



TMVR Trial at St. Francis Offers a New Treatment Option for Severe Mitral Regurgitation

St. Francis Hospital physicians were the first on Long Island to treat patients in the APOLLO trial, which is focused on transcatheter mitral valve replacement, or TMVR. The pivotal trial focuses on the Medtronic IntrepidTMVR system and randomizes transapical implantation of the mitral valve system against surgical mitral valve replacement and repair in patients with severe and symptomatic mitral valve regurgitation.

“The purpose is to demonstrate at least comparable if not better results with the transapical approach,” said Newell Robinson, M.D., Chairman of Cardiothoracic and Vascular Surgery at St. Francis Hospital. The transapical approach uses a small incision in the chest to insert the valve at the apex of the heart. “Patients do not have to use a heart and lung machine with the TMVR system, but they are under anesthesia,” Dr. Robinson said. Patients who may need TMVR often have malformed or degenerated valve leaflets.

The trial is expected to enroll 1,200 patients around the globe. “If successful, the TMVR system could give patients a minimally invasive option for severe mitral valve regurgitation,” said George Petrossian, M.D., Director of Interventional Cardiovascular Procedures. St. Francis surgeons participated in a similar trial for transcatheter aortic valve replacement, or TAVR, a treatment that is now commonly used throughout the U.S.

After a handful of initial TMVR procedures, eligible patients at St. Francis now



Another St. Francis First: Archie Dalton was the first person on Long Island to undergo a transcatheter mitral valve replacement thanks to Principal Investigators George Petrossian, M.D., (l) and Newell Robinson, M.D. (r).

are randomized to receive the valve either via surgery or TMVR. The goal is to enroll two to three patients a month at the hospital. “About three years from now, we should have some early results,” Dr. Robinson said.

Surgeons at St. Francis also are using other valve therapies or participating in other related trials, including the use of the MitraClip in degenerative and functional mitral regurgitation and tricuspid valve therapies and replacement. “We’re participating in a broad spectrum of valve therapies, inclusive of every valve of the heart,” Dr. Robinson said.

St. Francis Continues to Lead the Way With Precision Angioplasty



Precision angiography is trailblazing the way toward better imaging results, according to Richard A. Shlofmitz, M.D., Chairman of Cardiology at St. Francis, who compares the early days of precision angiography to an old Princess phone vs. the imaging options of an iPhone10.

St. Francis also continues to lead the way in research as Dr. Shlofmitz participates in

clinical trials and helps to lead a worldwide conference focused on this advanced technology.

St. Francis is the #1 enrolling site for the ILUMIEN IV: OPTIMAL PCI trial, a prospective, single-blind clinical investigation randomizing subjects to optical coherence tomography (OCT)-guided coronary stent implantation versus angiography-guided coronary stent implantation.

The clinical investigation is underway at approximately 125 centers in North America (U.S. and Canada), Europe, the Middle East, and Asia-Pacific. ILUMIEN IV is a follow-up to the 2016 ILUMIEN III, which found that both angiography and OCT were safe and resulted in a similar-sized stent area compared with intravascular ultrasound. Results from ILUMIEN IV are expected in approximately two years, Dr. Shlofmitz said.

The fifth annual “Intravascular Imaging and Coronary Physiology Workshop 2019”

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U.S. News & World Report Ranks St. Francis Best Hospital for Cardiology & Heart Surgery on Long Island

St. Francis Hospital has once again been rated the best hospital on Long Island for Cardiology & Heart Surgery by *U.S. News & World Report*. It was also ranked the fifth best hospital in New York State and the sixth in the NY metro area in the latest *U.S. News* rankings. In addition, St. Francis was rated the best hospital on Long Island for the sixth year in a row.

The Hospital was recognized by *U.S. News* as high performing nationally in five adult specialties: Cardiology & Heart Surgery; Gastroenterology & GI Surgery; Geriatrics; Neurology & Neurosurgery; and Orthopedics. The Hospital was also ranked high performing in seven common



adult procedures and conditions: abdominal aortic aneurysm repair, aortic valve surgery, heart bypass surgery, heart failure, colon cancer surgery, COPD, and hip replacement.

Nearly 5,000 hospitals nationwide were analyzed for *U.S. News*' 30th annual Best Hospitals rankings. Hospitals were compared in 25 specialties, procedures, and conditions. According to *U.S. News*, the rankings are designed to help patients make more informed health care decisions. The methodologies include objective measures such as patient survival, rates of infection, and adequacy of nursing staff.

Clinical Trials Enrolling in 2019

Intracoronary imaging continues to be the core of interventional research led by **Richard Shlofmitz, M.D.** As the top enrolling investigator in the ILUMIEN IV Trial, Dr. Shlofmitz and team aim to demonstrate the superiority of an OCT-guided stent implantation strategy versus angiographic-guided stent implantation on PCI procedural and clinical outcomes. Dr. Shlofmitz will also lead an investigation to assess intravascular lithotripsy for the treatment of complex calcified lesions prior to stenting.

Allen Jeremias, M.D., a leading expert in fractional flow reserve (FFR), a wire-based technology to assess the severity of coronary lesions, is conducting multiple studies investigating FFR and iFR to find their predictive value for future cardiovascular events. In addition, he also is assessing the value of derived FFR using computational flow dynamics based on angiographic images.

Expanding clinical trials designed to evaluate novel treatments of mitral regurgitation are underway at St. Francis Hospital. These trials are aimed at replacement or repair of the mitral valve. The structural heart disease team, led by **George Petrossian, M.D.**, and **Newell Robinson, M.D.**, is investigating mitral valve interventions via a catheter-based procedure that could possibly help patients avoid the need for open heart surgery. In addition to mitral valve research, the Heart Valve team continues research work involving of TAVR - Transcatheter Aortic Valve Replacement.

Rita Jermyn, M.D., Director of the Center for Advanced Cardiac Therapeutics, is involved in multicenter drug and device trials aimed at the optimization of heart failure treatment and reduction in heart failure hospitalization and cardio-

vascular mortality. Dr. Jermyn is a renowned expert in CardioMEMS, with a research interest targeted at improving the quality of life for heart failure patients, including HeartMate LVAD patients and potential expanded indications for CardioMEMS.

The Cardiac Imaging Department, led by **J. Jane Cao, M.D.**, has a large number of original research protocols encompassing echocardiography, nuclear imaging, cardiac CT, and MRI using state-of-art technologies. The accessibility of multi-modality imaging creates a unique opportunity to investigate the relationship of myocardial tissue property and myocardial mechanical performance, led by Dr. Cao and Lin Wang, M.D.

A broad interest in qualitative and quantitative myocardial perfusion research has created investigations using MRI, CT, echocardiography, and PET imaging led by **Madhavi Kadiyala, M.D.**, **Timothy Christian, M.D.**, **Aasha Gopal, M.D.**, **Andrew Van Tosh, M.D.**, and **Eddy Barasch, M.D.** The team continues to evaluate physiologic insights and clinical outcomes associated with aortic stenosis. Artificial intelligence is an important area of leading-edge research in cardiac imaging. **James Goldfarb, Ph.D.**, has taken the lead on research into the use of artificial intelligence in large-scale cardiac imaging analysis.

Another senior scientist, **Yulee Li, Ph.D.**, and his team are working on an NIH-funded study to develop techniques to increase the speed of cardiac imaging. Dr. Cao is collaborating with engineers to develop 3D printing to investigate the role of personalized planning in complex cardiac device deployment.

Please call (516) 562-6790 for more information about any of these trials.

St. Francis Gets Another 'A' in Nationwide Safety Test

For the twelfth time, St. Francis Hospital has received an 'A' in a national safety score that rates hospitals on the quality of their care. The letter-based rating system was devised by the Leapfrog Group, a nonprofit organization that ranks hospitals nationwide. St. Francis was one of just three hospitals on Long Island and the only one in Nassau County and Queens to get an 'A.' The Hospital has earned an 'A' 12 out of 14 times since the safety score's debut in 2012.

The semi-annual rankings rely on data from Leapfrog's own ratings as well as outside sources including the Centers for Medicare and Medicaid Services and the Joint Commission. Grades range from 'A' to 'F' based on 27 publicly available safety measures. Hospitals are rated on how well



they prevented errors, infections, injuries, and drug mix-ups that could lead to medical complications and unnecessary loss of life. Of the 145 hospitals surveyed in New York State, only a dozen or just eight percent received an 'A.'

According to Leapfrog, selecting the right hospital can reduce your risk of avoidable death by 50 percent. The ratings empower patients to make informed decisions about the safety of their hospital care.

St. Francis Hospital Names New President

Charles L. Lucore, M.D., M.B.A. has been appointed President of St. Francis Hospital, The Heart Center®. Dr. Lucore, an interventional cardiologist, was previously President and CEO of St. John's Hospital, the flagship hospital of the Hospital Sisters Health System. The network has 15 hospitals and over 1,000 employed physicians across both Illinois and Wisconsin.



Lucore received his M.D. degree from Duke University School of Medicine. He completed his residency at New York Hospital-Cornell Medical Center. Dr. Lucore then completed a fellowship in cardiology at Washington University-Barnes Jewish Hospital and was a faculty member at the University's School of Medicine. He also has an M.B.A. from the Olin School of Business at Washington University.

"Dr. Lucore is a highly accomplished hospital administrator and widely respected cardiologist. We are proud to have him take the helm of St. Francis, the flagship hospital of our system," said Alan D. Guerci, M.D., President & CEO of Catholic Health Services of Long Island.

After graduating from Colgate University, Dr.

Prior to becoming CEO of St. John's Hospital, Dr. Lucore was Secretary to the Board of Directors and Executive Director of the hospital's Prairie Institute. The nationally recognized institute is renowned for providing comprehensive cardiac care. It also has one of the country's oldest and most reputable Colleges of Nursing.

LVAD Program at St. Francis Reports Excellent Patient Results



Leaders in LVAD: Retired NYC Police Officer John DePerte (second from left) got a new lease on life from the St. Francis LVAD team. (From left to right) Rita Jermyn, M.D.; John DePietro NP-C; and Edward F. Lundy, M.D., Ph.D.

For patients who have received a Left Ventricular Assist Device (LVAD) as a bridge to transplantation or as destination therapy at St. Francis Hospital, our multidisciplinary team has produced outstanding results. The LVAD program at St. Francis is one of the fastest-growing programs in the country.

Among all LVAD patients implanted at St. Francis, operative mortality and 30-day mortality have been zero. This is compared with a national average of 5% and 10% respectively, said Edward F. Lundy, M.D., Ph.D., Surgical Director of the LVAD program. One-year survival is 96%, compared with 80% nationally.

The results are particularly notable because LVAD patients are among the sickest in the hospital, Dr. Lundy explained.

Left ventricular assist device patients also now receive a device called the HeartMate3 (HM3) Left Ventricular Assist System, approved for bridge to transplant or as destination therapy. One benefit of HM3 is a lower rate of pump thrombosis, said Rita Jermyn, M.D., Director of the Heart Failure Program. Results from the MOMENTUM 3 trial have demonstrated improved rates of pump thrombus compared to the HM2.

"The pump is a quantum leap forward," Dr. Lundy said. "Because of advanced technology, the pump is dramatically more hemocompatible. That results in reduced complications and increased one- and two-year survival."

The HM3 also improves patient quality of life because its batteries last longer—up to 17 hours—compared with previous pumps. "There's a dramatic difference and improvement in energy efficiency. It alters people's lifestyles," Dr. Lundy said.

Additionally, the HM3 is smaller and does not require a pocket to be created in the abdominal wall. All LVAD patients implanted in the last six months have received the HM3.

St. Francis Offers Advanced Treatment to Patients With Secondary Mitral Regurgitation

The MitraClip device was approved by the U.S. Food and Drug Administration in 2013 for use in patients not eligible for open-heart surgery. The device is delivered through a minimally invasive catheter, and it secures a portion of the mitral valve leaflets with an implanted clip.

More recently, a randomized study called COAPT focused on the use of the MitraClip in 614 patients with significant secondary mitral regurgitation. That study met its primary safety and efficacy endpoints and all secondary end-



points, according to a press release from device manufacturer Abbott in September 2018. The indication of significant secondary mitral regurgitation is used to describe patients with secondary mitral insufficiency and congestive heart failure who continue to have mitral valve leakage even after medication adjustments.

"[The study] showed treatment with MitraClip plus medical therapy was superior to medical therapy alone in reducing rates of heart failure hospitalizations and improving survival at two years," Abbott reported in a press release. St. Francis participated in the COAPT trial.

Based on the COAPT results, leading heart groups are recommending use of the MitraClip, but it will take another year or two for formal guidelines to be updated and put into practice, said Andrew D. Berke, M.D., an interventional cardiologist at St. Francis Hospital. In the meantime, St. Francis now is able to use the MitraClip for the indication of significant secondary mitral regurgitation, ahead of many other hospitals on Long Island and elsewhere.

St. Francis Hospital

CARDIOVASCULAR *Report*

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For physician referral, please call **1-888-HEARTNY (432-7869)**. For information about cardiovascular services at St. Francis Hospital, call **(516) 562-6725**.

St. Francis Receives Two Top National Awards for Stroke and Heart Failure Care

St. Francis Hospital has once again received the American Heart Association/American Stroke Association's *Get With The Guidelines®* – Stroke Gold Plus Quality Achievement Award. The award recognizes the hospital's commitment to ensuring stroke patients receive the most appropriate treatment according to nationally recognized,



research-based guidelines based on the latest scientific evidence.

The Hospital also earned the association's StrokeSM Elite/Target award. To qualify for this recognition, hospitals must meet quality measures developed to reduce the time between the patient's arrival at the hospital and treatment with the clot-buster tissue plasminogen activator, or tPA, the only drug approved by the U.S. Food and Drug Administration to treat ischemic stroke.

St. Francis also received the American Heart Association's *Get With The Guidelines®* – Heart Failure Silver Plus Quality Achievement Award. The award recognizes the hospital's commitment to ensuring heart failure patients receive the most appropriate treatment according to nationally recognized, research-based guidelines founded in the latest scientific evidence. The goal is speeding recovery and reducing hospital readmissions for heart failure patients.

St. Francis earned the award by meeting specific quality achievement measures for the diagnosis and treatment of heart failure patients at a set level for a designated period. These measures include evaluation of the proper use of medications and aggressive risk-reduction therapies.

Dr. Richard Shlofinitz, Chairman of Cardiology, is proud to announce

St. Francis Hospital
Heart Valve Symposium:
Update on Innovative Technologies
Saturday, April 13, 2019
8am-3pm
The DeMatteis Center
101 Northern Boulevard
Greenvale, NY

Featuring Live Cases
Target Audience:
Cardiologists, Internists, Advanced Practice Providers, Registered Nurses
Review state-of-the-art surgical and transcatheter options for aortic, mitral, and tricuspid valve disease.

Save the Date: St. Francis Hospital's Heart Valve Symposium: *Update on Innovative Technologies* will be held Saturday, April 13, 2019 from 8 a.m. to 3 p.m. at the DeMatteis Center for Cardiac Research and Education, 101 Northern Boulevard, Greenvale, NY. The second annual conference features live cases and review of state-of-the-art surgical and transcatheter options for aortic, mitral, and tricuspid valve disease.
Register online: HeartValveSymposium2019.eventbrite.com

Precision Angioplasty *(Continued from page 1)*

conference will take place this year on March 8 and 9 in New York City. This will be the biggest intravascular imaging conference to date, attracting 750 attendees as well as world-renowned faculty from around the globe. Attendees will learn about OCT image interpretation, best practices for coronary physiology and imaging, intravascular ultrasound, and newer techniques for precision angiography. Attendees will also be able to observe live cases from St. Francis Hospital. St. Francis Hospital sponsors the workshop, which is partially funded through educational grants from commercial supporters.

Dr. Shlofinitz is also participating in the Shockwave Coronary Lithoplasty Study (Disrupt CAD III), which will assess Intravascular Lithotripsy technology for the treatment of complex calcified lesions prior to stenting. St. Francis is the first hospital in the U.S. to enroll patients in the trial.