



Cardiology & Heart Surgery

2019 HIGHLIGHTS

Combined Heart–Lung Transplant Restores Patient’s Health and Function

Coordinated approach and surgical expertise bring success

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Landmark ISCHEMIA Trial

For stable heart disease, is an initial invasive strategy worthwhile?

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Impacting FDA Approval for Low-Risk TAVR Procedures

Improving outcomes and minimizing risk for transcatheter aortic valve replacement

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43

Heart transplants performed in 2019

#15 in the Nation

In *U.S. News & World Report*

144

Active clinical trials

300+

Scientific publications



NYU Langone Health’s cardiology, cardiac surgery, and vascular surgery programs are among the top-ranked in the United States, and we strive ceaselessly to reach new levels of excellence in clinical care, education, and research.

In 2019, we presented one of the largest international studies in the history of cardiology, the ISCHEMIA trial, which revealed potentially paradigm-shifting data on the treatment of stable ischemic coronary disease. Our surgeons performed the first combined heart–lung transplant in New York State in a decade, and went on to complete this rare and highly complex procedure four more times. We led clinical studies of novel medications and devices—including the first trial in the nation of a new cardiac ablation catheter that could cut procedure time by half. As always, our goal is to improve outcomes not only for our patients, but for patients everywhere.

Our reputation for outstanding care helped make us a national training site for transcatheter aortic valve replacement (TAVR), the highest-volume transcatheter mitral valve replacement (TMVR) practice on the East Coast, and the busiest transcarotid artery revascularization (TCAR) practice in New York City. We are proud of these and other achievements, and delighted to share the highlights of the past year’s work.



Cover image: Illustration of a man's heart.
RENDERING: GETTY IMAGES



With a meticulously planned collaborative approach, backed by extensive surgical expertise and preoperative preparation, Dr. Nader Moazami and Dr. Zachary N. Kon provide coordinated care for a patient who needed a multiorgan transplant.
PHOTO: NYU LANGONE STAFF

Restoring Health & Function with a Combined Heart–Lung Transplant

A 34-year-old woman in Manhattan sought a second opinion at NYU Langone for deteriorating function attributed to familial interstitial lung disease diagnosed in infancy, mitral valve prolapse (MVP) diagnosed in middle school, and subsequent pulmonary hypertension. She was treated from childhood at the same institution where her older brother had died awaiting a lung transplant seven years earlier. Her brother’s death left her reluctant to pursue a transplant even though her symptoms were worsening.

AN ACTIVE LIFESTYLE DESPITE FUNCTIONAL DECLINE

The patient’s childhood was marked by episodes of cyanosis and dyspnea, yet she maintained fairly normal activity throughout early adolescence, although she could not participate in sports. She was diagnosed with mitral regurgitation during middle school. Disabling joint pain in high school led to an additional diagnosis of arthritis and suspected connective tissue disease.

Initiating chemotherapy for 6 months at age 18 failed to halt her symptom progression, but a year-long cycle of Remicade® ultimately resulted in remission that lasted through her college years. The patient reported significant improvement and found an engaging field of study, leading to a career with a large international banking organization. However, after more than a decade, she noticed some new shortness of breath and unusual fatigue that prompted an evaluation by her physicians for pneumonia.

Her chronic interstitial lung disease and significant progression of her mitral valve disorder had resulted in heart failure. Treated with three rounds of antibiotics for a presumed respiratory tract infection, her lung function and quality of life continued

to deteriorate. In January 2019, she sought a second opinion at NYU Langone.

PULMONARY HYPERTENSION AND PROGRESSIVE MITRAL VALVE DYSFUNCTION EXACERBATE SYMPTOM PROGRESSION

Initial evaluation at NYU Langone revealed that the patient’s left ventricular function had significantly deteriorated from longstanding untreated severe mitral regurgitation. Additionally, her right ventricular function was significantly compromised under the strain of pulmonary hypertension secondary to her mitral valve disease and longstanding pulmonary fibrosis. It became clear that a lung transplant would not suffice; she would need a heart transplant as well.

Chest radiography exhibited expected evidence of chronic interstitial lung disease consistent with the patient’s prior CT exam. The images also revealed cardiomegaly, radiographic evidence of pulmonary hypertension, and a large pulmonary artery aneurysm of 3.5 cm. Pulmonary function studies were consistent with severe interstitial lung disease with an obstructive component, with a diffusing capacity of the lungs for

carbon monoxide (DLCO) of 14 percent of predicted, and significant reductions in forced vital capacity (FVC) and forced expiratory volume in the first second (FEV1), with a ratio of 53.

During a walk test, the patient’s oxygen saturation on 3L dropped from 91 percent to 84 percent. Although the patient had accommodated somewhat to lifelong hypoxemia, she was advised to increase her use of supplemental oxygen despite the reluctance she attributed to lack of significant symptomatic relief.

STREAMLINED APPROACH ACCOMMODATES THE PATIENT’S PERSONAL PRIORITIES

Because the patient continued to work at a demanding pace, the heart–lung transplant team coordinated efforts to accommodate her schedule while she began an extensive evaluation. The potential complications and prognostic data made her reluctant to receive a transplant, but, after exploring her options with Luis F. Angel, MD, medical director of lung transplantation, and Alex Reyentovich, MD, medical director of heart transplantation, she was realistic about the necessity to proceed. The patient noted that the team worked throughout the



PHOTOS: COURTESY OF LARRY A. LATSON JR., MD, MS

Preoperative X-ray shows an abnormally enlarged heart, with severely enlarged central pulmonary arteries (consistent with pulmonary hypertension), and severe diffuse abnormality in the lungs, which is consistent with underlying chronic interstitial lung disease and pulmonary fibrosis.



Postoperative X-ray shows a normal transplanted heart size. Aside from some small pleural effusions and a little atelectasis in the lower lungs, the transplanted lungs are normal in appearance. Sternotomy wires and surgical clips appear in the middle of the chest, as is consistent with heart and lung transplants.

entire process seamlessly, something she had not experienced despite her long involvement with another healthcare system.

Identifying the pulmonary artery aneurysm and progressive mitral regurgitation with heart failure resulted in the decision to proceed with a heart–lung transplant using cardiopulmonary bypass (CPB). The complexity of the bilateral orthotopic heart–lung transplant after en bloc dissection of the donor heart–lung allograft necessitated a well-coordinated team effort by Zachary N. Kon, MD, surgical director of lung transplantation; Nader Moazami, MD, surgical director of heart transplantation; and Deane E. Smith, MD, associate director of heart transplantation. Careful preoperative planning allowed the team to minimize ischemic time during the transplant.

FUNCTION RESTORED AFTER A RAPID RECOVERY AND INTENSIVE REHABILITATION

After a successful transplant, the patient was weaned without complication from CPB, demonstrating excellent biventricular and pulmonary function before being transferred to the intensive care unit (ICU). Extubated the next day, she was soon ambulatory and working with physical and occupational therapy. After a brief recovery period in the ICU and a short stay at Rusk Rehabilitation, the patient returned home within two weeks, continuing therapy as an outpatient.

The heart and lung transplant team’s commitment to integrating the patient’s unique healthcare needs with her personal and professional goals enabled her to rapidly recover and achieve restoration of function. She has returned to a challenging work environment and once again has the energy to engage fully with friends and family.

When asked for a summary statement about her experience and her

feelings during her recovery, the patient responded unmistakably enthusiastically about how great she felt. She said:

“This outcome was unimaginable to me, but it was clear that the NYU Langone team maximized areas of individual expertise and knowledge across several fields. The team envisioned creative solutions to difficult problems, and ultimately completed my complex procedure with success.”

PROCEDURE MARKS MILESTONE FOR ORGAN TRANSPLANTATION IN NEW YORK STATE

This combined heart–lung transplant was the first performed in New York state in a decade. In 2018, only 32 combined heart–lung transplants were performed in the United States. These complex procedures are reserved for patients who have end-stage disease of both organs, including patients with irreversible right-heart failure secondary to pulmonary hypertension.

The procedure requires intensive coordination between the patient, family, and the NYU Langone Transplant Institute, as well as fully integrating the heart and lung transplant teams. This integrative model—inclusive of highly skilled cardiologists, cardiac surgeons, thoracic surgeons, pulmonologists, social workers, dieticians, pharmacists, nurses, pathologists, and administrative support staff—facilitates NYU Langone’s ability to perform multiorgan transplants.

In 2019, the team has performed five combined heart–lung transplants and anticipates a continued steady volume of cases.



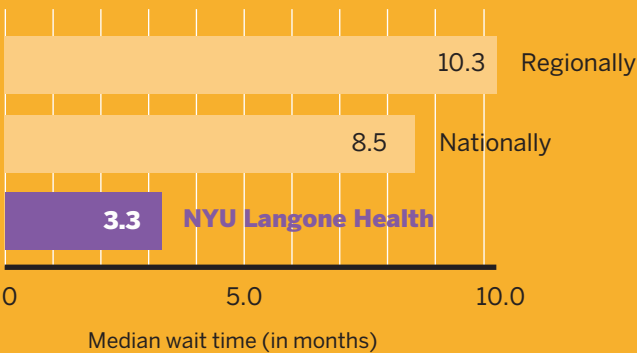
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Expertise Yields Top Outcomes

We achieved the fastest transplant rate and best post-transplant patient survival in the region in 2019. Our surgical team has more than 20 years of experience in heart transplantation with expertise in complex cases.

A leading center for multiorgan transplantation, we offer simultaneous heart/kidney, heart/liver, and heart/lung transplants. We offer second opinions and have successfully transplanted many patients turned down at other programs.

SHORTEST WAIT TIME IN THE NORTHEAST



Transplant Program Earns Highest Score in the U.S.

The Scientific Registry of Transplant Recipients rates transplant programs on 3 factors – waitlist mortality, transplant rate, and one-year post-transplant patient survival. In the January 2020 rating, the NYU Langone Transplant Institute tied for 1st place with the highest score in the country for heart transplant.

Landmark Trial Compares Results of Invasive Strategy and Medical Therapy Alone for Stable Heart Disease

Ischemic heart disease, the leading cause of death and disability worldwide, affects 17.6 million Americans and results in approximately 450,000 deaths per year in the United States. A major international study led by NYU Langone researchers suggests that for many of these patients, commonly recommended invasive approaches should be used more sparingly.

AN UNPARALLELED INVESTIGATION

The International Study of Comparative Health Effectiveness with Medical and Invasive Approaches (ISCHEMIA) was intended to settle longstanding questions over the most advantageous treatment of patients with stable ischemic heart disease (SIHD). Funded by the National Heart, Lung, and Blood Institute, the \$100 million trial was twice as large as any previous study of its kind—enrolling more than 8,000 patients and randomizing 5,179 at 320 sites in 37 countries.

“For decades, clinicians have routinely recommended invasive procedures for patients with moderate to severe ischemia,” explains Judith S. Hochman, MD, the Harold Snyder Family Professor of Cardiology in the Department of Medicine and senior associate dean for clinical sciences, who chaired the ISCHEMIA

trial with co-chair David Maron, MD, director of preventive cardiology at the Stanford Prevention Research Center at Stanford University. “More recently, studies such as COURAGE and BARI 2D have shown no benefit to stenting over medication alone for patients with stable disease, but those trials were criticized for certain design features, such as post-angiogram randomization, inclusion of patients with mild or no ischemia, and the use of older-generation stents,” Dr. Hochman adds. “Our goal was to address those concerns and to see what the data revealed.”

Enrollment for ISCHEMIA began in 2012. Exclusion criteria were recent myocardial infarction, unstable angina within the past two months, heart failure, poor pump function—low ejection fraction, and left main coronary stenosis. Patients who qualified were randomized to either an initial conservative or an initial

invasive strategy. The conservative group initially received only optimal medical therapy (OMT), consisting of medication and lifestyle counseling—with cardiac catheterization and revascularization reserved for failure of medical therapy. The invasive group also received OMT, but underwent angiography and either percutaneous coronary intervention with drug-eluting stents or (if indicated) coronary artery bypass grafting soon after diagnosis via stress test or other means.

Due to a lower-than-anticipated number of cardiovascular deaths and myocardial infarctions in both groups, the primary endpoint was expanded to include hospitalization due to unstable angina, hospitalization for heart failure, and resuscitation due to cardiac arrest, as pre-specified in the protocol. Patients were followed for a median of 3.3 years.



ISCHEMIA authors from NYU Grossman School of Medicine. From left to right: Jeffrey S. Berger, MD, Judith S. Hochman, MD, Jonathan Newman, MD, Harmony R. Reynolds, MD, Sripal Bangalore, MD. PHOTO: NYU LANGONE STAFF

POTENTIALLY PARADIGM-SHIFTING RESULTS

Presented by Dr. Hochman in November 2019 at the American Heart Association’s Scientific Sessions in Philadelphia, ISCHEMIA’s results showed no advantage for routine invasive therapy over OMT alone in preventing major adverse ischemic events. Rates of the primary endpoint did not differ significantly between cohorts: 13.3 percent in the invasive group and 15.5 percent in the conservative group. Event curves over five years showed that the invasive group had more cardiovascular events in the first two years, while the conservative group had more in years three through five. Rates of all-cause death were also similar for both cohorts—6.5 percent for the invasive group, and 6.4 percent for the conservative group.

ISCHEMIA did, however, find significant differences in angina relief. Among patients with monthly angina at baseline, 70 percent of the invasive group were angina-free at 1 year, compared with 40 percent of patients on OMT. For patients with daily or weekly angina, 50 percent of those treated invasively were angina-free at 1 year, versus 20 percent in the OMT group.

“These results indicate that, while stenting may be more effective for symptom control, there’s no added risk of major negative outcomes with a conservative approach for patients who meet the criteria included in the study,” observes Glenn I. Fishman, MD,

the William Goldring Professor of Medicine and director of the Leon H. Charney Division of Cardiology at NYU Langone. “If patients treated with OMT continue to have angina that is interfering with their lifestyles, they may choose to have an angiogram and, if appropriate, have a stent placed. But it’s not a life-or-death decision.”

The implications of these findings for clinical practice and healthcare spending could be significant, the researchers suggested. Of the approximately 500,000 coronary stent procedures performed each year in the United States, they estimated, 20 percent are for patients with stable heart disease. Among the latter, 24 percent—about 23,000—are performed on patients without symptoms. If those procedures were avoided, the team concluded, the cost savings could be at least \$570 million annually.

“This trial provides very important information for patients and their doctors to use in shared decision-making,” Dr. Hochman notes. “They can now weigh the potential risks and benefits of treatment options more accurately. Together, they can choose the strategy that best fits each patient’s needs.”



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Building on Our National Reputation in Both Diabetes and Cardiovascular Research

NYU Langone Health has been awarded its third Strategically Focused Research Network (SFRN) grant from the American Heart Association. This newest SFRN will address Cardiometabolic Health with an emphasis on Type 2 diabetes. As one of four such centers across the country, the NYU Langone team will investigate why people with diabetes don’t appear to fully benefit from cholesterol-lowering drugs.



Study Finds No Added Benefit from Invasive Strategy for Patients with Advanced Chronic Kidney Disease

Sripal Bangalore, MD, principal investigator of the ISCHEMIA-CKD trial
PHOTO: NYU LANGONE STAFF

A companion study to ISCHEMIA focused on patients with both moderate-to-severe ischemia and advanced chronic kidney disease (CKD) or on dialysis (ESRD). Led by Sripal Bangalore, MD, interventional cardiologist and professor of medicine at NYU Langone, the ISCHEMIA-CKD trial randomized 777 patients to either an initial invasive strategy of optimal medical therapy (OMT) plus revascularization as appropriate, or an initial conservative strategy of OMT alone—with invasive therapy only for failure of medical therapy.

The results, presented at the 2019 American Heart Association meeting, showed that the invasive strategy did not demonstrate a reduction in the primary endpoint of death or nonfatal myocardial infarction. Nor did that approach significantly improve angina frequency or severity compared with OMT alone. The risk for stroke was increased more than threefold in the invasive versus the conservative group, although the risk of procedure-related stroke was low and similar between the groups. The combined endpoint of death or initiation of dialysis was significantly higher in patients treated invasively—though mortality was similar in both groups, indicating that new dialysis drove this difference.

→ Under the leadership of Dr. Mathew R. Williams, the Structural Heart Program is nationally recognized as a training site for TAVR best practices and participates in clinical trials to test the safety and efficacy of replacement aortic valves, which are designed to function like a patient's own heart valve.

PHOTO: NYU LANGONE STAFF



Bringing the Benefits of Transcatheter Aortic Valve Replacement (TAVR) to Patients at All Risk Levels

In August 2019, the U.S. Food and Drug Administration (FDA) approved transcatheter aortic valve replacement (TAVR) for patients with severe aortic stenosis who are at low risk of death or complications from open heart surgery. Researchers at NYU Langone played a pivotal role in that decision and are developing new techniques to further advance TAVR clinical practice and improve patient outcomes.

CONTINUED LEADERSHIP IN TRANSCATHETER AORTIC VALVE REPLACEMENT

The FDA ruling was based on two multisite clinical studies: the PARTNER 3 trial, which gauged the safety and effectiveness of the Edwards SAPIEN 3 device in low-risk patients; and the Evolut Low Risk Trial, which tested the CoaReValve™, Evolut™ R, and Evolut™ PRO valves.

NYU Langone's Heart Valve Center was the nation's third-largest enroller in PARTNER 3, in which 497 patients were randomized to surgical aortic valve replacement (SAVR) and 503 to TAVR. The nonsurgical procedure proved superior to SAVR at preventing death, stroke, or rehospitalization within two years. TAVR also was associated with a shorter hospital stay, a lower incidence of atrial fibrillation, and a larger improvement in quality of life.

The Evolut trial reached similar conclusions.

"These studies showed that the advantages of TAVR apply to patients at all risk levels and that almost everyone with this disease can be treated without open heart surgery," says Mathew R. Williams, MD, chief of NYU Langone's Division of Adult Cardiac Surgery and director of the Structural Heart Program.

A TRAILBLAZING TEAM

Under the direction of Dr. Williams, a widely recognized pioneer in transcatheter valve replacement techniques, the Heart Valve Center has become a national training site for TAVR best practices, with doctors implanting more than 450 of the devices in 2019. The center also has the busiest transcatheter mitral valve replacement (TMVR) practice on the East Coast and offers a full array of open, minimally invasive, and robotic procedures.

Dr. Williams, associate professor in the Departments of Cardiothoracic Surgery and Medicine, has performed more than 3,500 such procedures, more than any other surgeon in the country. His record includes two first-in-human and three first-in-U.S. implants.

Dr. Williams also was the lead primary investigator in the Evolut™ R and Evolut™ PRO premarketing studies, which led to those devices' approval for high-risk patients in 2015 and 2017.

"Our outcomes are among the best in the country, thanks to a specialized team of surgeons, anesthesiologists, radiologists, and nurses who have performed these procedures together thousands of times," notes Dr. Williams, who was the first surgeon in the United States to be dual-trained in interventional cardiology and cardiac surgery.

NYU Langone's TAVR patients have a 99 percent survival rate, and a

significantly lower rate of stroke, bleeding, and other complications than the U.S. average. More than 99 percent of procedures are performed without general anesthesia. Most patients leave after an overnight stay, compared with a national median of two days.

ADVANCING A PRECISION MEDICINE APPROACH TO TAVR

The Heart Valve Center is committed to advancing patient-specific surgical techniques that can lower the risk of complications and improve outcomes. A study published in September 2019 in *JACC: Cardiovascular Interventions* found that a new approach to device implantation could minimize the risk of permanent pacemaker implantation (PPMI) in patients receiving repositionable self-expanding TAVR. The study was led by Dr. Williams and Hasan Jilaihaw, MD, associate professor of cardiothoracic surgery and medicine and co-director of transcatheter valve therapy.

One drawback to TAVR compared with SAVR is an elevated risk of PPMI. This risk has historically been higher with self-expanding TAVR than with balloon-expanding TAVR. Device positioning has emerged as an important determinant in PPMI, with higher TAVR implantation resulting in

lower rates of pacemaker implantation. Recent iterations of self-expanding TAVR devices are repositionable, which provides a further opportunity to reduce the risk of PPMI by intraprocedural optimizing of device positioning. Yet, no formula has existed for determining optimal positioning for any given patient.

“These studies showed that the advantages of TAVR apply to patients at all risk levels and that almost everyone with this disease can be treated without open heart surgery.”

Mathew R. Williams, MD

PROSPECTIVE STUDY OFFERS STRIKING RESULTS

The NYU Langone team retrospectively studied 248 patients who had undergone a standard approach to self-expanding repositionable TAVR implantation. A detailed analysis of anatomic, electrophysiological, and procedural factors contributing to PPMI in this context suggested that a key variable was depth of positioning relative to the length of a patient’s membranous septum. PPMI rates were uniformly high if implant depth was more than membranous septum length, and uniformly low if implant depth was less than membranous septum length.

Using this information, the researchers performed a prospective study based on an approach labeled MIDAS (minimizing depth according to the membranous septum). Operators attempted to position the prosthesis at a pre-release depth that was smaller than the length of the membranous septum, as measured from the noncoronary cusp.

Researchers followed 100 consecutive patients after discharge for at

least 30 days. The results were striking: The new PPMI rate in the MIDAS group was 3.0 percent, versus 9.7 percent in the standard group.

“With the expansion of TAVR to low surgical risk patients,” Dr. Williams observes, “it’s reassuring that rates of PPMI equivalent to or potentially even lower than surgery may be achieved through this precision medicine-based approach.”

Disclosure: Mathew Williams, MD, receives researching funding from Edwards and Medtronic.



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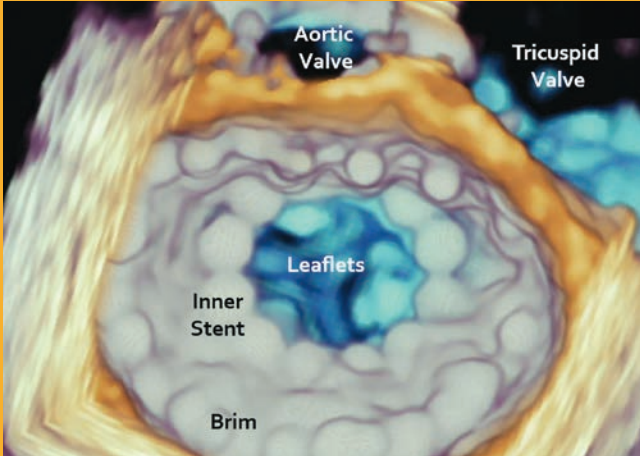


PHOTO: COURTESY OF MUHAMED SARIC, MD

3-D transesophageal echocardiography is essential for procedural guidance and successful transcatheter valve repairs. Our structural echocardiography team has been at the forefront of developing imaging protocols to guide precise device deployment by our interventionalists.

Ongoing Innovation from the Structural Heart Program

In the coming year, the Heart Valve Center will continue to investigate novel treatments for heart valve disease, including new TAVR devices that can be fully deployed and then recaptured, a new percutaneous mitral valve repair device, and the next-generation mitral valve clip. Additionally, the center was recently chosen as a study site for the APOLLO trial of Medtronic’s Intrepid TMVR device, which is implanted through a transapical approach on a beating heart.

In addition, patient enrollment will soon begin for a pivotal trial of Abbott’s TriClip device—the first transcatheter treatment for severe tricuspid valve disease.

Tricuspid valve regurgitation can lead to heart failure that is often resistant to medical therapy. Many patients are at high risk for conventional surgery and thus lack effective treatment options. In the multicenter TRILUMINATE Pivotal trial, approximately 700 patients will be randomized to medical therapy versus the TriClip device. The study also will have a nonrandomized arm for treatment of subjects with more complex disease. Results from an earlier phase of the study, presented at EuroPCR in May 2019, found that after 30 days, 86.6 percent of patients who received the TriClip saw reduced tricuspid valve regurgitation severity of at least one grade.

NYU Langone Creates Another Promising Option for Carotid Artery Disease

NYU Langone has been at the forefront of innovation in carotid artery disease for four decades—instrumental in advancing surgical techniques for carotid endarterectomy (CEA), as well as contributing to the development of trans-femoral carotid stenting. More recently, the medical center has emerged as a leader in a new, minimally invasive procedure: transcarotid artery revascularization (TCAR).

A PROMISING ALTERNATIVE

The gold standard treatment for carotid artery disease, CEA, has an excellent record of safety and efficacy, but potential complications include myocardial infarction and cranial nerve injury. The procedure is also contraindicated in certain patients exhibiting advanced age, medical comorbidities, anatomical anomalies, and other factors.

For those patients, transfemoral carotid stenting has been the only alternative. However, this option carries a higher risk of stroke—the very affliction it is intended to prevent. This occurs, in part, because transfemoral carotid stenting requires pushing a catheter through the aortic arch, where plaque often accumulates. Moreover, microemboli dislodged from the

carotid artery during stent insertion may elude filters inserted distally to trap debris.

In 2015, the U.S. Food and Drug Administration (FDA) approved TCAR as another option for patients at heightened risk of complications from CEA.

In this procedure, a hybrid of surgical and endovascular techniques, the surgeon makes a small incision just above the clavicle. A specialized sheath is placed directly into the carotid artery and connected to a system that reverses the flow of blood away from the brain to protect against procedural emboli. Meanwhile, the sheath delivers balloon angioplasty and a conformable stent, which stabilizes plaque against the wall of the artery, minimizing potential for a future stroke.

of 1.7 percent, comparable with rates reported for CEA. In the TCAR Surveillance Project, part of the SVS Vascular Quality Initiative, one study found TCAR associated with lower in-hospital risks of myocardial infarction and cranial nerve injury than CEA, and with similarly low incidence of stroke. Patients also were less likely to need more than a one-day hospital stay.

Another TCAR Surveillance Project study demonstrated lower rates of in-hospital stroke, death, and stroke/death/myocardial infarction with TCAR versus transfemoral carotid stenting in patients 80 and older. Also, lower death rates from all causes were reported in younger patients.

“Like transfemoral stenting, TCAR involves less ischemic time, less recovery time, and less scarring than open surgery,” explains NYU Langone’s Thomas Maldonado, MD, the Schwartz Buckley Professor of Surgery in the Department of Surgery and co-director of the Aortic Disease Center. “And by avoiding the aortic arch and using flow reversal, TCAR offers superior neuroprotection to the transfemoral approach. We believe this technique may become the preferred alternative for high-risk patients.”

POST-APPROVAL STUDIES SHOW STRONG EARLY RESULTS

Preliminary post-approval data for TCAR was presented at the 2019 Society for Vascular Surgery (SVS) annual meeting. In the FDA-mandated ROADSTER 2 trial, TCAR provided a 30-day stroke/death/myocardial infarction rate

↓
Vascular surgeon Dr. Thomas Maldonado and the Division of Vascular and Endovascular Surgery are studying the safety and efficacy of transcarotid artery revascularization (TCAR), a new and less invasive treatment for patients with carotid artery disease.
PHOTO: NYU LANGONE STAFF



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NYU Langone Achieves Recognition as a Leading Center for TCAR

In August 2019, NYU Langone became the first medical center in New York City to be named a Center of Excellence in TCAR. The designation was awarded by TCAR developer Silk Road Medical, Inc., in recognition of NYU Langone’s leadership in patient volume, record of successful outcomes, and commitment to ongoing research in the technique.

The TCAR team includes Thomas Maldonado, MD, Glenn Jacobowitz, MD, Neal S. Cayne, MD, Patrick J. Lamparello, MD, Karan Garg, MD, Michael E. Barfield, MD, and Todd Berland, MD.



Dr. Larry Chinitz and his team at the Heart Rhythm Center are at the forefront of research and clinical care of conditions that affect the heart's electrical system.
PHOTO: NYU LANGONE STAFF

NYU Langone Is First in the U.S. to Test a New Breed of Device for Treating Irregular Heartbeats

A newly refined ablation device pioneered by Dr. Larry Chinitz, director of the Heart Rhythm Center, promises to enhance patient safety and improve outcomes.

A new advance in the field could make ablation procedures easier on patients. In February, Larry A. Chinitz, MD, director of NYU Langone’s Heart Rhythm Center, became the first physician in the United States to trial a new ablation device, called the Qdot Micro, that generates roughly three times the heating power of conventional devices. “It can burn away faulty cells in as little as four seconds and potentially cut the procedure length in half,” notes Dr. Chinitz, the Alvin Benjamin and Kenneth Coyle, Sr., Family Professor of Medicine and Cardiac Electrophysiology. For patients, this means less sedation and reduced exposure time to X-rays. The shorter ablation time also reduces the risk of damaging healthy surrounding tissue.

The landmark trial is part of an investigational study underway at 30 sites nationwide involving 185 patients with atrial fibrillation,

the most common form of arrhythmia. It’s no surprise that Dr. Chinitz is taking the lead in the trial. A pioneer of catheter ablation and other novel treatments for heart arrhythmia, he heads one of the busiest arrhythmia centers in the country. His team is now treating two or three patients per month with the new device, and early results are encouraging. “This is a significant new technology,” he says, “and we expect it will improve both patient safety and clinical outcomes.”



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“This is a significant new technology, and we expect it will improve both patient safety and clinical outcomes.”

Larry A. Chinitz, MD

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APRIL 17, 2020

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for Practicing Health Care
Professionals

MAY 8, 2020

Cases and Controversies
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MAY 15, 2020

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ABOUT NYU LANGONE HEALTH

Leader in Quality

NYU Langone has achieved top rankings by Vizient, and is the only full-service health system in New York City with an “A” Leapfrog safety grade and a CMS 5-star rating in 2020. These accolades are reflective of a shared culture of quality that permeates our growing network, now inclusive of NYU Winthrop Hospital and its ambulatory sites on Long Island. All of our sites are held to the highest quality standards set at an institutional level.



#9 in the Nation

Ranked ninth by *U.S. News and World Report* for both Best Hospitals and Best Medical Schools (Research)



Transforming Medical Education

To address some of today’s most pressing issues in medical education such as physician shortages, debt burden, and lack of diversity, we have introduced accelerated pathways to the MD degree and full-tuition scholarships regardless of need or merit at the recently renamed **NYU Grossman School of Medicine** and the new primary-care focused **NYU Long Island School of Medicine**.

In 2019, we presented **one of the largest studies ever in cardiology**, performed the first **combined heart-lung transplant** in New York in a decade, and were integral in the approval of **low-risk TAVR procedures**.

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