

# CARDIOVASCULAR Physician



## ADVANCED HEART FAILURE

*Two Cities, One Program*

(l to r) Chief of Cardiology George Ruiz, MD, MedStar Union Memorial Hospital, Baltimore, Md.; Director Samer Najjar, MD, and Surgical Director Ezequiel Molina, MD, Advanced Heart Failure Program, MedStar Heart & Vascular Institute, Washington, D.C.

## One Program Across our Geographic Footprint



Seamless integration of services—over miles, across specialties and through all stages of care. That's the definition of a systemwide cardiovascular service line, and is what MHVI has been shaping for decades. Nowhere is this mantra more evident than in our Advanced Heart Failure program for patients in the Baltimore area. During the last several years, we have worked to create a seamless progression for patients who may ultimately need mechanical circulatory support or a transplant—complex procedures available only at MedStar Washington Hospital Center. Our cover story, on the following four pages, demonstrates how we are successfully sharing expertise and technology across our 10 regional hospitals—while providing the comfort and convenience of before and after treatment closer to home.

### THE BLIND MEN AND THE ELEPHANT

Treatment of heart failure and other cardiovascular diseases evolves over time as our knowledge expands. It calls to mind the very old story of the Blind Men and the Elephant. In this Indian parable, a group of blind men who had never crossed paths with an elephant are asked to describe the animal by touching it. Each feels a different part of the elephant and describes it based on this limited experience. Of course, their perceptions of the creature differ vastly.

At MedStar Union Memorial Hospital, a new hypertrophic cardiomyopathy clinic under the direction of Sandeep Jani, MD, demonstrates the modern relevance of this ancient tale. When physicians first identified hypertrophic cardiomyopathy, it was characterized by the limited tools at their disposal. They were only touching a part of the elephant.

In the early 1950s, Sir Russell Brock, a surgeon at Guy's Hospital in London, reported on three patients with aortic outflow obstruction as a result of left ventricular hypertrophy. Donald Teare, a contemporary of Sir Brock's, described many of the symptoms of the disease, and in post-mortem examination, he identified myocyte disarray. He also reported the sudden death of a 16-year-old brother of one of his original patients. On post-mortem, the heart's appearance was nearly identical to his sister's—a discovery that helped establish the genetic, and sometimes inherited, basis of hypertrophic cardiomyopathy.

But it was the advent of echocardiography that allowed physicians to measure left ventricular wall thickness and identify differing patterns of ventricular hypertrophy. Two dimensional echo, doppler techniques, and modern cardiac catheterization have expanded our understanding of the disease. Genomics and advanced imaging modalities, such as MRI, allowed us to see the "whole elephant" (although much work still needs to be done). Today we recognize that less than a quarter of patients with hypertrophic cardiomyopathy have left ventricular outflow tract obstruction—despite the initial description.

Now Dr. Jani is caring for patients—and families—affected by the disease driven by our experience, extensive imaging capabilities, genetic counseling, as well as skilled interventional, EP, and surgical management services, when needed. You can read more details about this clinic on page 7.

### NURSING EXCELLENCE

Also in this issue, we highlight the remarkable team of specialist nurses who are key to our clinical success. Their knowledge of complex cardiac disease and their teamwork are critical to maintaining optimal patient outcomes. Much like in medicine, nurses with specific content knowledge, interest, and experience further elevate the overall level of patient care. In 2017, the nursing team at MedStar Washington Hospital Center received the prestigious *Pathway to Excellence*® designation from the American Nursing Credentialing Center—the first such designation of an acute care hospital in the D.C. area. In addition, the MHVI Nursing Residency Program is now certified by the Commission on Collegiate Nursing Education, a national accreditation agency. At MHVI, high tech and high touch go hand-in-hand.



George Ruiz, MD, Chief of Cardiology, MedStar Union Memorial Hospital and MedStar Good Samaritan Hospital

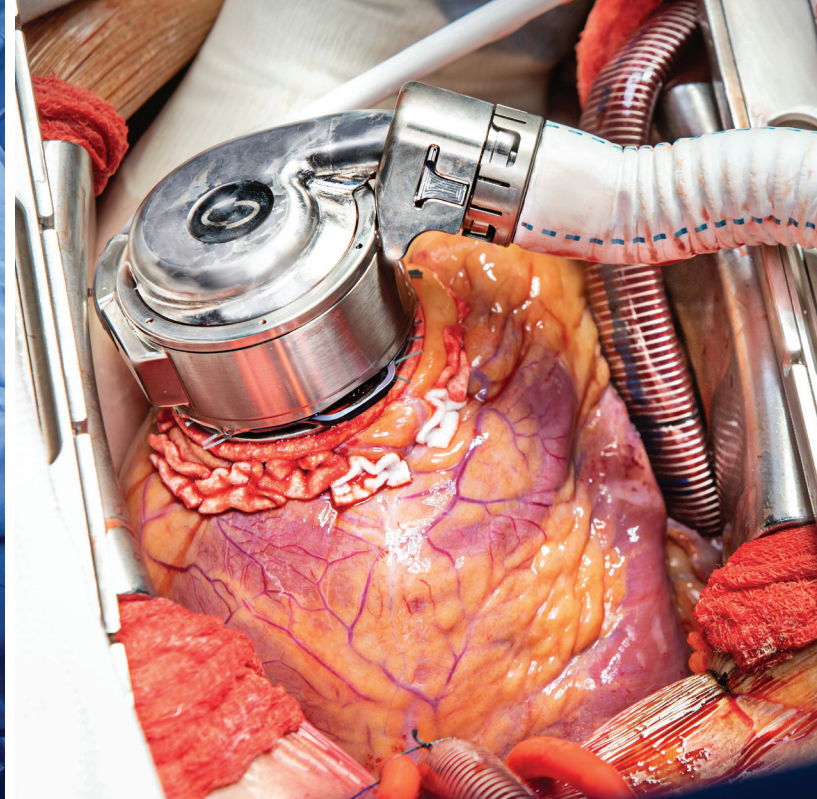
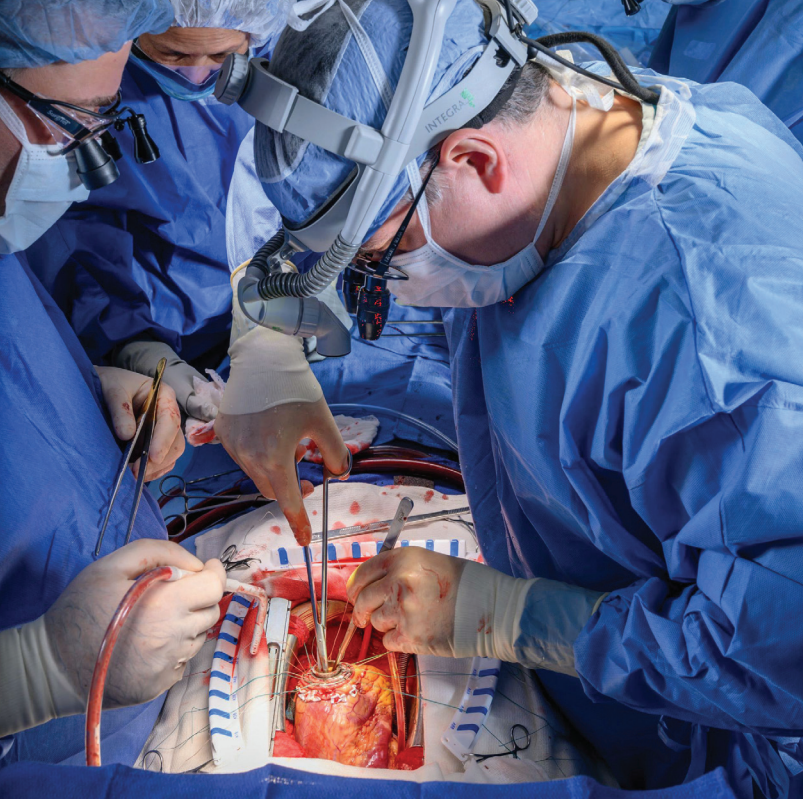


(l to r) MHVI's Advanced Heart Failure Program Director Samer Najjar, MD, and Surgical Director Ezequiel Molina, MD

## ADVANCED HEART FAILURE *Two Cities, One Program*

When David Johnson learned he needed a Left Ventricular Assist Device (LVAD), the Baltimore County resident traveled to the nation's capital—40 miles and seemingly a world away—despite the presence of two LVAD/heart transplant sites right in his own backyard.

His destination was MedStar Washington Hospital Center, home to the MedStar Heart & Vascular Institute (MHVI), by far the most accomplished VAD site in the region. His journey marked the mid-point of several years of planning to build a seamless Advanced Heart Failure (AHF) system spanning the two cities.



(l) Ezequiel Molina, MD, sews a ring to the apex of the heart in preparation for LVAD insertion. (r) The LVAD has been attached to the heart. The outflow graft (in white) will be sewn to the ascending aorta.

"We have a big footprint in Baltimore," says Samer Najjar, MD, director of MedStar Health's Advanced Heart Failure Program. "Our goal from the beginning was to figure out how to serve all AHF patients in the system equally well, including those needing VADs or transplant."

The AHF teams in both cities put their heads together to create a program that could fully integrate their services.

### DESIGN, DILIGENCE, DEDICATION

The foundation for such a program was already in place. MedStar Washington Hospital Center ranks among *U.S. News & World Report's* top 50 cardiovascular programs in the United States, and as the best heart hospital in the Washington, D.C., region. MedStar Union Memorial Hospital has been included among the top 100 heart hospitals nationwide, with a long history as a tertiary referral center for the Baltimore area. Both are allied with the Cleveland Clinic Heart and Vascular Institute, sharing a rigorous commitment to quality and safety, with impressive outcomes as testimonial.

The two hospitals' services also practically mirror each other, with one important difference. Only the Hospital Center performs the two most highly sophisticated surgical AHF procedures available—LVAD implantation and heart transplantation. In fact, it is one of the most experienced

VAD sites in the nation, implanting more than 80 devices each year. Its growing transplant program, the first in Washington, D.C., performs more than 16 of these vital operations annually, on par with other major centers.

The biggest question, then, became how to bring the pinnacle standard of care to Baltimore's sickest AHF patients, with as little disruption to their daily lives and routines as possible.

### BUILDING BEYOND REFERRALS

The answer lay in establishing a secondary MHVI hub in Baltimore with a seamless expressway between the two cities.

Four years ago, George Ruiz, MD—formerly with MedStar Washington Hospital Center and now chief of Cardiology at MedStar's Union Memorial and Good Samaritan hospitals—was tasked with the challenge.

"MHVI has the most mature, sophisticated AHF program around, with a history of providing aggressive yet thoughtful care, and a renowned VAD program," Dr. Ruiz says. "Our goal was to replicate that approach for the residents of Baltimore, without duplicating the mechanical assist or transplant services, both of which require a huge amount of infrastructure."

Toward that end, MedStar Union Memorial hired Sandeep Mahendra Jani, MD, MPH, a former fellow at MedStar Washington Hospital Center, to serve as associate director of Advanced Heart Failure for MHVI's Baltimore region. Dr. Jani specializes in identifying and treating patients with hypertrophic cardiomyopathy, LVAD management, and transplantation cardiology at both MedStar Union and MedStar Franklin Square Medical Center. In the past year, another AHF specialist, Tolulope Agunbiade, MD, also came on board.

To strengthen ties and familiarity between the Baltimore and Washington teams, cardiologists from MedStar Union Memorial Hospital, including Drs. Jani and Agunbiade, rotate through the Hospital Center. In January 2018, MedStar Union Memorial formalized a VAD clinic to assist with post-LVAD routine follow-up care in Baltimore.

The result is a much smoother, easier experience for patients. "What we've built together is very different from a traditional referral service," says Ezequiel J. Molina, MHVI's surgical director for the Advanced Heart Failure Program, and the Hospital Center's primary transplant surgeon. "MedStar Union Memorial is providing the highest level of medical care available—including intravenous inotropic agents—to AHF patients in Baltimore. But when medications fail, they can then conduct a complete work-up of potential VAD/transplant patients right in their own facility."

"Before patients even get here," says Dr. Molina, "we already know what to expect, making it less time-consuming and stressful for them, and easier and faster for us to deliver the highest level of care."

### PROOF IN NUMBERS

Thanks to the new program, over the past few years 32 patients from Baltimore have had VADs implanted, five of whom have transitioned to transplant, including David Johnson.

It's been a tremendous effort, involving a multidisciplinary team of specialized physicians and nurses, intensivists and pharmacists, nutritionists and physical therapists, coordinators and social workers, ethicists and more, across two cities and two hospitals. The result is one seamless AHF program.

And that's worth it, concludes Dr. Najjar. "Throughout MHVI, we have a passion for patients and for returning some of those abilities that AHF has taken away," he says. "Based upon this success, we hope to extend the new model throughout our MedStar system in the near future."



Jane Lashley, NP, and George Ruiz, MD, with Advanced Heart Failure patient David Johnson almost a year after his heart transplant.

## "I Just Want to Walk my Children to School"

That's what David Johnson told George Ruiz, MD, when the father of five first landed at MedStar Union Memorial Hospital. Only in his mid-40s, Mr. Johnson was diagnosed with nonischemic cardiomyopathy and started on a drug regimen to help his severely decompensated heart. Dr. Ruiz and his team eventually placed him on an intravenous medication delivered through a pump and implanted a defibrillator while they evaluated him for an eventual heart transplant. His condition was further complicated by pulmonary hypertension. Transplant was too risky in his weakened condition, so Mr. Johnson was sent to MedStar Washington Hospital Center for an LVAD, as a bridge to transplant. "After my LVAD, I felt so much better," Mr. Johnson recalls. "I could walk farther, including getting my 6-year-old twins to school." It wasn't long until Mr. Johnson got the call he had been waiting for. On February 4, 2018, Ezequiel J. Molina, MD, successfully replaced Mr. Johnson's failing heart. Today, the Baltimore County resident says he feels wonderful, with renewed energy for life and a great willingness to give back. "I received such excellent care at both MedStar Union Memorial and MedStar Washington Hospital Center," he says. "I'll do anything for them."

### Progression of AHF treatment between MUMH and MWHC





Jonathan Grinstein, MD

## Go Home With Your Balloon Pump! Short- and Long-Term Support for AHF Patients With Subclavian Artery Access Balloon Pump

Despite tremendous progress in treating advanced heart failure, certain patients have remained in limbo: too sick to benefit from medical therapy and specialized pacemakers, yet too well to undergo ventricular assist device (VAD) implantation or transplantation. But a promising new development may show the way out of the dilemma.

The NuPulseCV® Intravascular Ventricular Assist System (iVAS) is a novel, minimally invasive blood pump that uses a two-inch incision in the shoulder to reach the subclavian artery. By avoiding a VAD open procedure, use of iVAS could result in less blood loss, less pain, and a faster post-operative recovery, while providing enough support for intermediate

*"Also, because it is inserted through the subclavian artery, rather than the traditional access through the groin, patients can move about and even return home with it in place."*

—Ezequiel Molina, MD

AHF patients. "Also, because it is inserted through the subclavian artery, rather than the traditional access through the groin, patients can move about and even return home with it in place," says Ezequiel J. Molina, MD, MHVI's surgical director for the Advanced Heart Failure Program, and co-principal investigator for the NuPulse trial.

That premise is now being tested at MedStar Washington Hospital Center, one of 20 eventual sites nationwide selected for a major feasibility study of the device. Should NuPulse prove safe and clinically effective, it could become a proven addition to the AHF armamentarium and an important option for a currently underserved subset of patients.

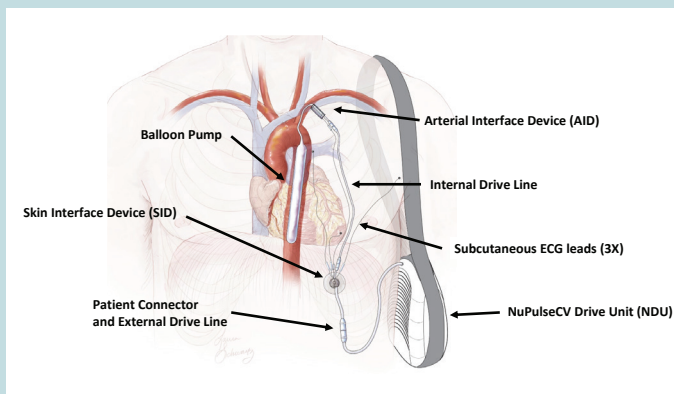
"NuPulse was created specifically for patients who fall between late Stage C and early Stage D heart failure, what we refer to as INTERMACS 3 through 7," says cardiologist and co-principal investigator Jonathan

Grinstein, MD, who recently joined MHVI from the University of Chicago where the new device underwent first-in-human testing. "It can provide months to years of partial support without the risks and potential complications associated with traditional circulatory assist devices."

The NuPulse device cannot deliver the same level of support as durable VADs, which are designed to completely take over the heart's function. The new device can help patients with a certain amount of cardiac reserve, serving as a bridge to recovery, bridge to transplant, bridge to decision, or as a destination therapy of its own. iVAS can be used across the entire spectrum of heart failure, both in heart failure with reduced (HFrEF) and preserved (HFpEF) ejection fraction, and in patients who could possibly recover from their heart failure. The HFpEF patient population currently has limited therapeutic options, yet accounts for nearly 50 percent of patients with heart failure in the U.S. NuPulse has the potential to offer these patients symptomatic improvement.

"Since their inception, VADs have prolonged the lives of end-stage AHF patients awaiting new hearts, and restored life and its quality to many others who may never get a transplant," says Dr. Molina. "But VADs have their own set of complications, including creating adhesions within the heart and chest wall, which can make subsequent heart surgery or transplantation more difficult. That's not a problem with the iVAS."

**MedStar Washington Hospital Center is currently enrolling candidates in the study. To see if your patient might qualify, please contact 202-877-4698.**



(l to r) Glenn Meininger, MD, Ankit Shah, MD, and Sandeep Jani, MD



MHVI Cardiac Genetics Counselor  
Aime Agather

## Hypertrophic Cardiomyopathy Clinic

About one in every 500 people in the U.S. are at risk for developing hypertrophic cardiomyopathy (HCM). As many as 1 percent of those are at risk for ventricular arrhythmias that could lead to sudden death, making HCM the leading cause of cardiac death in young adults. That's why the MedStar Heart & Vascular Institute (MHVI) has established a multidisciplinary HCM Clinic to diagnose patients at risk and follow them long-term.

Characterized by an abnormal thickening in the heart muscle, HCM can obstruct normal blood flow, causing shortness of breath, chest pain, dizziness and fainting. "HCM patients often require specialized care to keep them feeling as well as possible, understand and reduce their chance of sudden death, and appropriately screen and treat family members," says Sandeep Jani, MD, a cardiologist who specializes in advanced heart failure and heart muscle disorders, and is HCM Clinic medical director.

The HCM team includes cardiac imaging experts, electrophysiologists, interventional cardiologists and cardiac surgeons. In addition, Ankit Shah, MD, one of the few fellowship-trained sports cardiologists in the nation, specializes in managing cardiac conditions in athletes. The team also includes a dedicated cardiogenetics specialist to determine genetic factors that may be involved.

"We offer world-class interdisciplinary care, partnering with referring cardiologists," Dr. Jani explains. The clinic operates at MedStar Union Memorial Hospital in Baltimore. Patients in the D.C. area can contact Andrew Ertel, MD.

The first step is a thorough patient history and a physical exam. The clinic coordinates a full complement of testing modalities depending on the needs of each patient, including electrocardiogram, echocardiogram, genetics testing, cardiac imaging, stress testing, cardiopulmonary testing, EP testing, and cardiac catheterization.

"Then we analyze the results according to risk scores, taking into account heart muscle thickness, family history of sudden cardiac death, and genetics," Dr. Jani says.

Glenn Meininger, MD, medical director, Electrophysiology, Baltimore region, says, "Patients with significant risk of sudden death may benefit from placement of a defibrillator. Defibrillators are our best strategy for these patients."

Other patients develop obstruction that may require specialized medications, catheter-based procedures or open heart surgery. "What's important to know is that patients with HCM require ongoing screening," Dr. Jani adds. "Things can change over the course of time."

Dr. Shah provides an individualized approach to HCM as it relates to activity. "Traditionally, exercise recommendations for HCM patients have been restrictive," he says. "Many patients deliberately reduced their habitual physical activity after diagnosis, putting them at risk for sequelae of a sedentary lifestyle: weight gain, hypertension, insulin resistance and increased morbidity and mortality."

The solution is an individualized approach for each patient. "Recent literature suggests that structured exercise training can be safe and well tolerated so, with the understanding that nothing is risk free, we use cardiopulmonary exercise testing to provide patients with tailored exercise recommendations," Dr. Shah says.

Genetics also plays an important role in HCM. Aime Agather is MHVI's dedicated cardiac genetics counselor and is available to address genetic factors with HCM patients. "HCM tracks in families, so if a patient has a family history of sudden cardiac death, it's worthwhile to determine if there is a genetic component."

"If we identify a genetic change, we can screen family members for HCM," she says. "Genetic testing is indicated for first-degree relatives if a family member who dies suddenly is found to have a thickened heart on autopsy."

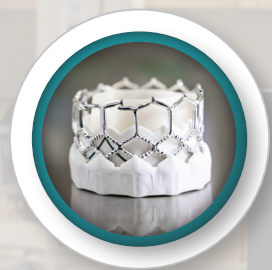
Dr. Jani adds, "We are available to help physicians assess and manage HCM patients. We follow patients over time so we can intervene at the appropriate time to prevent sudden death or other complications."

**For Baltimore patients, call 410-554-6550.  
For Washington, D.C. patients, call 202-877-7777.**



Ron Waksman, MD, designer and principal investigator of the Low-risk TAVR Study

TAVR STUDY FOR LOW SURGICAL RISK PATIENTS



All-Cause Mortality and In-Hospital Stroke

## Study Suggests TAVR Extends Benefits to Low Surgical Risk Patients

### Zero Mortality, Zero Stroke Found at 30 Days Post-Procedure

In a major national trial spearheaded by MedStar Heart & Vascular Institute (MHVI), transcatheter aortic valve replacement (TAVR) has demonstrated its safety and efficacy among patients at low surgical risk when compared with similar patients who had surgical aortic valve replacement (SAVR). Not only were the TAVR outcomes superior to SAVR, but the less invasive approach also resulted in fewer complications.

The findings could have major implications for the treatment of all patients with severe aortic stenosis, whether symptomatic or asymptomatic, says MHVI interventional cardiologist Ron Waksman, MD, designer and principal investigator of the Low-risk TAVR (LRT 1.0) study. He presented its results at the European Society of Cardiology Congress in Munich last August. Results have subsequently appeared in the *Journal of the American College of Cardiology*.

"Among low-risk patients, TAVR out-performed SAVR in terms of mortality and morbidity, while resulting in shorter hospital stays and lower rates of atrial fibrillation and paravalvular leak," he says. "Based upon these results, it's only a matter of time until TAVR receives FDA approval for general use with low-risk patients, probably within the next 12 months or less."

Eleven medical centers nationwide participated in LRT 1.0, which compared results from 200 low-risk TAVR

patients against a control group of 719 low-risk historical patients who underwent SAVR at the same institutions. The results showed zero all-cause mortality and zero in-hospital stroke in the TAVR group compared to 1.7 percent and 0.6 percent, respectively, among the SAVR population.

With the initial LRT study under their belts, Dr. Waksman and his team are now turning their attention to the next steps: determining the optimal anti-coagulation/platelet regimen to prevent post-TAVR bioprosthetic leaflet dysfunction among the low-risk group. Dubbed LRT 2.0, the newest multi-institutional study was launched at MHVI in late July, with more than 30 patients enrolled to date.

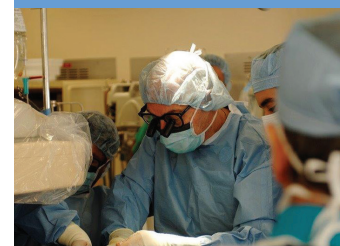
LRT 2.0 is one more example of MHVI's commitment to improve understanding of new and expanded treatment modalities for severe aortic stenosis.

MHVI has participated in every major TAVR trial since the procedure's debut and is now one of the largest TAVR centers in the United States, performing approximately 400 of the procedures each year.

"Our goal is to have something to offer every patient in our care with advanced heart valvular problems, whether a proven solution or a promising new approach," Dr. Waksman concludes.



George Washington University Med School Graduation, 1969



Dr. Corso in the MWHC OR in 1980s



During the early 2000s, Dr. Corso's dream for a regional institute takes shape.



In 2016, Dr. Corso achieves the dream of a highly sophisticated CVICU.



MHVI Cardiac Surgery Team 2018



After 40 years, Dr. Corso retires in 2018.



## Creating a Legacy by Pushing through Boundaries

Paul Corso, MD, watched his first surgical procedure at age 16—his own. The teenager from Charleston, W.V., asked to watch as a surgeon removed his appendix. "He gave me a spinal anesthetic and set up a mirror used for obstetric patients during delivery," Dr. Corso recalls.

### MUSIC VS. MEDICINE

Dr. Corso played saxophone and clarinet, had a high school band, and nearly chose music as a career. But because he particularly enjoyed helping his mom, head nurse at a 44-bed hospital, assemble instrument packs, he entered George Washington University's (GWU) pre-med program instead. He graduated from GWU Medical School in 1969. During an internship, residency and fellowship at GWU, mentors helped shape his progressive approach to patient care and cardiac surgery.

### IMPROVING CARDIAC SURGERY

In those days, people were dying after heart surgery, and Dr. Corso thought there must be a better way. He stayed in touch with a like-minded physician he'd met in school: Dr. Floyd Loop, the chief resident and a future president of the Cleveland Clinic. "We both believed that we needed to prove or disprove surgical approaches, and develop standardized protocols based on outcomes," Dr. Corso says.

He joined the practice of Jorge Garcia, MD, at Washington Hospital Center in 1978.

Dr. Garcia brought the Cleveland Clinic culture to the Hospital Center, Dr. Corso says, and together they shared ideas about fine-tuning protocols and standardizing care.

### BUILDING ON A NOVEL NOTION

In fact, standardization underlies everything that followed in Dr. Corso's career, including the notion of a regional institute, which eventually became the MedStar Heart & Vascular Institute (MHVI). He led the process throughout, as department chair, MedStar Health board member, and chairman of the Heart & Vascular Institute's cardiac surgery program.

MHVI now has "an organized system of care" and "upgraded data collection and analysis," he says. "Our journey is not over, but we must be doing something right, because we became the first Alliance member with Cleveland Clinic Heart and Vascular Institute."

During 40 years as a leader in cardiovascular surgery, Dr. Corso says, "We have seen an evolution—perhaps a revolution—in practice. Research has fueled this process, and will continue to do so."

Dr. Corso says MHVI is in good hands with his successor, Vinod Thourani, MD.

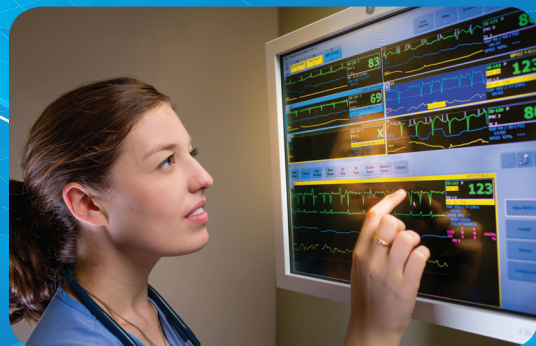
"I think surgeons and ballplayers should leave the field before they are asked," Dr. Corso says. After decades of exemplary service, Dr. Paul Corso he is clearly going out a winner.

# Nurses

at the

# Heart

OF CARDIOVASCULAR CARE



**MedStar Heart & Vascular Institute's (MHVI) highly trained cardiovascular nurses are at the heart of successful outcomes.**

This spring, for instance, MedStar Washington Hospital Center's nursing educators are beginning a new class for cardiovascular nurses: a four-hour breakout session focused exclusively on vascular nursing. "Courses like this one were developed to complement the already extensive cardiovascular education that our nurses experience," says Nancy Bruce, vice president at MHVI.

The vascular course, one of the first such training programs in the country, covers the unique technology and interventions used in specialty vascular procedures in the heart's periphery. It fills a unique need: supporting specialized nursing expertise to manage the rapid growth of cardiovascular patients at the MedStar Heart & Vascular Institute.

Danae Snyder, RN



## FOUR MONTHS OF TRAINING AND 12 MONTHS OF ADDITIONAL HANDS-ON ORIENTATION

Developed by critical care educators in the Hospital Center's Nursing Professional Development Department, the new vascular class builds upon four months of training and an additional 12 months of support with experienced preceptors through the nurse residency program, already required for nurses who become part of MHVI. "The cardiologists and surgeons rely on input from the nurses to assess and develop the plan of care," says Lucy Shivan, BSN, RN, one of the critical care educators who train MHVI nurses. "Cardiovascular nurses need to delve deeper into catheters, pacing and goals of care for the cardiac patient population, and the complications that are typical in this area. We layer more complexity as we go."

In addition to classroom didactic, nurses in the training program use skills simulation to learn such procedures as attaching temporary pacing wires to the heart to make it beat regularly or faster after surgery.

Nurses in MHVI procedural areas have similar training and expertise. At MHVI's Cardiovascular Lab at MedStar Union Memorial Hospital, nurses specialize in one of three areas, and training can take three to six months, notes Kathleen Wenham, RN, manager of Patient Care Services. Nurses in the Lab "require a background in critical care or emergency nursing before they are hired," she says.

## LEARN QUICKLY, DESIRE TO EXCEL

MHVI nurses also participate in research that involves technologies, medications, and procedures not available

elsewhere. "The MHVI nurse needs to learn quickly, be open and curious to learning new information constantly, be willing to jump in and want to excel," says Ms. Bruce. "The fast pace, combined with the complexity, means the nurse is the bridge between the patient and some very sophisticated medical information."

That bridge is visible at the bedside and in the outpatient clinic, where MHVI's 125 Left Ventricular Assist Device (LVAD) patients come for regular care and monitoring. The LVAD patients come once a week at first, then are followed regularly until they receive a heart transplant, says Sharon Oates, MSN, RN, nursing director for MHVI's Ambulatory Practices and Clinical Support. Nurses who work with LVAD patients (inpatient and outpatient) require special certification. "Nurses assess the equipment as well as the patient, and educate patients and family members on maintenance of the device as well as changing dressings and general medical care."

## WHY WE DO WHAT WE DO

For Kelly Lesser, MSN, RN, the challenges of training to be a nurse on cardiac intensive care unit 2NW pay off when patients return to the unit months later. Ms. Lesser, who gave up an earlier career path to law school to pursue nursing, notes that in MHVI surgical patients, "You work with somebody who is so critically ill, you think they are at the end of their life. Then they turn around and months later come back wearing their regular clothes and doing well, and you do a double take. It hammers home why we do what we do. It makes a difference."

## No Place Like MHVI

Chelsea Conger, RN, passes four hospitals on her way to work at MedStar Heart & Vascular Institute (MHVI). The reason: "There are very few places to get this experience."

Ms. Conger knew she wanted to pursue cardiac nursing before she completed nursing school. "To me, it was the most interesting part of physiology, and I was intrigued by the entire cardiovascular system," she says.

Upon graduation from the College of Southern Maryland, Ms. Conger applied to MHVI. She says, "The bridge program in cardiac nursing here is one of few in the country where you are able to work with the latest equipment, delve into research, and work with some of the best physicians worldwide." One of her favorite parts of the training: observing cardiac and vascular surgical procedures. "When you see how a surgeon approaches a repair or a particular issue," she notes, "you have a much better understanding of what to do to support full recovery."

The Maryland resident drives an hour each way to work in the 4NW Vascular Unit at MHVI. In addition, she precepts new nurses, and participates in vascular training sessions and Grand Rounds.

After two years, Ms. Conger says of her experience at MHVI, "I'm still learning. I know I will use these skills for the rest of my nursing career."



Chelsea Conger, RN

## In Memoriam



**Dipin Gupta, MD**, was a talented surgeon as well as a dedicated and passionate physician who took time with his patients, explaining the diagnosis and treatment options available to them to help reduce their anxiety and honor their questions and concerns.

Dr. Gupta, 44, died last summer. "It was a particular tragedy to lose such a talented physician at the age of 44," says Stuart B. Bell, MD, VP, Medical Affairs and CMO, MedStar Union Memorial Hospital and MedStar Good Samaritan Hospital. "He is missed by all of us."

Dr. Gupta joined MedStar Union Memorial in 2014 as a cardiothoracic surgeon. He had extensive training in more than 3,000 minimally invasive techniques and took great pride in mastering the latest surgical techniques so he could offer his patients safe and effective alternatives to traditional open surgery. His expertise earned him a teaching award from residents at Temple University Hospital and recognition as a "Top Doc" by *Richmond* magazine from 2009 - 2014, and *Baltimore* magazine's "Top Doc" recognition in 2016 and 2017.

## Fluoroless Ablations: A Safer Procedure for All

For decades, cardiac electrophysiologists have used fluoroscopy to help guide them during ablation procedures. From obtaining access to the heart through veins and arteries in the groin, to catheter positioning, mapping, and ablation, fluoroscopy has always been considered "indispensible". However, radiation exposure is a well-recognized occupational hazard, and the detrimental effects of radiation range from cataracts to cancers. Compelling new studies indicate that performing ablations with minimal, or no, fluoroscopy—with assistance of newer technologies like ultrasound and 3-D mapping—is not only possible, but feasible, during most ablation procedures. This approach is safer for patients, physicians, and procedural staff without adding significantly to procedure duration in most cases.



Aditya Saini, MD

Aditya Saini, MD, who recently completed an advanced clinical cardiac electrophysiology (EP) fellowship at Virginia Commonwealth University, and now is a member of the EP staff at MedStar Union Memorial Hospital, says there is growing focus during training at most academic programs on skills and techniques for minimizing fluoroscopy and radiation exposure during ablations. "At MedStar Union Memorial, we try to minimize fluoroscopy by using ultrasound guidance to access veins or arteries, then 3-D mapping and intra-cardiac ultrasound to guide catheter placement and reach specific areas of the heart," he says. "Because these technologies have gotten so much more sophisticated, fluoroscopy isn't required at all for many ablation procedures, and the remainder can be performed with minimal fluoroscopy, resulting in significantly lower radiation exposure. While there are still going to be times you need this tool, it's no longer 'indispensible.' More often than not, it is just a habit we need to unlearn as physicians. Routine use of minimal-to-zero fluoroscopy in ablation techniques is here to stay, and is the near future of electrophysiology."

## Kuguchi Awarded Leadership Grant



Congratulations to Misaki Kuguchi, MD, Vascular Surgery, for receiving The Eastern Vascular Society's Diversity and Women Leadership Development Grant. Two such grants were presented at the 32nd Annual Meeting of the Eastern Vascular Society (EVS), held at The Capitol Hilton in Washington, D.C., last September. One of the EVS goals is to encourage more women and underrepresented minorities to enter the vascular surgery specialty. The Society works to address the gap that exists with respect to women or minority group surgeons in leadership positions. This year, the EVS committee, in collaboration with W.L. Gore Medical, offered the \$5,000 grant to women surgeons and/or surgeons from minority groups who wish to develop or improve their leadership skills. The funds can be used for travel, hotel accommodations, and registration expenses to attend specific courses and other leadership training opportunities.

## Good Health Center Heart Failure Clinic at MedStar Good Samaritan Hospital

The Good Health Center at MedStar Good Samaritan is delivering a population-based approach to care for patients with heart failure. The program is helping to reduce hospitalizations while providing close monitoring for patients on an outpatient basis. Cardiologist Tolulope (Tolu) Agunbiade, MD, who works with some of these patients in the Good Health Center, says the mission is to provide longitudinal care for complex cases and, with its infusion capabilities, provides a bridge between inpatient and outpatient treatment. The program will continue to expand and enhance its capabilities to take care of this growing patient population.

For more information, call 443-444-4663.

Tolulope Agunbiade, MD



(l to r) Former UK Prime Minister Tony Blair and CRT Director of CV Research Ron Waksman, MD

## CRT19

More than 3,000 medical professionals from across the globe traveled to the Omni Shoreham in Washington, D.C., March 2 through 5, to attend the annual MedStar Cardiovascular Research Network's CRT19. Now in its 22nd year, the innovative interventional cardiology conference focuses on advances and changes in cardiovascular technology and interventional procedures. The conference gives attendees the opportunity to share ideas and knowledge, collaborate on interventional cardiology solutions, receive interventional cardiology training and network with other professionals. Highlights of this year's four-day conference included keynote speaker Tony Blair, who, during his tenure as prime minister of the United Kingdom (U.K.), implemented a major domestic reform agenda, including creating

the largest hospital and school building program since the creation of the U.K.'s welfare state. Jean Chatzky, financial editor for NBC's *Today* show, AARP's Personal Finance Ambassador and host of the HerMoney podcast on Apple Podcasts, gave the keynote address at the Women and Heart Symposium, and Soledad O'Brien, award-winning journalist, addressed attendees with a speech about Disparities and Inequities in Interventional Cardiology.

New Medical Staff



**Tolulope A. Agunbiade, MD**, is a cardiologist specializing in Advanced Heart Failure at MedStar Union Memorial Hospital and MedStar Good

Samaritan Hospital. Dr. Agunbiade completed a fellowship in Advanced Heart Failure and Transplantation at Johns Hopkins Hospital in Baltimore. She also completed her clinical fellowship in Cardiovascular Medicine and her Internal Medicine Residency at Johns Hopkins Hospital. Dr. Agunbiade earned her medical degree from Harvard

Medical School, Boston, Mass.

Her special interests include:

- Advanced heart failure
- Left ventricular assist devices (LVADs)
- Cardio-oncology
- Peripartum cardiomyopathy



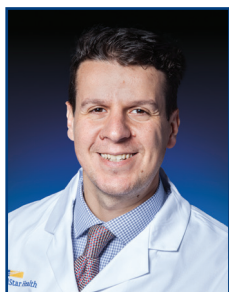
**Ebony Rebecca Alston, MD**, is a cardiologist at MedStar Franklin Square Medical Center. She previously was a

non-invasive cardiologist at Hamilton Cardiology in Hamilton, N.J. Dr. Alston completed a Cardiology fellowship at Hahnemann University Hospital in Philadelphia, Pa., and an Internal Medicine residency at the Cleveland Clinic, Cleveland, Ohio. She received her medical degree from the Medical

University of South Carolina in Charleston.

Dr. Alston's special interests include:

- Integrative medicine
- Preventive cardiology



**Abdelrahman Aly, MD, FACC** is a cardiologist at MedStar Southern Maryland Hospital Center. He is board certified in Cardiovascular Diseases, Echocardiography,

cardiac CT. Dr. Aly completed postdoctoral fellowships at the Mayo Clinic in Rochester, Minn., and at the University of Colorado in Denver. He completed a residency in Internal Medicine at the University of Kansas City, Mo., and a Cardiovascular Diseases fellowship at Saint Luke's Mid-America Heart Institute and University of Missouri-Kansas City, Mo. He has also received training in preventive cardiology at Johns Hopkins Bloomberg School of Public Health and

the Mayo Clinic. He received his medical training at Faculty of Medicine, Zagazig University in Zagazig, Egypt, where he also completed a Cardiology residency.

Dr. Aly's special interests include:

- Cardiac imaging including echocardiography, transesophageal echocardiography, cardiovascular CT and nuclear cardiology
- Preventive cardiology
- Cardiac risk assessment and modification

Nuclear Cardiology and Internal Medicine, and board eligible in Cardiovas-

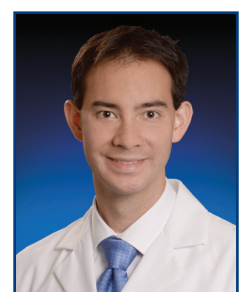


**Patrick Bering, MD**, is a cardiologist at MedStar Washington Hospital Center. Dr. Bering completed a fellowship in Advanced

Cardiac Imaging at the University of Pittsburgh Medical Center. He completed his residency in Internal Medicine, and a fellowship in Cardiovascular Diseases at the University of Maryland Medical Center in Baltimore. He received his medical degree from Jefferson Medical College in Philadelphia, Pa.

Dr. Bering's special interests include:

- Transesophageal and transthoracic echocardiography
- Stress echocardiography
- Cardiac magnetic resonance imaging
- Thoracic magnetic resonance angiography



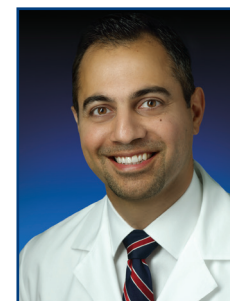
**Jason Chin, MD**, is a vascular surgeon working primarily at MedStar Union Memorial Hospital and MedStar Harbor Hospital. Dr. Chin completed his residency in

certified as a Registered Physician in Vascular Interpretation. A graduate of Northwestern University, Dr. Chin received a BSE in Biomedical Engineering before completing medical school at Northwestern's Feinberg School of Medicine. While in residency, Dr. Chin co-founded the medical device company Acantha Medical Inc., specializing in the development of innovative vascular access solutions. He continues to serve as chief medical officer and holds

several patents. His clinical and research interests include:

- Complex open and endovascular aortic aneurysm repair
- Advanced endovascular limb salvage techniques
- Carotid artery disease
- Dialysis access creation and revision
- Minimally invasive treatment of venous thrombosis and varicose veins

Vascular Surgery at Yale New Haven Hospital at which time he also was



**Hayder Hashim, MD, FACC**, is an interventional cardiologist at MedStar Washington Hospital Center and MedStar Southern Maryland Hospital

Center. Dr. Hashim is board certified in Nuclear Cardiology, Echocardiography, and Vascular Medicine. He was previously a member of the medical staff

of CardioCare in Germantown, Md. Dr. Hashim completed a fellowship in Coronary and Peripheral Artery Interventions at Albert Einstein College of Medicine/Montefiore Medical Center in New York. During his fellowship training, Dr. Hashim served as president of the American Heart Association Fellows' Society of Greater New York. Dr. Hashim completed his Internal Medicine residency at Rutgers University-New Jersey Medical School, as well as a fellowship in Cardiovascular Diseases. He received his medical degree from Baghdad

University College of Medicine. His special clinical and research interests include:

- Complex percutaneous coronary intervention
- Coronary Chronic Total Occlusion (CTO) intervention
- Left ventricular assist devices
- Peripheral vascular intervention
- Intravascular imaging



**Bhavin M. Patel, DO**, is a cardiologist at MedStar Franklin Square Medical Center. Dr. Patel previously served on the medical staff of Frederick Memorial Hospital

in Frederick, Md., where he provided comprehensive inpatient and outpatient cardiology consultation.

Dr. Patel completed a fellowship in Cardiovascular Diseases at the Deborah Heart and Lung Center in Browns Mills, N.J. He also served as a clinical research fellow at the Lankenau Institute of Medical Research in Philadelphia, Pa., working on the Randomized Evaluation of Long-Term Anticoagulant Therapy (RELY) Trial.

He completed his residency at Drexel University College of Medicine, Philadelphia, Pa. and received his Doctor of Osteopathic Medicine from the

Philadelphia College of Osteopathic Medicine.

His special interests include:

- Clinical cardiology and preventive cardiovascular medicine
- Electrocardiography
- Echocardiography including TTE, TEE & Stress Echo (Level 2)
- Diagnostic radial and femoral cardiac catheterization



**Ricardo Quarrie, MD**, is a cardiothoracic surgeon with the MedStar Heart & Vascular Institute at MedStar Union Memorial Hospital. Dr.

Quarrie completed a surgical fellowship

at the Cleveland Clinic Foundation, Cleveland, Ohio. As a faculty member at The Ohio State University, Dr. Quarrie co-taught an inter-professional ethics course for law, medical, nursing, social work, education and allied medical profession students. He received his medical degree, and completed an internship and residency in General Surgery, at The Ohio State University College of Medicine in Columbus, Ohio. He also

completed a Cardiothoracic Surgery residency at Yale New Haven Hospital, New Haven, Conn. Dr. Quarrie is widely published in peer-reviewed journals. He is also a member of The Society of Thoracic Surgeons.

Dr. Quarrie's special interests include:

- Cardiac ischemia-reperfusion
- Aortic root and arch abnormalities



**Aditya Saini, MD, FACC**, is a cardiac electrophysiologist at MedStar Union Memorial Hospital and MedStar Harbor Hospital in Baltimore. Dr. Saini completed his advanced fellowship training in Cardiac Electrophysiology at Virginia

Commonwealth University Pauley Heart Center, Richmond, Va. He completed a fellowship in Cardiovascular Diseases at Louisiana State University Health Center, Shreveport, La. Dr. Saini completed an Internal Medicine residency at MedStar Harbor Hospital and is a graduate of the University College of Medical Sciences, New Delhi, India. He is actively involved in research and has several publications in journals of Cardiology and Cardiovascular electrophysiology.

Dr. Saini's clinical and research interests include:

- His bundle pacing
- Endocardial and epicardial ablation of ventricular tachycardia
- Radiofrequency and cryoballoon ablation of atrial fibrillation
- Fluoroless SVT and flutter ablation
- Cardiac resynchronization therapy





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*Course Co-Directors:*  
Richard T. Benson, MD, PhD  
Rocco A. Armonda, MD

[CE.MedStarHealth.org/Stroke](http://CE.MedStarHealth.org/Stroke)

### FRONTLINE CARDIOLOGY FOR THE PRIMARY CARE PROVIDER 2019

**May 18**

College Park Marriott, College Park, Md.

*Course Directors:*  
Caroline I. Valdiviezo, MD  
Allen J. Taylor, MD  
Sriram Padmanabhan, MD

*Course Co-Director:*  
James C. Welsh, MD, MBA, MPH  
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