.

As also standard for patients receiving carotid stenting, she was placed on aspirin and clopidogrel. The trial requires at least four weeks of such therapy, post procedure, though most patients will continue on this regimen long term.

At her 30-day and six-month evaluations at Lourdes, she felt well and had no neurological changes. An ultrasound of her carotid artery confirmed that her stenosis had not changed from that measured immediately post-treatment. At her one-year follow-up, the team will use ultrasound again to assess both of her carotid arteries.

The patient, who also has hyperlipidemia and diabetes, had received extensive lifestyle counseling by that point, both by the Lourdes staff and her primary physician. Partly as a result, she gave up smoking after her discharge from Lourdes, and she currently remains tobacco free.

Lourdes is the only center in the Delaware Valley/New Jersey area offering carotid stenting for asymptomatic patients who do not otherwise qualify for the procedure under standard guidelines (due to their being at low or standard risk for surgery).

■ For more information, or to refer a patient, call 1-888-LOURDES.