

# Cardiovascular **Physician**

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## Hypertension:

*Balancing new  
interventional therapy,  
investigational drugs, and  
a 'back-to-basics' approach.*

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TAVR study evaluates  
clinical needs as patients  
and valves age.

Concomitant ablation with  
LAAO device: An alternative  
to anticoagulants.

First in Maryland to implant  
the only FDA-approved  
transcatheter tricuspid valve.

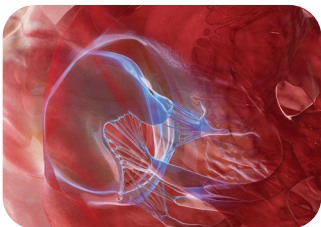


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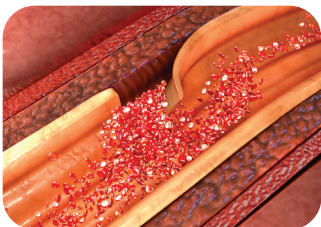
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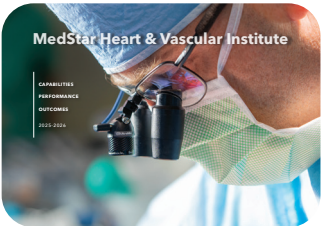
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## Novel technology and novel challenges, forging ahead.

As cardiovascular clinicians, we have a front-row seat to innovation. Frequent waves of fresh technology and invention regularly advance our ability to care for our patients. As we embrace progress, we must also remain mindful of the potential challenges brought by innovation—challenges that often reveal themselves in hindsight, especially as we look to expand those benefits to a broader population.

As early adopters, we have the privilege of introducing cutting-edge tools to the field. Likewise, we consider ourselves both responsible and uniquely equipped for anticipating consequences and asking the right questions as our cardiovascular armamentarium expands.

Our leadership on the REVIVE-TAVR study (page 8) illustrates this concept. After 20 remarkable years of refining the lifesaving TAVR technique, we are now encountering questions regarding long-term durability (like any prosthetic device) as these patients age. This study will help define how best to manage TAVR valves when and if they fail and, ultimately, illuminate optimal initial patient selection in the future.

We have taken our structural heart experience innovating treatment for the aortic and mitral valves and applied it to our use of EVOQUE—the only FDA-approved system for transcatheter tricuspid valve replacement. While once considered “forgotten,” new therapeutic technology has moved the tricuspid valve into the clinical limelight and we are proud to be the among the first to offer it in our region, and enthusiastic about its future in selected cases. Read more on page 6.

The results of the OPTION trial (page 12) demonstrate innovative application of two previously discrete technological advances—the WATCHMAN FLX™ and electrophysiologic catheter ablation. When they are performed concomitantly for patients with atrial fibrillation, we can safely lower stroke risk without requiring lifelong anticoagulation. The melding of two evolving technologies in experienced hands may provide a comprehensive solution for patients with arrhythmia and its associated complications.



In the realm of hypertension management—our cover story on page 4—we have often found ourselves frustrated by the lack of real innovation given such a prevalent problem. Now, in light of growing evidence and evolving tools around direct renal denervation along with expanded use of established and newer drugs, we are able to give our patients more tailored and more effective care.

At MedStar Health, we are motivated by the possibilities presented by each new advance and continue to forge a thoughtful path forward. We look forward to doing so with your continued partnership.

*Stuart F. Seides, MD*



# Hypertension:

## Balancing new interventional therapy, investigational drugs, and a 'back-to-basics' approach.



### Newly approved renal denervation.

Renal denervation therapy has recently emerged as an effective alternative approach for treating patients with resistant hypertension. The minimally invasive procedure reduces sympathetic nervous system activity using multipolar radiofrequency or ultrasound ablation on nerves in the renal arteries. Studies have found the procedure is effective at helping to sustain blood pressure at normal or near-normal levels for three years or even longer.

Interventional Cardiologist Nelson Bernardo, MD, says that while the modality of renal denervation may be new, the concept behind the procedure dates back nearly a century.

"In the 1930s, selected patients with severe hypertension were treated by performing thoracolumbar sympathectomy—cutting and removing ganglia from the sympathetic nerve chain," explains Dr. Bernardo. "Though effective in reducing blood pressure, the procedure was quite invasive and sometimes had debilitating consequences. Small wonder, then, that medications became the preferred means of hypertension treatment for many years."

The advent of catheter-based minimally invasive procedures in the 1990s spurred renewed interest in renal denervation, particularly for patients in whom medications had proven to be ineffective.

"Developing a reliable alternative approach also helps address the longstanding issue of patients who don't comply with part or all of their recommended anti-hypertension treatment or are unable to tolerate certain medications for long periods," Dr. Bernardo adds.

Over the past decades, refinements in both technology and the procedure itself have established both the efficacy and safety of minimally invasive renal denervation, with two systems having recently received approval from the U.S. Food & Drug Administration. Brief pulses of radiofrequency or ultrasound energy ablate nerves in the renal arteries without damaging the arteries themselves. Patients are sedated for the procedure, but they usually go home the same day.

Renal denervation is offered to patients based on a multi-disciplinary assessment of their medical history,

comorbidities, and other factors. Dr. Bernardo notes that while a patient's pre-existing kidney problems may preclude use of renal denervation, outcomes of the procedure are typically positive.

"The procedure's long-term effects continue to be studied, but the risk of poor outcomes so far appears to be very low," he says.

Along with its proven success in treating resistant hypertension, Dr. Bernardo believes renal denervation could well become an attractive option for treating less-severe forms of the disease, particularly for those patients diagnosed with the condition at a relatively young age.

"For someone in his or her mid-40s, for example, the cost of the procedure will likely more than offset the long-term costs of blood pressure medications," he says. "We do need more research, especially in looking at long-term outcomes, but to me, renal denervation holds the promise of setting a new paradigm for hypertension treatment."

### The bigger picture—and growing issue—of hypertension.

Allen Taylor, MD, regional chair of Cardiology for MedStar Health's Washington, D.C. region, is pleased to have the option of renal denervation for his patients with hypertension, particularly those who have a number of medical comorbidities which further necessitate the need for greater control.

"We know that many patients are uncontrolled due to problems with medication adherence," says Dr. Taylor. "Renal denervation helps us address the problem in a new way by providing an adjunct to our existing protocol."

But for those patients who are challenging to treat but not candidates for renal denervation, Dr. Taylor applies a 'back-to-basics' approach.

"We are losing our grip on hypertension," he says. "More people have it and our control over it is diminishing. The body is not programmed to have high blood pressure. It's acquired. It's on us. We are creating resistant hypertension in our society, and the consequences are too high to ignore."

Through a combination of increasingly sedentary behaviors and deteriorating quality of diets, there are more people developing hypertension—and for most, it is not well controlled.

"As physicians, we have the onus and the opportunity to help our patients improve their lifestyle. We should emphasize exercise, better weight control, diets with salt and alcohol restriction and increased potassium, assessment for sleep apnea, and avoidance of certain over-the-counter medications. We should also audit our use of the many effective drugs we have. Typically, three or four drugs will be required, often at meaningful doses. We may also need to review diuretic approaches or help address medication adherence."

Currently under consideration are two repurposed medications that may offer an effective option for some patients who are truly resistant to other drug regimens. Aprocitan, a dual endothelin antagonist commonly used to treat pulmonary hypertension, may now be applicable and



Interventional Cardiologist Nelson Bernardo, MD



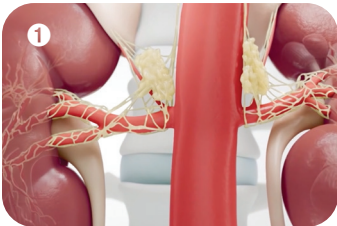
Washington, D.C. Regional Chair of Cardiology Allen Taylor, MD

appropriate for other conditions. Additionally, Zilebesiran, an RNA interference therapeutic agent formerly available only in pill format, is being investigated as an injectable.

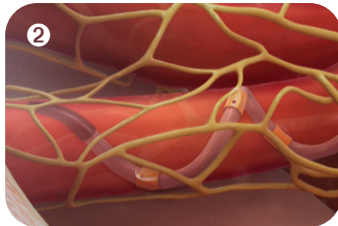
"Long-term assessment of both these medications is still outstanding, as well as conclusions on side effects and cost effectiveness," Dr. Taylor explains.

"While it is nice to have new tools, this is a good time for us to get even better at doing what we already know works—prescribing lifestyle changes and using the currently available drugs optimally—while we await confirmation on the effectiveness of new therapies."

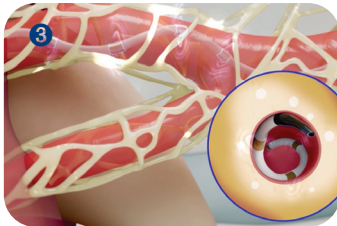
**We invite you to contact Dr. Bernardo (202-877-5975) or Dr. Taylor (202-444-5111) for more information or to arrange a consult.**



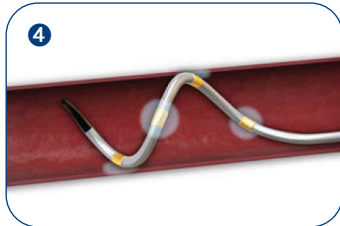
1 Nerve distribution from ganglia along the aorta to the main renal arteries to the distal renal artery branches.



2 SPYRAL™ Catheter electrode placement inside an artery in relation to nerve locations outside the vessel.



3 Arterial cross-section showing the helical placement of the electrodes that will provide a quadrant ablation.

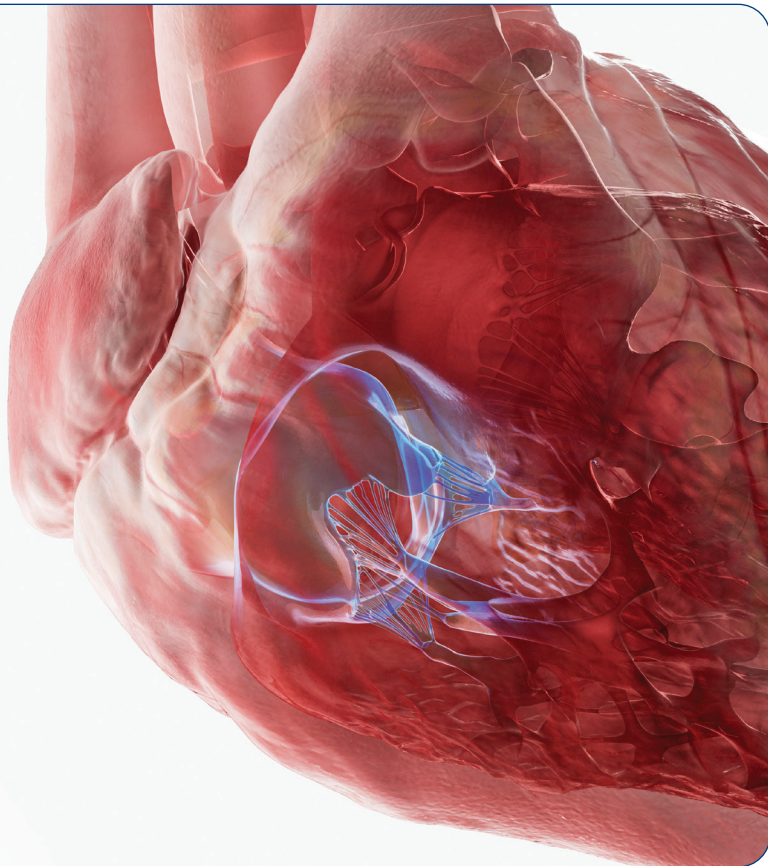


4 With the guide wire pulled back, the nitinol SPYRAL Catheter end will resume its coil shape and appose the electrodes to the walls of arteries between 3mm and 8mm in diameter.



# Remembering the "forgotten valve":

Team at MedStar Union Memorial Hospital first in Maryland to implant the only FDA-approved transcatheter tricuspid valve.



The structural heart team at MedStar Union Memorial Hospital achieved a landmark in cardiovascular care earlier this year when they performed Maryland's first transcatheter tricuspid valve replacement (TTVR) using a recently approved system to treat life-threatening tricuspid regurgitation (TR). On Jan. 7, two patients, both in their 80's, received the replacement valves delivered via catheter, forgoing the need for conventional open-heart surgery.

The new system—EVOQUE—is the only FDA-approved TTVR option in the United States. TTVR is an emerging therapy for patients with severe functional TR who have an extremely poor prognosis and are not candidates for surgical replacement.

During the procedure, the valve is positioned using a catheter threaded into the heart chamber through a sheath placed in the femoral vein—a process that requires close collaboration among a multidisciplinary team of cardiac experts. At the helm for the first procedures were three experienced leaders in minimally invasive cardiac procedures: John Wang, MD, chief of the cardiac catheterization laboratory at MedStar Union Memorial and MedStar Franklin Square Medical Center, and scientific director for Baltimore cardiovascular research; Brian Bethea, MD, chief of Cardiac Surgery at MedStar Union Memorial; and Antony Kaliyadan, MD, associate medical director of the cardiac catheterization laboratory at MedStar Union Memorial.

"The tricuspid valve is sometimes referred to as 'the forgotten valve' because early symptoms of TR are difficult to detect, and once severe dysfunction develops, the condition is difficult to treat and often progresses to heart failure,"

explains Dr. Bethea. "TR causes blood to leak backwards into the right atrium through the tricuspid valve when the right ventricle contracts. The increased volume of blood can enlarge the right atrium, changing the pressure in the nearby chambers and blood vessels. Untreated, it can lead to the development of other serious conditions. But, until recently, the guidelines only recommended medical therapies or traditional surgical procedures to treat this disease."

"While many transformative transcatheter approaches to replace diseased aortic and mitral valves have been developed in recent years, the tricuspid valve has been overshadowed," adds Dr. Wang, "One reason for this is the complexity of the tricuspid valve. It is not annular like the aortic valve. Rather, it is asymmetrical with a lot of variability in anatomy from one individual to the next. Thus, repair or replacement is less predictable."

"Patients suffering with tricuspid regurgitation can endure life-impairing symptoms," he continues. "This new option virtually eliminates tricuspid regurgitation in a wide range of patients, offering a less invasive approach with a quicker recovery and improved quality of life. Much still needs to be learned about optimal device and patient selection, and EVOQUE is not ideal for every patient. But as we have seen with TAVR, outcomes will no doubt improve as these devices evolve and as providers gain more experience performing the procedure."

The approval of the EVOQUE system, developed by Edwards Lifesciences, offers new hope for individuals who have long been faced with limited treatment options. The valve is comprised of a nitinol self-expanding frame, intra-annular sealing skirt, and tissue leaflets made from bovine pericardial



John Wang, MD, Brian Bethea, MD, and Antony Kaliyadan, MD, performed Maryland's first transcatheter tricuspid valve replacements using a recently approved valve to treat tricuspid regurgitation.

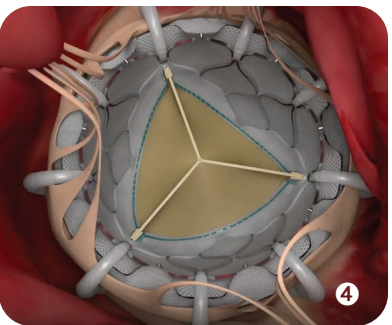
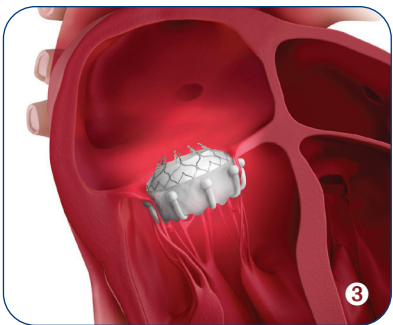
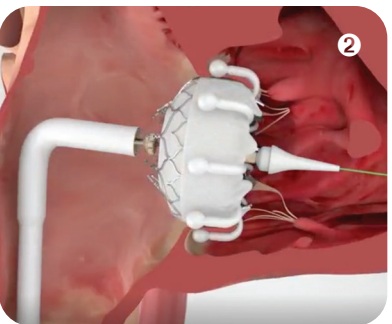
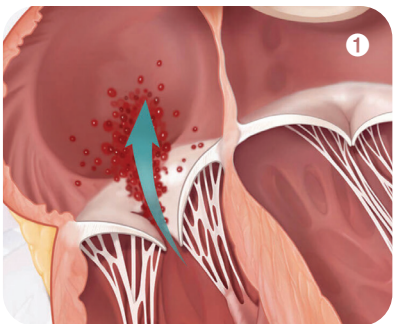


tissue. It is available in four sizes, all delivered through the same low-profile transfemoral system. In clinical trials, researchers saw significant improvements in patients' symptoms and quality-of-life after the implant.

In addition to EVOQUE, MedStar Union Memorial offers the TriClip™ transcatheter tricuspid valve repair system, which was approved last year by the FDA. "TriClip is another minimally invasive treatment option and is an exciting alternative for high-surgical risk patients," says Dr. Bethea, who served as the hospital's principal investigator for the clinical trial that led to its approval.

"We offer one of the widest range of treatment options and devices for patients with structural heart disease available in the country," he notes. "In addition to pioneering many of the advances that have been made in this evolving field, we continue to be among the leading sites in the nation in evaluating emerging technologies and procedures. With the technology now at our fingertips, we are able to provide truly personalized and tailored care. So, rather than making the patient fit the technology, we can make the technology fit the patient, which ultimately optimizes benefit and minimizes risk."

**To learn more about all of our tricuspid valve offerings or to discuss patient candidacy, please call the HeartLine at MedStar Union Memorial Hospital: 410-554-2332.**



- 1 Tricuspid regurgitation with blood flowing backwards from the ventricle to the right atrium through a leaky tricuspid valve
- 2 EVOQUE valve in position for final deployment at the tricuspid valve
- 3 4 Deployed EVOQUE device in the tricuspid valve, side and aerial views



# The evolution of TAVR:

New study evaluates emerging clinical scenarios as patients and valves age.



Transcatheter aortic valve replacement (TAVR), first performed in 2002, has transformed the management of aortic stenosis (AS), becoming the leading therapeutic strategy for patients with the disease. This is due, in large part, to the many groundbreaking advances in technology and techniques that have been made during the past 20+ years, opening the door for the use of TAVR in younger and lower-risk patients.

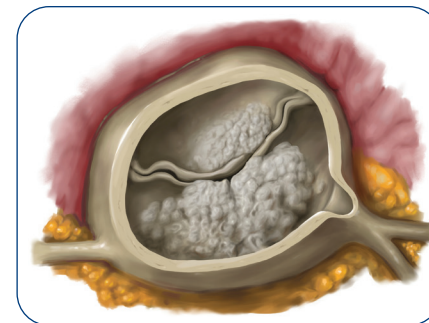
“TAVR was initially developed as an alternative to surgical aortic valve replacements (SAVR) in elderly patients at high or medium risk from surgery,” says Toby Rogers, MD, PhD, an interventional cardiologist and scientific lead for the Structural Heart Disease program. “As indications for the use of TAVR have expanded, so has the number of recipients who are younger and healthier with longer life expectancies. This has raised new therapeutic challenges.”

While TAVR valves can last 10 years or more, they may also fail due to deterioration or complications such as restenosis, regurgitation, and endocarditis. Further, some patients may require cardiac surgery after TAVR for other reasons, requiring the valve to be explanted and replaced surgically, even if it is still functional.

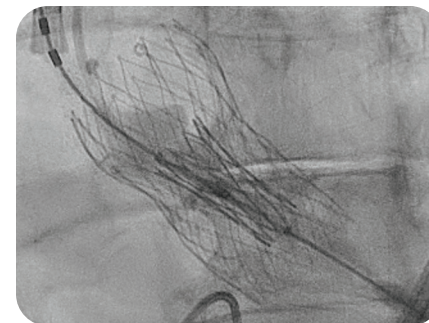
“When a TAVR valve needs to be replaced, the options are insertion of a second TAVR valve inside the first, or surgical explantation followed by SAVR,” explains Ron Waksman, MD, associate director of Cardiology at MedStar Washington Hospital Center and director of Experimental Angioplasty and Emerging Technologies for the Cardiovascular Research Institute. “There are many factors that go into determining the optimal course of action for each patient.”



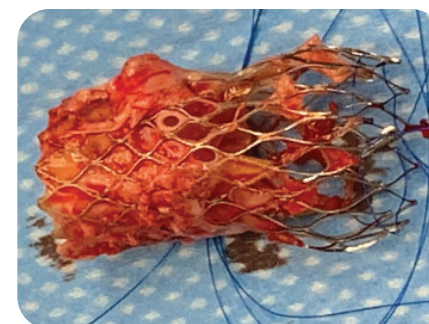
(l to r, standing) Interventional Cardiologists Ron Waksman, MD (principal investigator); Toby Rogers, MD; Itsik Ben-Dor, MD; Cardiac Surgeons Christian Shults, MD; Jeffrey Cohen, MD; (l to r, seated) Interventional Cardiologist Lowell Satler, MD; and Cardiac Surgeon Thomas MacGillivray, MD.



Aortic stenosis caused by calcification



Stacked TAVR-in-TAVR implantation



Surgical TAVR explant

At MedStar Health, a recently launched study aims to provide long-term outcomes data to inform the decision-making process when a TAVR needs to be replaced. Called REVIVE-TAVR (Randomized Evaluation of Valve-In-Valve versus Explantation for failed TAVR), it is being led by Dr. Waksman, as principal investigator, along with a team of his colleagues that includes Dr. Rogers, Thomas MacGillivray, MD, Lowell Satler, MD, Jeffrey Cohen, MD, Christian Shults, MD, Itsik Ben-Dor, MD, and Kalyan Chitturi, DO.

The prospective, multicenter, global randomized trial is investigating the safety and efficacy of reintervention for transcatheter heart valve failure by comparing redo-TAVR (TAV-in-TAV) with TAVR surgical explantation in low or intermediate surgical risk subjects who are candidates for both options.

“This is an emerging field that continues to be informed by ongoing research, especially given the expected rise in the need for these types of procedures,” says Dr. Waksman. “Our goal is to report on and evaluate the clinical characteristics and clinical outcomes of patients who required repeat interventions after TAVR, including redo TAVR and surgical explants, during a 10-year period.”

Primary completion of the trial is targeted by January of 2034. An estimated 264 patients in 80 centers are expected to enroll.

**For more details on REVIVE-TAVR, please visit contact [Kassandra Lopez](mailto:kassandra.lopez@medstar.net) at 202-877-2452 or [kassandra.lopez@medstar.net](mailto:kassandra.lopez@medstar.net).**



## Case study:

# The challenge of spontaneous coronary artery dissection (SCAD):

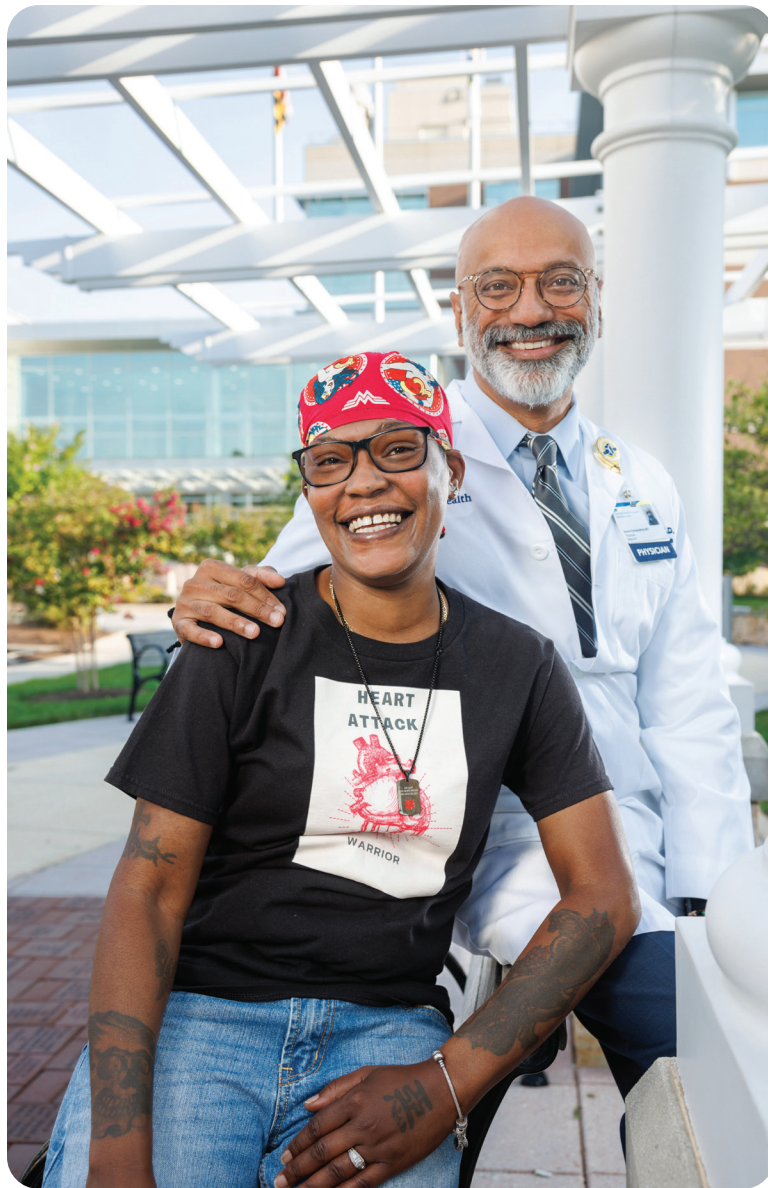
## Nuanced complexities and considerations explained.

In September of 2020, Ashurbanipal “Ash” Leach, then 45 years old and a member of the housekeeping team at MedStar Franklin Square Medical Center, presented to the Emergency Department with sudden onset epigastric and chest pain, and shortness of breath.

Shortly after arrival, she suffered a sudden cardiac arrest. Cardiopulmonary resuscitation (CPR) was promptly administered, and during resuscitation she received multiple shocks for ventricular fibrillation and had a brief return of spontaneous circulation. Her ECG was consistent with ST-segment myocardial infarction (STEMI) and in this context she suffered yet a third cardiac arrest.

Once hemodynamically stabilized in the Emergency Department, Interventional Cardiologist Antony Kaliyadan, MD, brought her to the cardiac catheterization laboratory. While the coronary angiogram showed no significant evidence of disease in the right coronary circulation, the left anterior descending artery (LAD) was 100% occluded. Importantly, there was a dissection flap extending from the left main (LM) coronary artery into the LAD with a heavy clot burden identified in the vessel. Using an aspiration catheter, Dr. Kaliyadan removed the thrombus, restoring blood flow and placed two stents—one in the LAD and one in the LM. Ms. Leach stabilized quickly. The etiology of her STEMI and related cardiac events were determined to be due to spontaneous coronary artery dissection (SCAD).

Nearly four years after her initial crisis and intervention, Ms. Leach began experiencing chest pain that increased in both frequency and intensity with exertion. By this time, she was under the care of Sriram Padmanabhan, MD, chief of Cardiology at MedStar Franklin Square, who ordered further evaluation including a stress test that showed ischemic changes with ST depression. It was recommended that she undergo a repeat cardiac catheterization. The angiogram revealed a new severe stenosis of the ostium of the left circumflex coronary artery that was “jailed” by the stent placed to save her life in 2020.



**Patient Ash Leach with Chief of Cardiology at MedStar Franklin Square Medical Center Sriram Padmanabhan, MD**

John Wang, MD, director of Interventional Cardiology in Baltimore, performed a coronary intervention involving wiring, ballooning, and stenting the new blockage, at MedStar Union Memorial Hospital. In reviewing the angiogram toward the end of the procedure, it was found that a complicated, iatrogenic occlusive coronary dissection had occurred involving the newly placed stent. Dr. Wang was able to treat the dissection through placement of three more stents.

Subsequently, Ms. Leach has done well. She continues to be monitored closely, as patients with similar history are at higher risk of future cardiovascular and cerebrovascular events. She reports that her new role as a respiratory equipment technician at MedStar Franklin Square helps keep her active, complementing her regimen of cardiac rehabilitation, mild exercise, anti-hypertensive medication, and diet.



**(l to r) Interventional Cardiologists Antony Kaliyadan, MD, and John Wang, MD**

### Discussion

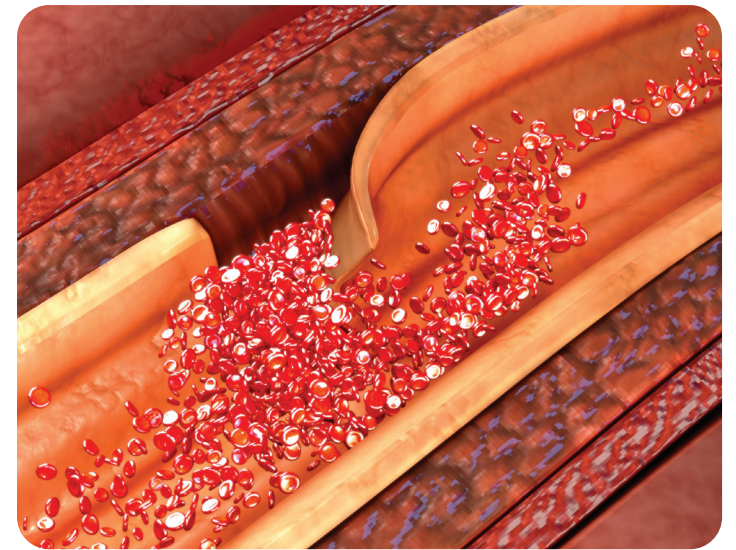
While the incidence of SCAD is low—most frequently occurring in younger women who lack characteristic risk factors for heart disease—early diagnosis can be challenging.

“When a young person comes in with acute coronary syndrome—classic symptoms such as angina, nausea, vomiting, and shortness of breath can be present—we always suspect SCAD,” says Dr. Kaliyadan. “We must be cognizant when assessing these patients that SCAD is a possibility, although that diagnosis cannot be confirmed until we perform a coronary angiogram. Even then, SCAD can be very difficult to recognize, as it can sometimes appear as a more typical blockage in the coronary artery. The eye does not see what the mind does not know. Sometimes SCAD may be written off as a focal lesion.”

If SCAD is suspected, it is imperative that the patient be evaluated at a center with significant experience in the diagnosis and management of very complex coronary cases, with physicians able to balance the risks and benefits of the array of diagnostic and treatment options. Notably, even a standard coronary angiogram can be risky in this subset of patients. Dissection can occur between any layer of the arterial endothelium and lead to acute cardiac decompensation.

“The intima and media are often so friable and fragile in patients who’ve had SCAD, that the slightest intervention can create a dissection,” says Dr. Wang. “Even procedures that are routine for the general population can be quite treacherous in these patients. Interventionalists must be equipped with expertise in wiring large spiral dissections like this one, to avoid emergent bypass surgery.”

Dr. Kaliyadan explains further: “We can treat many patients with SCAD medically without placing stents, as stenting can create intraluminal stress that may lead to new—or propagate existing—dissections.



**A spontaneous coronary artery dissection is a rare, sometimes fatal condition, with the majority of cases affecting women.**

Assuming adequate coronary blood flow, patients can be treated with medications including aspirin, beta blockers, and a course of P2Y12 inhibitor. If there is known hyperlipidemia, we add statins. Anti-anginal medications are used to treat recurrent angina. We try not to perform another coronary angiogram unless there is a clinical imperative. Generally, the dissected artery will heal on its own within 4-to-6 weeks.”


“In summary, less is more in terms of how the catheter is engaged and how we limit the number of injections to avoid propagating or creating new dissections,” he continues. “If the dissection is diffuse and we don’t have the ability to stent—we may elect to pursue medical treatment. The bottom line is that the interventional cardiologist needs to have significant expertise, experience, and judgement to know what to do, and when to—and when not to—engage.”

“We must remain vigilant and responsive to symptoms,” emphasizes Dr. Padmanabhan. “For patients with previous SCAD, there is an increased risk of chronic angina, along with pericarditis and recurrence. A large percentage of these patients are found to have fibromuscular dysplasia also, which can predispose them to brain aneurysms, and connective tissue disorders.”

If SCAD is suspected, it is crucial that appropriate imaging and intervention be performed by experts who are knowledgeable and experienced with the specific complications posed by the disease.

**Our Interventional Cardiology teams are available for consults and urgent cases. Contact us at 410-554-2332 (Baltimore region) or 202-877-5975 (Washington, D.C. region).**





## Concomitant ablation with LAAO device implantation is safer and as effective as anticoagulants for patients with AFib.

The recently completed OPTION study found that implanting the WATCHMAN FLX™ left atrial appendage occlusion (LAAO) device concomitantly or sequentially with catheter ablation significantly reduced episodes of clinically relevant non-major bleeding in patients with atrial fibrillation. Patients treated with this dual approach had fewer bleeding episodes requiring medical evaluation, as well as an equivalent level of stroke protection, compared with patients treated with anticoagulants. The method also has the added potential of lowering procedural risks.

“Our team has extensive experience in this area, having performed more than a thousand WATCHMAN implants,” says Manish Shah, MD, cardiac electrophysiologist and director of the Cardiac Electrophysiology Fellowship at MedStar Washington Hospital Center. “This can play a key role in minimizing complications and reducing a patient’s long-term risk of stroke.”

While catheter ablation has long been a mainstay for atrial fibrillation (AFib) treatment, this concomitant approach with an LAAO device may obviate certain patient misgivings regarding anticoagulation.

“Whether patients have concerns with bleeding, with the high cost of medication, or the incorrect assumption that anticoagulants are no longer necessary, we now have another option for them to consider,” says Dr. Shah.



**Cardiac Electrophysiologist Manish Shah, MD, holding the WATCHMAN FLX™.**

Still, caveats remain regarding the different treatment approaches, including full approval and guidelines for the concomitant procedure.

“Currently, other factors are needed to qualify, such as an elevated risk or history of bleeding, or ongoing use of NSAIDs like ibuprofen,” he says.

Dr. Shah suggests making the evaluation process as patient-specific as possible.

“We work with patients and their cardiologists to find a path forward that’s best for their particular condition and needs. If a patient requests an LAAO device, we evaluate their risk of bleeding or factors that may make them poor candidates for long-term

anticoagulation, such as frequent falls or participation in high-risk activities or occupations. Together, we can then better appreciate the options and determine the best way to proceed.”

**For a consult with one of our cardiac electrophysiologists, please call 202-877-7685 (Washington, D.C. region) or 410-554-6727 (Baltimore region). Our providers see patients at 24 convenient sites around the region.**

## New protocol connects Urgent Care patients with surgeons to expedite DVT diagnosis and treatment.

Shortly after returning from a long plane trip to Oregon, an active 61-year-old man visited a MedStar Health Urgent Care in Maryland, complaining of pain in his left calf. Suspecting the patient might have deep vein thrombosis (DVT), the nurse practitioner knew a prompt examination and treatment were essential.

Rather than refer the patient to an Emergency Department (ED) for an ultrasound, the NP contacted Vascular Surgeon Misaki Kiguchi, MD, as part of a new protocol in which our Urgent Care centers use telehealth to consult on such cases with MedStar Health specialists.

Examining the patient later that day, Dr. Kiguchi reviewed his ultrasound and diagnosed him with a DVT.

“I was able to start the patient on anticoagulation immediately, and because he had also reported shortness of breath while exercising, we conducted a CT study the next day, which confirmed a large pulmonary embolism,” Dr. Kiguchi recalls. “He was admitted to MedStar Georgetown University Hospital that evening for close supervision while awaiting his procedure. We performed a pulmonary thrombectomy, he recovered well, and continues to do great with no further problems.”

B. Elizabeth Delasobera, MD, Chief Medical Officer for MedStar Health Ambulatory Services, explains that the protocol was initiated to address the potential severity and time-sensitive nature of vascular issues—as was the case for this patient.

“If patients are stable, we like to avoid the ED because of the time and extra steps required to get the ultrasound,” Dr. Delasobera says. “By having vascular surgeons on call, we’re able to immediately connect patients with the specialist who will be managing their condition long term. The physician can assess the patient, expedite the appropriate imaging, and, if necessary, intervene—sometimes within a matter of hours.”

Another advantage is that some thrombi can be handled entirely on an outpatient basis unless a more serious condition necessitates a procedure or hospitalization.

“This enables us to mitigate an already overburdened ED, efficiently distribute resources, and limit unnecessary steps for the patient to resolve the condition safely and quickly,” Dr. Kiguchi adds.

During off-hours, the vascular surgeon can consult with the Urgent Care provider to determine the likelihood of a thrombus and gather other information to determine if a patient can be treated with an oral anticoagulant as a bridge for 24-to-48 hours while awaiting vascular follow up.

“In addition to vascular surgery, we also have the ability to consult with specialists in other areas, including orthopaedics, cardiology, otolaryngology, and ophthalmology,” Dr. Delasobera adds. “It makes a significant difference to their short- and long-term care when the patient receives specialty advice right away.”

**MedStar Urgent Care has more than 30 locations across Maryland, Washington, D.C., and Virginia, and can provide expedited access to specialty care.**

**Patients may reserve a spot online at [MedStarHealth.org/Services/Urgent-Care](https://www.MedStarHealth.org/Services/Urgent-Care). To reach the Vascular Surgery team, please call 202-444-2255 (Washington, D.C.) or 410-554-2950 (Baltimore).**

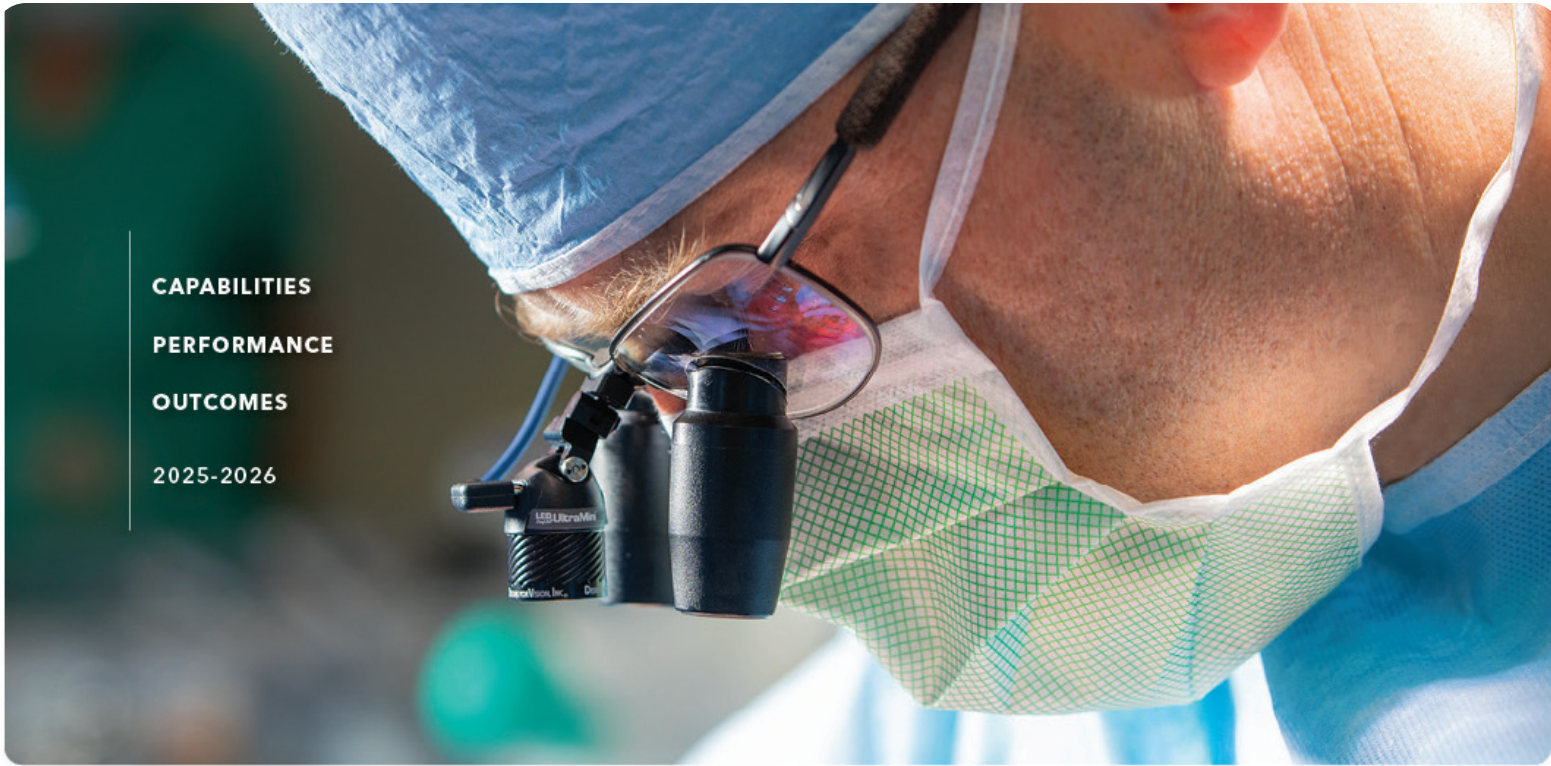


**Chief Medical Officer for MedStar Health Ambulatory Services B. Elizabeth Delasobera, MD**



**Vascular Surgeon Misaki Kiguchi, MD**





CAPABILITIES  
PERFORMANCE  
OUTCOMES  
2025-2026

# The 2025-2026 Capabilities, Performance, and Outcomes Report is now available online.

We invite you to review this biennial compilation of procedural, research, and physician updates, along with metrics from across MedStar Heart & Vascular Institute.

### Key clinical achievements

**#38 Hospital in the country for cardiology and heart and vascular surgery**  
MedStar Washington Hospital Center was awarded.

**Center of Excellence in the treatment of sarcoidosis**  
MedStar Health is now a **Center of Excellence in the treatment of sarcoidosis** by the World Health Association of Sarcoidosis and Other Granulomatous Disorders (WASOG).

**Among America's 100 Best Hospitals for Cardiac Care or Coronary Intervention**  
Awarded to MedStar Washington Hospital Center, MedStar Union Memorial Hospital, and MedStar Southern Maryland Hospital Center by Healthgrades' Specialty Excellence Awards.

**1<sup>st</sup> Combined Heart-Kidney Transplantation program in Washington, D.C.**  
Contemporaneous transplantation of the heart and kidney provides the optimal outcome for a patient suffering from these concurrent disease processes.

**Lowest 30-day mortality rates for heart attack patients**  
Among the top hospitals in the nation with the lowest 30-day mortality rates for heart attack patients MedStar Washington Hospital Center recognized by Becker's Hospital Review.



### Structural heart and valves

Baltimore region team

Washington, D.C. region

Key metrics

551 total TAVR procedures	61 TAVI closures
20 active aortic valve studies	11 active mitral valve studies
3 active tricuspid valve studies	<2 weeks standard TAVR process timeline (before to procedure, for elective cases)

Learn More About Structural Heart and Valve →

Program highlight and recent innovations

Aortic valve

Mitral valve

Tricuspid valve

The Society of Thoracic Surgeons

★★★★★

CABG

Coronary Artery Bypass Grafting

Three stars represents the highest achievable metrics in the U.S.

MedStar Washington Hospital Center and MedStar Union Memorial Hospital both have achieved this recognition

Program highlight and recent innovations

Heart Transplantation

While there is still a significant shortage of available donor hearts, we are increasing our ability to proactively recognize which organs can be safely used and which patients are eligible. To this end, our donor pool is broadening and includes hearts from donors with hepatitis C as well as donation after cardiac death. Our program provides patients with the assurance that they have access to the best donor matches, in addition to numerous temporary platforms that can extend life while they are waiting.

Program highlight and recent innovations

Heart Transplantation

While there is still a significant shortage of available donor hearts, we are increasing our ability to proactively recognize which organs can be safely used and which patients are eligible. To this end, our donor pool is broadening and includes hearts from donors with hepatitis C as well as donation after cardiac death. Our program provides patients with the assurance that they have access to the best donor matches, in addition to numerous temporary platforms that can extend life while they are waiting.

Visit [MedStarHealth.org/HeartVascularReport](https://www.MedStarHealth.org/HeartVascularReport).

## News and notes.

### Electrophysiology procedural services now available at MedStar Franklin Square Medical Center.



(l to r) Cardiac Electrophysiologists Richard Jones, MD; Rajiv Kabadi, MD; Sunjeet Sidhu, MD; and Glenn Meininger, MD

We continue to expand our cardiovascular footprint at MedStar Franklin Square Medical Center. Now patients may schedule generator changes and implantations of pacemakers, ICDs, and CRT-D devices with cardiac electrophysiologists. These new offerings, as well as the recent addition of comprehensive PCI services, are part of a larger effort to improve access for individuals in the surrounding community, rather than requiring travel to MedStar Union Memorial Hospital in Baltimore. We are committed to improving convenience and availability for all, across the region.

To schedule an EP consult, please call the HeartLine at 410-554-2332.

### Expanding cardiovascular specialty care in Frederick, Md.

We are pleased to welcome the physicians and patients of Cardiology Center in Frederick, Md., to MedStar Health. Under the new name of MedStar Health Cardiology Center at Frederick, cardiologists Kusay Barakat, MD, Shawn Buki, MD, Sana Shah, MD, and David Yu, MD, will continue to practice at the same location (310 West 9th Street, Frederick, Md. 21701).

This expansion enhances access not only to trusted cardiologists, but to MedStar Health's vast network of cardiovascular subspecialists nearby, including electrophysiology and vascular surgery. Patients will also enjoy a more seamless experience at MedStar Health hospitals and other care delivery sites.

To schedule an appointment at MedStar Health Cardiology Center at Frederick, call 301-694-5900.



### Cheryl Lunnen named 2025 Woman of Impact for Maryland chapter of American Heart Association.

Congratulations to Cheryl Lunnen, regional vice president, MedStar Heart & Vascular Institute, named the 2025 Woman of Impact for the Greater Maryland chapter of the American Heart Association. Cheryl was among nine women nominated to participate in the annual nine-week campaign, during which she raised awareness and funds for women's heart health and stroke. Cheryl and her team raised \$47,404, putting her in the top 5% of nominees in the country. In total, the nine nominees raised \$107,662. This designation is a testament to Cheryl's commitment to cardiovascular health and we are proud that she is one of ours. Cheryl will be featured in a Time magazine digital ad with other Women of Impact winners from throughout the country.





Cardiovascular Physician is a publication of MedStar Health. It is a forum to share clinical, research, and teaching information in cardiology, cardiac surgery, and vascular care.



Please submit any comments to Managing Editor Karoline Hutson, at [karoline.m.hutson@medstar.net](mailto:karoline.m.hutson@medstar.net).

## MedStar Heart & Vascular Institute

### Thomas E. MacGillivray, MD

Physician Executive Director,  
MedStar Health Cardiac Surgery  
Chairman, Cardiac Surgery,  
MedStar Washington Hospital Center

### Stuart F. Seides, MD

Physician Executive Director Emeritus

### Steven D. Abramowitz, MD

Chair, MedStar Health Vascular Program

### Brian T. Bethea, MD

Chief, Cardiac Surgery  
MedStar Union Memorial Hospital

### Zayd A. Eldadah, MD

Director, MedStar Health Cardiac  
Electrophysiology

### Sandeep M. Jani, MD

Medical Director, Advanced Heart Failure  
Baltimore Region

### Robert A. Lager, MD

Chief, Ambulatory Practices, Washington Region

### Glenn R. Meininger, MD

Director, Cardiac Electrophysiology  
Baltimore Region

### Samer S. Najjar, MD

Regional Chief, Cardiology, Baltimore Region

### Sriram Padmanabhan, MD

Chief, Cardiology  
MedStar Franklin Square Medical Center

### Lowell F. Satler, MD

Director, Interventional Cardiology  
Washington Region

### Farooq H. Sheikh, MD

Medical Director, Advanced Heart Failure  
Washington Region

### Allen J. Taylor, MD

Regional Chair, Cardiology, Washington Region

### Raghuveer Vallabhaneni, MD

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Director, Cardiovascular Research  
and Advanced Education

### John C. Wang, MD

Director, Interventional Cardiology  
MedStar Union Memorial Hospital  
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## Department of Continuing Professional Education

Please visit [MedStar.Cloud-CME.com](https://www.MedStar.Cloud-CME.com) for updated conference information, or call **202-780-1655**. CE transcripts are available online. You can download, print or e-mail your CE transcript. Visit [CME.MedStarHealth.org](https://www.CME.MedStarHealth.org) and click on **"View Your CE Transcript"** for complete instructions.

### CRT TV

Saturdays, 9:00 a.m.

#### Virtual

Stay ahead in the field of cardiovascular medicine and connect with others who share your passion. Join us for two-to-three-hour sessions, featuring live case studies, presentations, and panel discussions.

**View the schedule and register at [crttv.org/crt-tv](https://www.crttv.org/crt-tv).**

### Mastering Cardiac and Vascular Complications

August 8-9, 2025

**Yours Truly Hotel  
Washington, DC**

This case-based course will provide a venue for fellows to review challenging complications of coronary, structural heart, and endovascular procedures, and discuss their management, early recognition and prevention. The course offers the opportunity for hands-on experience with the equipment needed for "bailout" and rescue from complications.

**View details and register at [mvcmeeting.org](https://www.mvcmeeting.org).**

## Regularly scheduled series—AMA PRA Category 1 Credit(s)<sup>™</sup>

### Cardiac Catheterization Conference

Weekly, Wednesdays, 7:30 a.m.

1 AMA PRA Category 1 Credit<sup>™</sup>

**202-877-7808**

### Cardiac Surgery Grand Rounds

Weekly, Tuesdays, 7:15 a.m.

2 AMA PRA Category 1 Credits<sup>™</sup>

**202-877-3510**

### Cardiology Grand Rounds

Weekly, Tuesdays, 12:30 p.m.

1 AMA PRA Category 1 Credit<sup>™</sup>

**202-877-9090**

### Cardiac Ultrasound and Advanced Imaging Conference

Weekly, Thursdays, 7:30 a.m.

1.25 AMA PRA Category 1 Credits<sup>™</sup>

**202-877-6264**

### Electrophysiology Core Curriculum Conference

Weekly, Tuesdays, 7 a.m.

1 AMA PRA Category 1 Credit<sup>™</sup>

**202-877-3951**

Visit us at [MedStarHealth.org/Services/Heart-and-Vascular](https://www.MedStarHealth.org/Services/Heart-and-Vascular).