



Stony Brook University **Heart** Center

Long Island's
ONLY
University-Based
Heart Center

Welcome to the Heart Center

THE STONY BROOK UNIVERSITY HEART CENTER OFFERS A COMPREHENSIVE, MULTIDISCIPLINARY PROGRAM FOR THE PREVENTION, DIAGNOSIS, AND TREATMENT OF CARDIOVASCULAR DISEASE. Our staff includes 50 full-time and community-based, board-certified cardiologists and cardiothoracic surgeons, as well as 350 specially trained anesthesiologists, nurses, physician assistants, nurse practitioners, respiratory therapists, operating room technicians, perfusionists, and other support staff. Their expertise allows us to offer state-of-the-art interventional and surgical capabilities in 24-hour cardiac catheterization labs and surgical suites.

The Heart Center is located within Long Island's only university-based medical center. Not only do we offer the latest advances in medicine, but our physician-scientists are also actively enhancing knowledge of the heart and blood vessels through basic biomedical studies and clinical research.

This is a promising time in the prevention and treatment of cardiovascular diseases. New diagnostic and imaging technologies yield unprecedented views of the heart. Minimally invasive surgeries offer patients faster recoveries. Procedures are constantly evolving to treat arrhythmias and other complex conditions. Here at the Heart Center, we implement these lifesaving strategies with effectiveness, safety, and compassion for our patients and their families.

To learn more about our many services, to request a clinical consultation or refer a patient, or to locate a physician, please call **(631) 44-HEART**.



TODD K. ROSENGART, M.D.

Chief, Division of Cardiothoracic Surgery
Co-Director, Stony Brook University Heart Center



DAVID L. BROWN, M.D.

Chief, Division of Cardiovascular Medicine
Co-Director, Stony Brook University Heart Center



Todd K. Rosengart, M.D.

David L. Brown, M.D.

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Outstanding Outcomes

The most recent outcomes data reflect our dedication to the highest-quality care. Stony Brook's coronary artery bypass graft program achieved a mortality rate of 1% for 2006—less than half the most recent average (2002-2004) in the state, as reported by the New York State Department of Health. The Heart Center's overall operative mortality rate of 3.1% was significantly lower than the 6% statewide (unadjusted) average.

♥ The Heart Center offers minimally invasive surgeries. ♥ We perform 500 heart operations annually. ♥ Our

Challenging Cases, Lifesaving Solutions: Treating Advanced Cardiac Disease

Stony Brook surgeons perform 500 heart operations annually, including the only open-heart surgery in Suffolk County. We are the region's center for high-risk cardiac care.

Our highly skilled cardiothoracic surgeons treat patients with all forms of heart disease, including those who are in a high-risk state following acute myocardial infarction and heart failure; valve repair; ventricular reconstruction; mechanical device support implantation; electrophysiology surgery, including the Maze procedure for atrial arrhythmias; and minimally invasive heart surgery, including mini-thoracotomy and off-pump coronary artery bypass procedures. We also perform endovascular thoracic aortic aneurysm repair (the new “internal bypass” stent).

We operate on the heart, but we focus on all aspects of our patients' care. To mini-

The Heart Center
has provided
cardiothoracic
surgical care for
more than
10,000 patients.

mize the risk of cognitive dysfunction after surgery, we employ state-of-the-art blood pressure manipulation and use epicardial echocardiography during surgery to detect and avoid aortic sources of atheroembolic debris.

“Bloodless surgery” eliminates the need for allogeneic blood transfusion. Our blood conservation program includes less-invasive surgical techniques to reduce blood loss; cell salvage; autologous transfusion; and administration of medications to stimulate the body's blood production before and after surgery.

Minimally Invasive Program

Minimally invasive efforts in cardiac surgery involve procedures performed “off-pump”—without the use of cardiopulmonary bypass via heart-lung machine—or via small thoracic incisions. The result for patients: reduced pain, less need for postoperative pain medication, faster healing time, and smaller scars.

OFF-PUMP CORONARY ARTERY BYPASS: Frank C. Seifert, M.D., heads our minimally invasive bypass surgery program, which includes multi-vessel OPCAB (off-pump coronary artery bypass) and MIDCAB (minimally invasive direct coronary artery bypass). More than 2,000 of these off-pump procedures have been performed

Stony Brook offers minimally invasive approaches to surgical coronary revascularization and heart valve repair and replacement.



bypass program achieved a mortality rate of 1% for 2006—less than half the most recent average in the state. ♥

Cardiothoracic Surgery

at Stony Brook, representing 50 percent of the coronary bypass surgeries performed here. We use endoscopic and radial vein harvesting for all of our patients undergoing bypass, for improved cosmetics, significantly reduced postoperative leg pain and complications, and faster recovery.

MINIMALLY INVASIVE VALVE SURGERY:

Sternotomy incisions are no longer an absolute requirement for valvular surgery. We perform minimally invasive mitral valve and aortic valve repair and replacement, with endoscopic techniques via small thoracotomy (chest) incisions. Most mitral valves are repaired rather than replaced.

THORACIC AORTIC ANEURYSM (TAA):

TAA—a life-threatening bulge in the thoracic aorta, the major artery from the heart—affects an estimated 31,000 people each year in the United States.

Allison J. McLarty, M.D., (below) director of our thoracic aortic surgery program, and



Historic Valve Repair
Long Island's first "closed-heart" valve repair was performed at Stony Brook. The procedure implanted a Coapsys Annuloplasty system to reduce mitral regurgitation, as part of the RESTOR-MV (Randomized Evaluation of a Surgical Treatment for Off-Pump Repair of the Mitral Valve) clinical trial. Stony Brook was the only Long Island hospital to participate in the FDA-regulated multicenter research study. The mitral valve leakage was corrected utilizing a "next-generation" repair device implanted without opening the heart chambers.

Stony Brook surgeons perform endovascular stent grafting of thoracic aortic aneurysms, a safer, more effective approach than conventional surgery.

Thomas V. Bilfinger, M.D., director of our program in thoracic surgery, lead our minimally invasive aortic program that includes the use of stents placed through small incisions in the leg. This newer, safer approach replaces conventional surgery and its associated significant morbidity and mortality. Complex aortic and aortic arch reconstructions and hybrid elephant trunk repairs of the aortic arch are also performed by Stony Brook's cardiothoracic and vascular surgeons.

MAZE PROCEDURE: This highly specialized surgery for atrial fibrillation is available at only a few medical centers, including Stony Brook. A radiofrequency probe makes a series of lines ("maze") in the atrium. Normal electrical impulses travel through these pathways, overriding faulty impulses that cause chaotic and ineffective heartbeat. The surgery has a high

success rate for sustaining normal heart rhythms, usually without the need for a pacemaker.

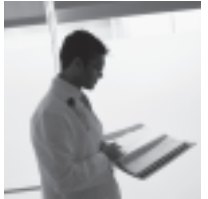
Educating with "Emmi®"

Stony Brook has joined hospitals across the country that ensure patients are well-informed about their surgeries by using "Emmi"® (Expectation Management and Medical Information). Emmi® is a series of Internet-based programs that walk patients through medical procedures, from pre-op through recovery, using text, sound, and computer animation. Emmi's® cardiovascular version (designed by a team that included Dr. Rosengart) gives step-by-step details of valve replacement and coronary artery bypass graft surgeries. Patients view simple yet thorough explanations of normal heart function; progression of heart disease; and risks, benefits, and alternatives to surgery. The program, which complements the informed consent process, may be viewed at home with family or at the hospital bedside via laptop computer.

Growing a Bypass

One in ten cardiac patients is not a candidate for bypass surgery or angioplasty. Dr. Rosengart is investigating angiogenesis (encouraging the heart to grow new blood vessels from existing ones) as a treatment option for these patients. With a \$250,000 grant from the American Heart Association, he is studying whether the early growth response gene can stimulate the heart to revascularize itself.

♥ Todd K. Rosengart, M.D., Thomas V. Bilfinger, M.D., Allison J. McLarty, M.D., and Frank C. Seifert, M.D., were included in the



Integrative Healing

Because we treat the entire patient rather than just his or her cardiac disease, we offer integrative medical modalities that have proven effective in strengthening natural healing ability. Acupuncture, therapeutic massage, guided imagery, and therapeutic touch (Reiki) promote relaxation and enhance recovery pre- and post-operatively. Dr. McLarty oversees our Integrative Medicine Program.

2006 Castle Connolly guide *America's Top Doctors*, as well as in the



2006 Guide to America's Top Surgeons. ♥



The ten-bed cardiac intensive care unit (CICU) is adjacent to the catheterization labs. CICU patients may be offered the opportunity to participate in clinical trials of novel treatments for heart attack or heart failure.

♥ **Interventional cardiologist David L. Brown, M.D., and thoracic surgeon Todd K. Rosengart, M.D., were named among the**



Round-the-Clock Catheterization Offers Emergency and Elective Care

Cardiologists perform a full spectrum of interventional therapies in catheterization laboratories designed for patient comfort and updated technology.

The Heart Center's catheterization laboratories are the region's only 24-hour coverage for acute myocardial infarction patients who need primary or salvage angioplasty to restore blood flow quickly to the heart. We are the only catheterization facility in the area that is associated with on-site cardiothoracic surgery. Should patients require emergency bypass surgery, a designated elevator brings them directly from the catheterization lab to the operating room.

Safer Catheterization for Higher-Risk Patients

Stony Brook is the only hospital on Long Island to use an advanced system that allows patients undergoing high-risk angioplasty or stenting to be placed on bypass in the catheterization lab. The TandemHeart PTVA® (Percutaneous Trans-septal Ventricular Assist) offers better circulatory support for these patients than the intra-aortic balloon pumps traditionally used for high-risk catheterization.

Atherosclerosis Up Close

Heart Center catheterization labs are equipped with intravascular ultrasound (IVUS), an advanced tool to assess atherosclerotic plaque in coronary arteries. More detailed than conventional angiography,



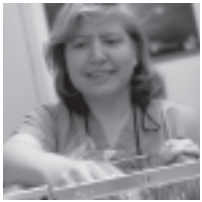
Real-time intravascular ultrasound scans help us design individualized treatment plans for each patient.

IVUS reveals whether plaque is fibro-fatty, fibrous, dense calcium, or necrotic core, and shows the percentage of resulting stenosis. These real-time scans enable us to design individualized treatment plans for each patient.

Adult Congenital Defects

Advanced, non-surgical devices are available to treat patent foramen ovale (PFO) and atrial septal defect (ASD), two serious congenital heart defects caused by abnormal openings between the right and left atria. We use a new technique that closes these openings with connected discs resembling mesh pancakes. Closure with this device requires only an overnight hospital stay.

Our interventional cardiologists use the most advanced tools to assess atherosclerotic plaque in coronary arteries.



Heart attack patients treated at designated chest pain centers are 37% more likely to survive and be discharged home.

♥ Pioneering treatment for angina was developed at Stony Brook. ♥ Code H protocol brings the region's severe

Code H

Saving Hearts Minute by Minute

Acute myocardial infarction begins when a blood clot occludes a coronary artery.

Then the clock starts ticking...

American College of Cardiology/American Heart Association practice guidelines recommend that for salvage of the largest amount of heart muscle, occluded arteries be reperfused within 90 minutes of the patient's presentation to a hospital emergency department.

Stony Brook's Heart Center has reduced door-to-perfusion time to 71 minutes by creating a "Code H" protocol. Rather than remaining at local hospitals for clot-dissolving therapy, patients experiencing

severe chest pain are brought to our emergency department. Electrocardiograms (EKGs) are read within five minutes of the patient's arrival. If the patient is having a heart attack, he or she is taken immediately to the catheterization laboratory for primary angioplasty to restore blood flow.

We are working closely with neighboring hospitals to initiate a Code H from outlying emergency departments, and with local EMS technicians to obtain EKGs in the field to further accelerate treatment.

STONY BROOK DESIGNATED A CHEST PAIN CENTER

The International Society of Chest Pain Centers has recognized Stony Brook as an accredited chest pain center. Accreditation is granted to hospitals that meet or exceed quality of care standards in diagnosing or treating heart attack or acute heart failure.

Intractable Angina

Enhanced External Counterpulsation: Noninvasive Relief for Angina Pain

This nonsurgical, mechanical method of increasing coronary circulation relieves symptoms of intractable angina. Benefits may persist long after completion of treatment.

Enhanced External Counterpulsation (EECP) is a noninvasive, nonsurgical treatment for intractable angina pectoris that was developed by a team including Harry Soroff, M.D., founding chair of Stony Brook's Department of Surgery. In 1989, Stony Brook researchers determined that EECP treatment continued to show helpful effects for patients as long as three years after completion of treatment. Today, the

Heart Center at Stony Brook remains the premier location for this therapy.

Cuffs similar to those used to measure blood pressure are placed on the patient's legs and sequentially inflated from calf to thigh. This gentle compression moves oxygen-enriched blood back to ischemic areas of the heart. The treatment relieves chronic angina pain and offers a therapeutic option

for patients who are not candidates for angioplasty, stenting, or coronary artery bypass surgery. There are no reported risks of complication associated with this treatment, and EECP patients may even experience reduced need for medication.

Recent studies show that EECP may also be beneficial for patients with stabilized congestive heart failure.

chest pain patients directly to our emergency department. ♥ Percutaneous LVAD supports our high-risk patients. ♥

Ongoing Disease Management Improves Quality of Life for Chronic Patients

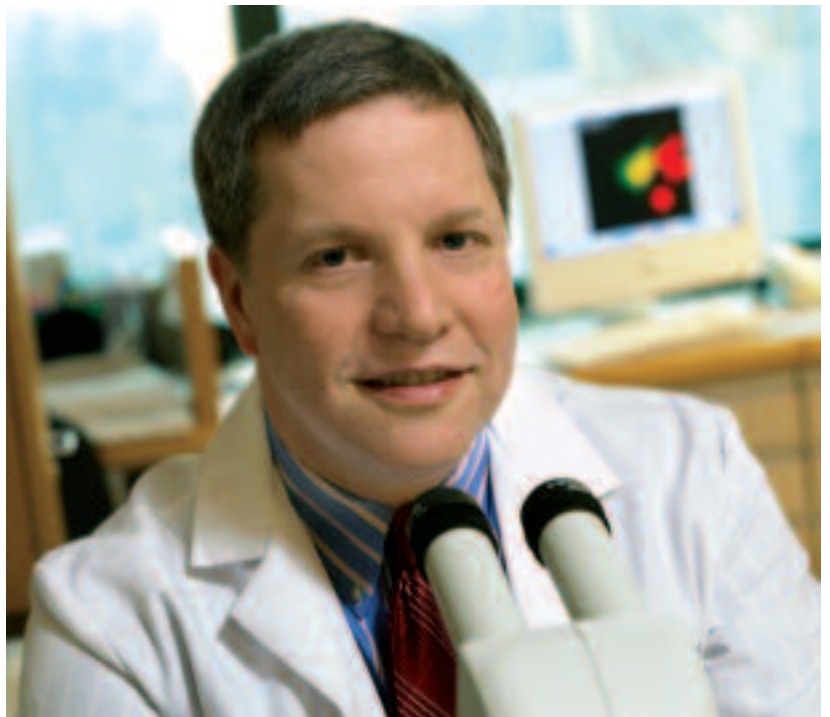
Nearly 5 million Americans live with heart failure, and 550,000 more are newly diagnosed each year. Stony Brook cardiac patients live longer, more vigorous lives—and learn to monitor their own symptoms—with help from our heart failure experts.

The Heart Center's Heart Failure and Cardiomyopathy Service, directed by Hal Skopicki, M.D., Ph.D., (right) provides prevention, diagnosis, and treatment for people with this debilitating and often life-threatening condition.

American College of Cardiology/American Heart Association guidelines advise that heart failure patients fare best when enrolled in a multidisciplinary disease management program, and when their primary care physicians collaborate with specialists. Our heart failure experts work closely with community physicians on issues in advanced cardiology.

We evaluate patients for transplantation or mechanical heart devices, and recommend pacemakers and defibrillators to prevent arrhythmia and sudden death associated with heart failure. We present an annual seminar, with the American Association of Critical-Care Nurses, on caring for heart failure patients.

Dr. Skopicki leads a team of researchers exploring early diagnosis of heart failure. Investigations are also ongoing on gene therapy and transplanted myocytes to treat critically ill patients. Cell therapy studies are supported by a five-year, \$875,000 grant from the National Institutes of Health.



DRAMATICALLY IMPROVED SURVIVAL WITH DESTINATION THERAPY

Patients with advanced-stage heart failure will turn to Stony Brook for a new treatment that enables them to live independently at home. Destination therapy uses a portable, implantable “artificial heart” device that takes over the pumping function of the heart. The Thoratec HeartMate® eXtended Lead Vented Electric (XVE) device, used by Heart Center specialists, is the only left ventricular assist device approved by the Food and Drug Administration as permanent support for patients who do not respond to other therapies and are ineligible for cardiac transplantation. It can dramatically improve quality of life, and has demonstrated meaningful survival benefits for patients who are being supported by the device.

OPTIMAL Care

Studies demonstrate that most heart failure patients do not receive state-of-the-art therapy to reduce symptoms and prolong their lives. Our OPTIMAL clinical trial (Out-Patient Trial Investigating Medications that Add Longevity in Heart Failure), directed by Dr. Hal Skopicki (right), is testing whether evaluation of a patient's medications will result in better management of his or her heart failure. After a consultation, patients are given a “report card” with medication suggestions and self-care guidelines. The report card may be shared with their primary care physicians for further discussion. The OPTIMAL study is open to the public at no cost.

♥ Teaching heart failure patients to self-monitor symptoms prevents hospital readmissions. ♥ We offer Long Island's only

ACC/AHA guidelines advise that heart failure patients fare best when enrolled in a multidisciplinary disease management program that collaborates with their primary care physicians.

WHAT PATIENTS ARE SAYING



BERT GRASSO'S desire to avoid a hospital stay is all the motivation he needs to follow the

Heart Failure Clinic's recommendations on self-monitoring of symptoms. Clinic staff taught him to take his glucose levels and blood pressure several times a day, and advised him to call the clinic if he experiences symptoms such as excessive coughing. So far it's working, despite Bert's history of heart failure. It has been a year since Bert needed hospitalization or an emergency room visit. During clinic appointments he is treated by Hal Skopicki, M.D., director of the Heart Failure Service. "I like the way Dr. Skopicki explains things," Bert says. "Everything is quite clear. And that's great."

Latest Alternatives for Systemic Atherosclerosis

Early treatment of Peripheral Artery Disease (PAD) prevents coronary artery disease, stroke, and death.

The Heart Center's section of Vascular Medicine and Peripheral Vascular Intervention, directed by Allen Jeremias, M.D., (below) utilizes new and promising diagnostic and treatment options for peripheral artery disease (PAD). Dr. Jeremias is among the first physicians in the country to become board certified in vascular medicine. Diagnostic techniques include noninvasive evaluation of the peripheral circulation by segmental blood pressure assessment of the lower extremities, ultrasound, CT-angiography, and MR-angiography.

Once PAD is diagnosed, a comprehensive cardiovascular workup reduces the risk for myocardial infarction and stroke. Systemic treatment, lifestyle modifications, exercise, and drug therapy are critical in every new patient. When drug therapy and exercise alone are not sufficient, novel minimally invasive procedures treat obstructive lesions in the peripheral arteries of many

patients. In addition to these techniques, the Heart Center offers other minimally invasive options, such as atherectomy, excimer laser, and cryotherapy catheter. Heart Center specialists work closely with their colleagues in Vascular Surgery to tailor the best treatment for each patient.

For patients with significant cardiac disease who have suffered a stroke or transient ischemic attack, the Heart Center offers an alternative to carotid endarterectomy surgery. Carotid artery stenting is increasingly performed nationwide, and has been shown to reduce the risk of stroke in high-risk cardiac patients similarly to surgical carotid endarterectomy. Dr. Jeremias and Luis Gruberg, M.D., are one of the most experienced physician teams in the region for treating carotid artery disease with stents to prevent strokes. This extremely safe procedure is done without general anesthesia, reducing the risk of anesthesia-associated complications in the high-risk patient.



Atherosclerosis affects the coronary arteries as well as the entire arterial vasculature.



Arrhythmia Research
With a \$1.1 million grant from the National Institutes of Health (NIH), Dr. Rashba (right) is studying whether late percutaneous coronary intervention—angioplasty or stenting three to 28 days after heart attack—affects vulnerability to arrhythmias in heart attack patients. With additional NIH funds, he is studying the use of GIK (an intravenous solution of glucose, insulin, and potassium) in heart attack survivors, and is developing new noninvasive tests to identify which cardiomyopathy patients are most at risk for sudden cardiac death.

♥ Innovative CRT therapy offers new hope for heart failure patients, with breakthrough treatment to resynchronize cardiac

Timing is Everything: Adjusting Arrhythmic Cardiac Contractions

As patients with heart disease live longer, dysfunctional heart rhythms are an increasing source of morbidity and mortality. Heart Center electrophysiologists are experts in the latest devices, drugs, and therapies for life-threatening arrhythmias.

THE CLINICAL ELECTROPHYSIOLOGY SERVICE, under the direction of Eric Rashba, M.D., (left) performs in- and outpatient evaluation and management of cardiac arrhythmias, using investigational and conventional antiarrhythmic drugs, implantable pacemakers and defibrillators, and catheter ablation. Our **CENTER FOR ADVANCED ABLATION THERAPY** is developing improved ablation approaches for complex arrhythmias.

Catheter ablation of atrial fibrillation requires precise anatomic information to place continuous radio-frequency ablation lesions around the pulmonary veins correctly, and to minimize complications (possible pulmonary vein stenosis). Importing a preoperative cardiac CT into the three-dimensional (3-D) electrophysiology mapping system gives us a detailed anatomic reconstruction of the left atrium and pulmonary veins. The best candidates for this type of ablation are patients with symptomatic paroxysmal or persistent atrial fibrillation that is refractory to medical therapy.

Ventricular arrhythmias also are treated with ablation therapy. Rather than keep a patient in sustained tachycardia to map and ablate the arrhythmia, a newer, safer, and more effective approach is used. A 3-D anatomic map is constructed of the left ventricle to identify areas of myocardial

scar that give rise to arrhythmia. Ablation lesions are administered in the “border zone” between the scar and normal tissues. Patients who are intolerant of antiarrhythmic drugs, or who undergo frequent shocks from implantable cardioverter defibrillator therapy, can benefit from this procedure.

Cardiac Resynchronization

Cardiac resynchronization therapy (CRT) offers new hope for heart failure patients who have ventricular dysynchrony (a condition in which the ventricles do not contract together, which causes patients to experience marked shortness of breath and fatigue). This breakthrough treatment implants a pacemaker to deliver electrical impulses to the ventricles, restoring synchronous heart function. Standard pacemakers have only two leads that stimulate the right side of the heart, but the innovative CRT device has a third lead that extends into the left ventricle.

Correct placement of this left ventricular lead is critical to the treatment’s success. Stony Brook electrophysiologists have achieved a left ventricular implant success rate of greater than 95 percent. Our cardiac resynchronization expertise has changed the lives of progressively deteriorating patients who previously could be managed only with drugs or surgical interventions.

WHAT PATIENTS ARE SAYING



Laurie Mattone headed off on a business trip, never imagining she’d soon be rushed to the

hospital. Although she had a history of atrial fibrillation, it was controlled with medication. But the onset of ventricular arrhythmia interrupted Laurie’s trip. Once back home, she suffered shortness of breath and fatigue, her prognosis complicated by intolerance of beta blockers.

Aided by 3-D imaging, Eric Rashba, M.D., performed an ablation on Laurie’s left ventricle. “I had complete faith in him,” Laurie recalls. “He’s my hero!” Husband Matt (a nurse practitioner) agrees: “Dr. Rashba was extremely knowledgeable and competent. He made us feel that everything would be okay.” Laurie’s heartbeat is normal again, and the arrhythmia has not returned.

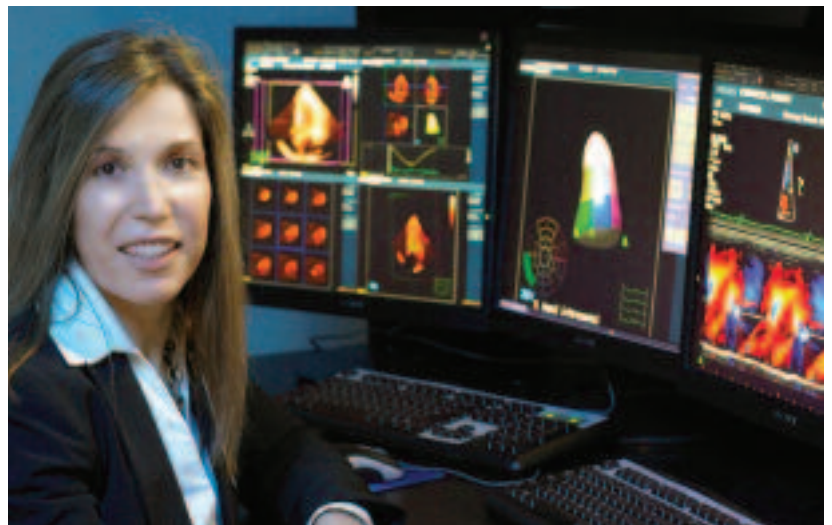
arrhythmia. ♥ Stony Brook electrophysiologists have achieved a left ventricular implant success rate greater than 95%. ♥

Cardiovascular Imaging “Sees” More When Technologies are Combined

The proliferation of new ways to view the heart demands an integrated approach. Fusing the latest imaging techniques reveals the heart and arteries with greater depth and clarity, for earlier and more accurate diagnosis of complex cardiac disease.

Our Cardiovascular Imaging Section, led by Smadar Kort, M.D., (right) offers state-of-the-art echocardiography, nuclear cardiology, cardiac CT, and cardiac MR. The Echocardiography Laboratory is one of only a few centers in the country to offer the most innovative technologies—such as 3-D echocardiography, tissue Doppler, and strain and strain rate imaging—to enhance the diagnosis of cardiac disease in our patients. We use these types of imaging to assist cutting-edge interventions, including cardiac resynchronization therapy, pacemaker optimization, and other innovative surgical and percutaneous procedures.

The laboratory performs 10,000 procedures annually, aided by its ten state-of-the-art ultrasound systems and new treadmill and stress testing system. The facility is fully digital, and all studies are securely



stored on a dedicated server for retrieval and interpretation of data.

The Nuclear Cardiology Service, directed by Jordan Katz, M.D., offers diagnostic exercise and pharmacologic stress testing for more than 2,500 patients each year who are undergoing myocardial perfusion imaging or radionuclide ventriculography.

Cardiac CT and cardiac MR are performed in close collaboration with the Department of Radiology. We have recently added perfusion MR as well as MR-PET fusion imaging.

New 64-slice computed tomography scanners allow us to “see” inside coronary arteries faster and with greater clarity. We

use this technology to perform calcium scoring, an early predictor of coronary artery disease, and to obtain detailed assessment of the degree of atherosclerotic plaque in the coronary arteries.

Our Echocardiography Laboratory is one of only 92 laboratories in New York State to be accredited by the Intersocietal Commission for the Accreditation of Echocardiography Laboratories (ICAEL).

We are currently involved in imaging research studies, including evaluation of new technologies not yet available for clinical use. In addition, we serve as a clinical site for students from ultrasound schools in the area.

Dr. Kort (above) directs our efforts to incorporate rapid changes in cardiovascular imaging into clinical practice, research, and education.

With the image (right) generated by 64-slice CT scanners, we can visualize the actual coronary artery with 1mm resolution.



Women and Heart Disease: Symptoms, Risks are Different in Female Patients

Stony Brook is addressing gender-based differences in cardiac health and heart disease—the leading killer of women in the United States—through research, education, and treatment designed specifically for women.

Cardiovascular disease is the leading cause of death of women in the United States. Yet studies show that female patients receive less aggressive cardiac treatment than men, and are referred less frequently for cardiac intervention. At Stony Brook we address these gender-related issues with treatment, research, and education.

Our team of cardiologists, cardiac surgeons, and nurses conducts ongoing community and professional education to raise awareness of female-specific factors in heart disease, including: symptom presentation in acute myocardial infarction (only 50 percent of women having a heart attack experience the classic

symptom of chest pain radiating to the jaw—women are more likely to feel dizzy or nauseated); coronary heart disease affects women at an older age; there is higher mortality in women after heart surgery or cardiac catheterization; women of certain ethnicities have specific risks (for example, black women have a higher incidence of hypertension).

A conventional stress test alone is not sufficient to detect ischemia due to atherosclerosis in women, as there can be nonspecific changes in the EKG that interfere with diagnosis. The Heart Center performs more sensitive stress tests on women (stress imaging—EKG plus nuclear or echocardiogram imaging).

WOMEN, STROKE, AND ASPIRIN

A study co-authored by David L. Brown, M.D., described for the first time a gender-based differential effect of aspirin therapy for primary prevention of cardiac disease. In women, aspirin reduces the risk of strokes but not heart attacks. In men, aspirin reduces the risk of heart attacks but not strokes. While aspirin reduced cardiovascular mortality in both sexes, it also significantly increased the risk of major bleeding episodes in women and men. The study, published in the *Journal of the American Medical Association*, has stimulated a new field of research into gender-based differences in responsiveness to aspirin.



WHAT PATIENTS ARE SAYING

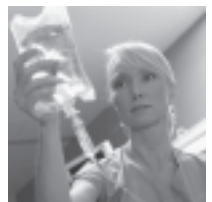


RUTH JUDGE had been living with heart failure for six years. But the physicians who treated her at

another institution didn't seem to have time for her questions. "Their bedside manner was so bad, my blood pressure went up every time I was there," she recalls.

Ruth called Stony Brook's Heart Center. There she found the care she'd been seeking, and she is now treated by Noelle Mann, M.D. "She is very easy to talk to," Ruth reports. "I never feel rushed."

Ruth had a successful angioplasty procedure at Stony Brook and attends patient education seminars, where she receives information on diet and stress management. And "to other heart patients, I'd say, 'By all means, go to the Heart Center.'"





Exploring Causes and Cures of Cardiovascular Disease

Working within a world-class research university, our physician-scientists investigate the etiology, treatment, and prevention of heart disease, which enables our patients to benefit from the latest drugs and therapies.

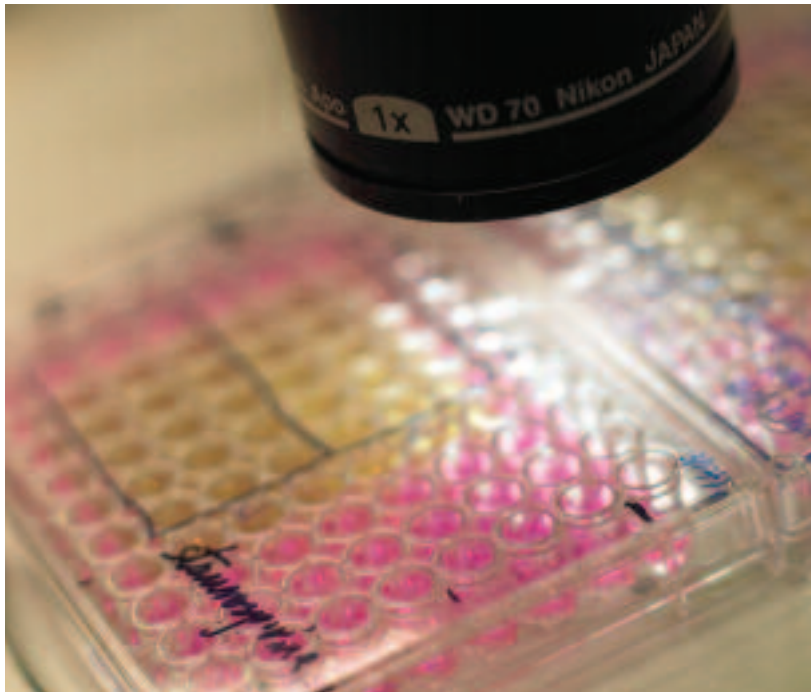
Working within a world-class research university, the Heart Center's physician-scientists are exploring causes, treatment, and prevention of cardiovascular disease. Our clinical studies give patients access to the most innovative technologies and cutting-edge services. Basic biomedical research advances at Stony Brook University Medical Center increase knowledge of the heart and how it functions, and is translated into quality medical care. We participate in national and international

clinical trials that enable patients to benefit from the latest drugs and therapies.

We participated in these recent multicenter trials: RESTOR-MV (Randomized Evaluation of a Surgical Treatment for Off-pump Repair of the Mitral Valve), CHAMPION (Cangrelor vs. Standard Therapy to Achieve Optimal Management of Platelet Inhibition), SOLO (Study of One Lead Defibrillation Efficacy), and CREATE-PAS (Carotid Revascularization with EV3 Arterial Technology Evolution Post-Approval Study).

LANDMARK DRUG DEVELOPED AT STONY BROOK

ReoPro[®], the leading agent used to prevent restenosis after angioplasty and stent placement, was developed in Stony Brook research laboratories. The drug resulted from studies on platelet behavior done by Barry Coller, M.D., who isolated an antibody that inhibited platelets from coagulating in arteries. Since it was introduced in 1995, ReoPro[®] has been used to treat millions of patients.



Stony Brook receives more federal research funding than any other SUNY campus. At the Heart Center, we continue to expand our basic and translational research efforts.

ReoPro[®] was the first drug developed in a State University of New York institution to be approved (in 1994) by the Food and Drug Administration.

♥ We conduct clinical and basic biomedical studies that result in state-of-the-art patient care. ♥



About Stony Brook University Hospital

Stony Brook University Hospital is the only tertiary care center in Suffolk County. We provide advanced patient care, education, research, and community service. Our highly skilled, compassionate team of physicians, nurses, and other health care professionals treat more than a half-million Long Islanders each year. We have received National Research Corporation's "Consumer Choice Award," the only hospital in Suffolk County and one of only two on Long Island to do so.

**The Heart Center at
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Stony Brook University/SUNY is
an affirmative action, equal
opportunity educator and employer.

