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Rethinking AFib:

The changing landscape of detecting and managing atrial fibrillation.

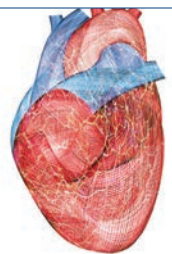
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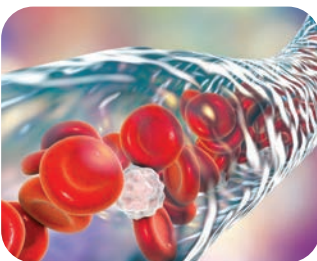
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Concerns over recent FDA recall regarding LVAD equipment are well-known and well-managed.

The FDA recently issued a recall to alert clinicians managing patients with the HeartMate 3™ left ventricular assist device (LVAD) of the potential for long-term buildup of serous material in the outflow graft leading to obstruction and low-flow alarms. This risk has been well-known and well-managed at MedStar Washington Hospital Center for years.

"Monitoring for this potential risk has been a part of our guidelines since the inception of LVAD therapy," explains Program Development and Clinical Specialist of the VAD Program Tonya Elliott, MSN, RN, CCTC, CHFNP. "Our diagnostic algorithm includes assessing for it, and our staff is well-versed in protocols to promptly handle alarms associated with low-flow conditions. Patients also receive extensive education on how to respond as part of the standard discharge VAD education."

Our robust recall response includes notification of every VAD team member: clinical, quality, risk, and materials management personnel. Each element of every recall is fully vetted to ensure our response provides for safe patient care.

"We have only had a handful of these situations in our three decades of implanting LVADs," explains Elliott. "Albeit a rare complication, when a low-flow alarm occurs, we conduct a very thorough and cautious analysis of the patient, which includes a low threshold for obtaining a CT scan when other more common reasons have been ruled out. Radiologists are trained to look for outflow graft obstructions, and when found, we can take care of it with a stent or surgical repair/replacement."

"As one of largest LVAD centers in the country, we have extensive experience in safe implantation and meticulous ongoing care for each of our patients," says Keki Balsara, MD, surgical director of Transplantation and Mechanical Circulatory Support. "The latest data show our LVAD patients have a one-year survival rate of 86%, an excellent outcome that we are committed to maintaining."

If you have questions pertaining to the recall or to one of your patients with an LVAD, please contact Tonya Elliott at 202-877-5853.

Perspective from Stuart F. Seides, MD, physician executive director emeritus, MedStar Heart & Vascular Institute

Exceptional medicine requires exceptional humanity.

"You can't make everyone better, but you can make everyone *feel* better."

This is a personal maxim that I've embraced throughout my career and one that I've shared repeatedly with our trainees. As clinicians, we understand the reality of some disease processes and the limitations of our therapeutic modalities. Humanity, however, has no confines. The compassion and kindness we bring to our practice, to each interaction with the individuals entrusted to our care, almost always has tangible power to make someone feel better.

The term 'patient-centered care' is well-worn in the healthcare lexicon—and rightfully so. But it can risk becoming stale when it isn't reinforced in personal, humanistic ways. We take pride in our MedStar Health providers, who not only strive to offer the best medical and surgical care, but who also carefully listen and observe in order to best understand their patients' needs and desires.

No one displays this more consistently than Dr. Reginald Robinson, a MedStar Health cardiologist and the American Heart Association's 2024 Physician of the Year. When I recruited him from his training program in 2001, I distinctly recall how deeply his instructors and colleagues respected and admired him. Twenty-three years later, he remains the consummate 'high-touch' provider, offering empathetic and wise clinical counsel. Read more about this esteemed honor on page 18.

I am struck by the other examples of whole-person care on display throughout this issue: Dr. Amy Marino recognizes and gives specific attention to the unique needs of the women she treats (page 13), and Dr. Aubrey Grant shares his perspective on how healthcare can be experienced across different ethnic groups and social circumstances (page 16).

Of course, as clinical innovators, we remain enthusiastic about new and evolving research and technology. The advances discussed on page four are revolutionizing the way we think about and manage atrial fibrillation. Current research in the field of vascular surgery continues to develop tools that improve and personalize treatment options (page 10). New drugs treating the underlying factors for developing heart disease have the potential to make an impact in favorably modifying the overall disease process (page 13).



Taking these 'high-tech' elements and marrying them with an overall commitment to 'high touch,' provides us with the greatest opportunity to both make our patients better, and to also make (almost) everyone *feel* better.

Rethinking AFib:

The changing landscape of how we detect and manage atrial fibrillation.

"Atrial fibrillation (AFib) is a progressive, biologic process driven primarily by human aging, and influenced by genetics and lifestyle," says Zayd Eldadah, MD, PhD, physician executive director of Cardiac Electrophysiology at MedStar Health. "We understand that it is a manifestation of advancing age that will affect about a third of all people at some point in their lives, and it may be the case that all humans might develop AFib if they lived long enough."

People are living longer, and facing a greater prevalence of obesity, diabetes, and high blood pressure—all of which can accelerate the appearance and worsen the severity of AFib. For this reason, along with better tools for detection, we are seeing more AFib than ever before.

Experience has shown that while AFib is not usually acutely life threatening, it's important to manage it promptly and comprehensively.

"The more time patients spend in AFib, the more likely they are to

develop adverse consequences of this arrhythmia," Dr. Eldadah explains. "AFib can promote heart valve dysfunction, a higher risk of myocardial infarction, heart failure, and even chronic kidney disease. The greatest danger AFib confers is the risk of stroke, which is five times higher for a person with AFib than for someone with normal heart rhythm. Stroke is the single greatest contributor to the risk of death or severe disability in AFib."

"AFib begets AFib," is how Sung Lee, MD, director of Cardiac Electrophysiology at MedStar Southern Maryland Hospital Center and research lead for Cardiac Electrophysiology at MedStar Cardiovascular Research Network, describes the process of electrical remodeling. "The longer a patient is in AFib, the more difficult it is to manage and the more likely it is to progress along the continuum of severity, persistence, and even irreversibility."

The continuum for recurrent, primary AFib is as follows:

- 1. Paroxysmal:** can last for seconds to even days, comes and goes on its own.
- 2. Persistent:** lasts longer than 7 days but less than one year.
- 3. Longstanding persistent:** lasts over a year.
- 4. Permanent:** a therapeutic decision in which efforts to restore normal rhythm are abandoned, and the patient is allowed to remain in AFib.

Enhanced detection and earlier treatment.

An individual patient's awareness of AFib can vary. Some develop profound symptoms such as palpitations, shortness of breath, or exercise intolerance with every episode. These individuals generally seek medical attention promptly, enabling early diagnosis and intervention. But those with minimal symptoms can be unaware that anything is amiss. Under these circumstances, AFib may be discovered long after it has progressed along the continuum of persistence, making treatment more challenging.

Sarfraz Durrani, MD, director of heart rhythm technology and innovation at MedStar Washington Hospital Center, explains the research. "One finding in a large European trial right now is that people who are treated aggressively within the first year—regardless of symptoms—show better outcomes. Rates of heart failure, stroke, and hospitalizations all go down significantly. Another trial shows that earlier treatment is more successful at suppressing progression. If we follow the data, we can change the paradigm. Our team always aims to stay ahead of the curve."

Fortunately, new technologies have aided earlier detection.

"We are seeing more patients because their wearables, such as watches and fitness trackers, alert them to an abnormal rhythm," says Dr. Lee.

Richard Jones, MD, sees this trend in his practice, as well. "Wearables may help us uncover abnormalities that we may not have caught before," he says. "However, the algorithms used by these devices are designed to be very sensitive, so false positives may be overrepresented, meaning the devices may pick up irregularities that are not AFib. But these devices are an increasingly important element of our practice. We scrutinize the data and incorporate what we find into our overall plan of care."

After detection, Dr. Jones explains, patients undergo a diagnostic process which may include rhythm surveillance with the Zio® patch, mobile telemetry, portable EKG monitoring, and/or implantable cardiac monitors.

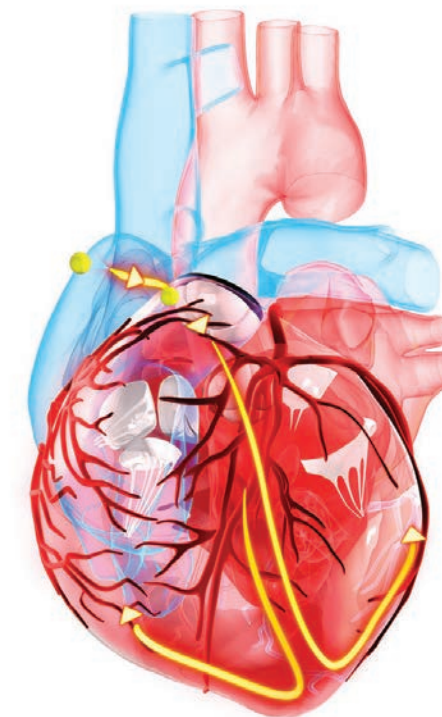
Throughout MedStar Health, novel patient-based monitors are being used to improve detection and supervision.

"The team of nurses at our device clinic uses a remote monitoring strategy to review device data and provide prompt feedback to patients," explains Glenn Meininger, MD, director of Cardiac Electrophysiology in Baltimore. "This allows for earlier intervention and quicker delivery of care before problems progress or complications arise. With remote monitoring, we've seen improvement in patient outcomes, as well as patient satisfaction."

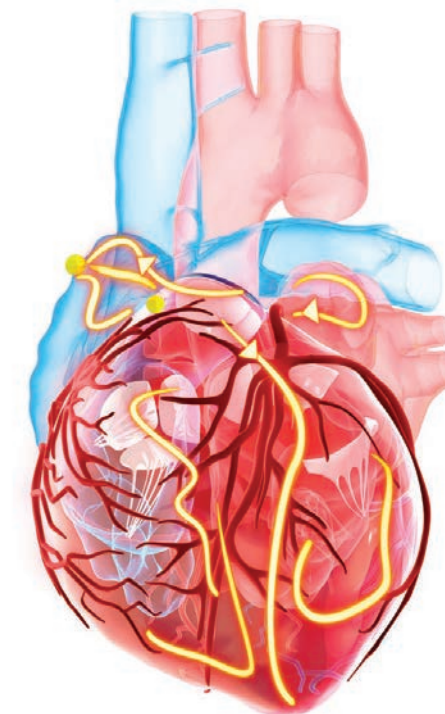
This responsive and personalized approach to care is vital to developing an optimal treatment plan.

"We must treat each patient individually," says Dr. Jones. "Every patient may have different responses and tolerance to medications, as well as individual preferences for interventions versus drugs. Our practice is to discuss all possible strategies and, through shared decision making, determine the best approach."

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Electrical conduction through the heart during sinus rhythm.



Electrical conduction through the heart in atrial fibrillation.

Our three areas of focus:



Manage the increased risk of stroke due to AFib.



After stratification for stroke risk, anticoagulation may be appropriate. In some cases, simply an aspirin a day is suitable, but for higher risk patients, more powerful blood thinners are likely indicated. These drugs have been utilized extensively, safely, and effectively for many years. New drugs are currently being investigated and introduced.

Because nearly all strokes due to AFib appear to originate within the left atrial appendage (LAA), innovative strategies have been developed to prevent blood from entering this space and clotting. Left atrial appendage occlusion (LAAO) systems are examples of such novel tools for effective stroke prevention. The first commercially available LAAO device, the WATCHMAN™, is deployed within the LAA, and acts as a mechanical obstruction that prevents blood clots from entering the circulation, thereby reducing stroke risk and enabling patients to stop anticoagulants. Our physicians pioneered the WATCHMAN in 2015 as the first in the Capital Region to implant the device successfully.

"WATCHMAN technology has been shown to be a safe and effective alternative to blood-thinning medications in patients with AFib that is not caused by a heart valve problem. It is particularly valuable to patients who must avoid blood thinners," says Manish Shah, MD, program director of the Cardiac Electrophysiology Fellowship at MedStar Washington Hospital Center and MedStar Georgetown University Hospital.

The field of AFib management and stroke prevention continues to advance rapidly, with more innovative devices and approaches being developed and tested. The **WATCHMAN FLX Pro™** (pictured above right), a novel, third-generation device, represents a significant advancement



in LAA closure technology, offering improved healing and reduced stroke risk using the thromboresistant coated fabric HEMOCOAT™.

This technology has been exclusively used at MedStar Health as part of a limited market release and shows great promise in treating patients with the most severe bleeding problems. Dr. Shah, the primary investigator for the WATCHMAN FLX Pro registry and upcoming SIMPLAAFY study, hopes that these investigations will clarify the use of blood thinners immediately after implantation of WATCHMAN FLX Pro.

In addition to the ongoing WATCHMAN studies, Dr. Shah is eagerly anticipating the results of the OPTIONS study in November 2024. This study is evaluating a combined approach to AFib management with simultaneous ablation and LAA closure. This concomitant approach may allow patients to have a single procedure incorporating both WATCHMAN device implantation and ablation.

"The concomitant approach may be very appealing to patients. If the OPTIONS study reveals promising safety and efficacy, I would anticipate that a combined approach will soon become the first-line approach at heart rhythm centers of excellence," says Dr. Shah.

Another trial, CATALYST, seeks to further investigate the FDA-approved Amplatzer™ Amulet™ LAA Occluder. John Wang, MD, Director of the Cardiac Cath Lab at MedStar Union Memorial Hospital and MedStar Franklin Square Medical Center, and Dr. Meininger, are leading our participation in the study to evaluate its safety and efficacy compared to NOAC therapy in some patients.

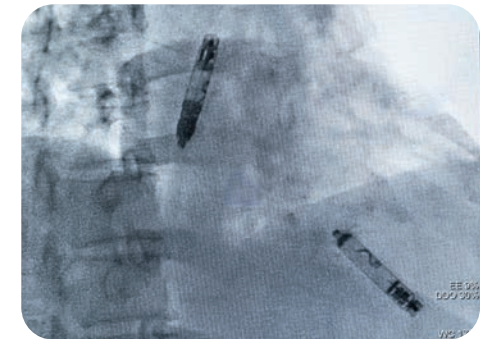


Ensure heart rates are physiologic.

Tachycardia and bradycardia from AFib can cause burdensome symptoms and dangerous consequences. Medications may help, but if a patient is refractory to drug therapy, has bradycardia or comorbid heart failure, a pacemaker should be considered.

"This is one of the more exciting innovations in our field right now—the leadless pacemaker," shares Cyrus Hadadi, MD, associate director of cardiac arrhythmia research. "MedStar Washington Hospital Center is among a select few U.S. hospitals offering the revolutionary **Aveir™ DR Dual Chamber Leadless Pacemaker** (pictured at right). Our experts contributed to the clinical trial that tested and validated the Aveir system, and we implanted the D.C. region's first FDA-approved dual-chamber leadless pacemaker in November 2023."

The leadless system consists of two mini capsules, each smaller than a AAA battery, that are delivered via minimally invasive femoral venous access. Compared to traditional pacing, leadless technology can eliminate inflammation, scars, and long-term problems such as wire insulation breaks, vein blockage, and infection. Battery life is similar to that of traditional pacemakers, and the capsules are designed to be readily retrieved and removed if needed.



Restore normal heart rhythm.

Correcting the AFib itself—meaning maximizing the time a heart beats normally—has been associated with longer and improved quality of life. Several options can achieve this. Anti-arrhythmic drugs work modestly well but may not be the optimal solution. Catheter ablation was developed to isolate the pulmonary veins electrically, minimizing AFib, and it has been shown to be superior to anti-arrhythmic drug therapy.

Cryoablation

"Our field has made a lot of progress in improving our ablation techniques in recent years," says Dr. Durrani, the first provider at MedStar Health to offer cryoablation when it was initially introduced. "While radiofrequency ablations (RFA), which heats heart tissue, may be used by some providers in some instances, we now use cryoablations much more widely in our system, particularly for patients with new AFib."



"A few months ago," he continues, "new guidelines were released that provide for consideration of cryoablation as first-line treatment. Until that point, guidelines favored that AFib be treated first with drugs, and once the patient fails one or two drugs, then ablation should be considered. This stood for one to two decades, an era when procedural risks were higher and success rates lower. But now we have much more experience with ablations and have learned that

freezing is less traumatic to the heart than burning. The risks associated with ablation have decreased dramatically now that we have shifted away from RFA. With an experienced provider, a cryoablation takes less than an hour to perform, patients can go home the same day, and typically have an easier recovery due to less inflammation."



Pulsed-field ablation

Pulsed-field ablation is the revolutionary electroporation technology playing an increasingly prominent role in our management of AFib. Also catheter-based, this non-thermal approach applies a series of high-intensity pulses of energy to achieve fast, complete, targeted ablation of the heart tissue associated with irregular electrical activity. It is more efficient and reduces collateral damage to the surrounding tissue (nerves, lungs, esophagus) than prior methods.

“PFA is becoming one of our most promising treatments and will truly alter how we do ablations in the future,” predicts Dr. Lee.

Our cardiac electrophysiology program was selected to conduct two competing, concurrent trials for PFA in 2021, both of which have since secured FDA approval for their respective systems. We became the first center in the Washington-Baltimore-Northern Virginia region to introduce PFA using the recently FDA-approved **FARAPULSE™ system** (pictured above).

“We are gratified to see this technology introduced for the benefit of our patients—particularly as first-line treatment and for younger populations,” reflects Dr. Hadadi. “Our patients are very excited about the number of options now available to them.”

Convergent/Hybrid ablation

For some patients, particularly those with persistent and longstanding persistent AFib, catheter-based ablations may not be sufficiently effective at restoring normal rhythm.

“This population—representing nearly 50% of all AFib cases—typically experience worsening symptoms and significant morbidity over time, despite attempts to manage with medications and one or more catheter ablations,” explains Athanasios Thomaides, MD. “Convergent ablation provides an excellent option for these patients.”

Performed collaboratively by a cardiac surgeon and cardiac electrophysiologist, the minimally invasive Hybrid AF™ Convergent Therapy combines epicardial and endocardial ablation for a more comprehensive and effective treatment.

Our physicians introduced the technology to the region in 2011 and were key investigators in its landmark CONVERGE trial, which validated the procedure’s superior

safety and effectiveness compared to only endocardial ablation for longstanding persistent AFib.

“Convergent ablations are now available as first-line therapy for these challenging patients, dramatically improving their quality of life and avoiding numerous, potentially ineffective, interventions,” adds Dr. Thomaides.

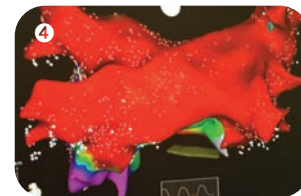
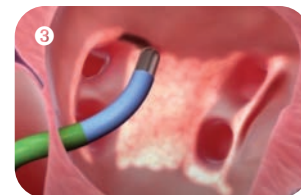
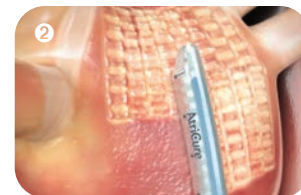
Convergent ablation process

1 Epicardial ablation: Cardiac surgeon uses radiofrequency (RF) energy applied to the posterior left atrial wall, away from the esophagus.

2 The aim is to create durable and contiguous lesions while reducing risk of injury to structures adjacent to the heart.

3 Endocardial RF ablation: Electrophysiologist employs mapping and ablation to target the regions requiring additional treatment, as well as those areas inaccessible to the surgeon due to the pericardial reflection. Pulmonary vein isolation (PVI) completes the lesion set.

4 Completion mapping: Electrical silence of the posterior wall (red areas silent).



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The Cardiac Electrophysiology team (standing, l to r): Margaret B. Fischer, MD; Sarfraz A. Durrani, MD; Sung W. Lee, MD; Edward V. Platia, MD; Sunjeet S. Sidhu, MD; Richard Jones, MD; Seth J. Worley, MD; Susan O’Donoghue, MD; Manish H. Shah, MD; David A. Strouse, MD; Walter L. Atiga, MD; John H. Shin, MD; Michael S. Goldstein, MD; Apostolos Tsimploulis, MD; Jay A. Mazel, MD; (seated, l to r) Cyrus A. Hadadi, MD; Glenn R. Meininger, MD; Zayd A. Eldadah, MD; Athanasios Thomaides, MD

The future: True AFib management will be AFib prevention.

Since AFib is a progressive process, early intervention is best. The techniques described in this article have greatest efficacy when implemented early in the AFib progression.

“Updated management guidelines reflect the principle that earlier treatment is best,” explains Dr. Jones. “We recognize that prompt rhythm control makes sense for the vast majority of patients, and it helps avoid downstream adverse effects of AFib, such as the development of heart failure.”

Dr. Lee says he hopes to see the field develop and apply new technology to support this effort. “Even better than early treatment, is treating AFib before it starts. With AI and machine learning, we are exploring ways to identify those who might be at risk for developing the condition and potentially help prevent or delay it.”

“We recognize that all of these therapies, as advanced as they seem now, will be looked back upon one day



as crude and primitive, and most importantly, reactive,” agrees Dr. Eldadah. “In the future, truly effective AFib management will be proactive, meaning AFib prevention.”

To engage our cardiac electrophysiology team in the care of your patient, please call 202-877-7685 (Washington, D.C. region) or 410-554-6727 (Baltimore, Md. region).

The MedStar Health difference.

We offer all the state-of-the-art options for individualized and lifelong management of AFib. From the most straightforward to complex cases with complicated comorbidities, such as advanced heart failure.

“We’ve seen many patients with left ventricular ejection fractions of only 10-to-20%,” shares Dr. Durrani. “Frequently, once we are able to perform an ablation, their heart function returns to normal, and some have been removed from the cardiac transplant list. Twenty years ago it was too risky to intervene on these patients. Now, with the tools and expertise we’ve developed, we can save lives.”

The latest in vascular surgery research:

Vascular surgeons share details on three new clinical trials.

Study evaluates potential advantages of mechanical thrombectomy in treating iliofemoral deep vein thrombosis.



Interventional Radiologist Saher Sabri, MD (left), and Vascular Surgeon Steven Abramowitz, MD (right), collaborate in the DEFIANCE study, which seeks to compare mechanical thrombectomy with the ClotTriever® System to anticoagulation therapy in treating iliofemoral DVT.

When treating iliofemoral deep vein thrombosis (DVT), clinical guidelines currently favor medical management with anticoagulation, as lytic-based interventions carried significant risks and provided limited benefit over anticoagulation in previously performed randomized controlled clinical trials.

New technology, such as the ClotTriever® System, now allows for rapid and complete lytic-free thrombus removal in a single session, agnostic to thrombus age. This represents a huge advancement in interventional options, particularly when dealing with established clots—the older the clot, the less responsive to thrombolytics, typically.

Chairman of Vascular Surgery Steven Abramowitz, MD, serves as global PI for the DEFIANCE study, seeking to compare mechanical thrombectomy with the ClotTriever System to anticoagulation therapy in treating iliofemoral DVT. Saher S. Sabri, MD, Chief of Interventional Radiology, serves as PI at MedStar Washington Hospital Center.

“The number of patients who could benefit from this study is significant, as there are up to 400,000 cases of proximal DVT each year,” explains Dr. Abramowitz. “DVT can damage and scar deep veins leading to post-thrombotic syndrome and venous hypertension.”

This potential treatment option appears to hold promise. Early registry data suggest that results are better in those who underwent the mechanical thrombectomy rather than just anticoagulation.

“One of the most interesting findings from recently published literature is that even beyond a clinical difference in long-term outcomes, patients who have the intervention report that they have improved quality of life and an earlier return to activities,” adds Dr. Abramowitz. “Overall, this is providing opportunity to reevaluate our paradigm of intervention in a way to make people feel better faster and for longer.”

Previous DVT trials focused solely on patients within 14 days of diagnosis, but this study expands the timeframe to three months. Additionally, the DEFIANCE protocol permits crossover to the treatment group: if a patient is randomized to no intervention and not doing well, they are eligible to cross over and receive the intervention. The study is currently enrolling patients at multiple sites throughout MedStar Health. Patients may receive imaging at one of 20 vascular lab sites throughout the Washington and Baltimore regions, as well as telehealth visits with providers.

For more information, please contact Dr. Sabri at 202-877-6495 or saher.s.sabri@medstar.net.



Raghuveer Vallabhaneni, MD, Director of Vascular Surgery in the Baltimore region, employs the investigational GORE® VIAFORT Vascular Stent—the first stent specifically designed for the inferior vena cava.

A more customized stent for treating IVC narrowing or occlusion.

Over the past several years, stents have become an attractive option for treating adult patients with symptomatic inferior vena cava (IVC) or iliac vein stenosis or occlusion. Although largely successful, none of the devices have been primarily designed for the IVC's variable structure or function. IVC filters, a common treatment option for patients with a history of clotting and low tolerance for anticoagulants, can eventually cause vein scarring and increase the risk of IVC thrombosis if in place for prolonged periods of time.

A more tailored approach to treating narrowing or occlusion of the IVC—with or without combined iliofemoral vein obstruction—could be available soon, with a clinical trial underway on the GORE® VIAFORT Vascular Stent, which utilizes a proprietary expanded polytetrafluoroethylene (ePTFE) technology in conjunction with a singly wound nitinol frame.

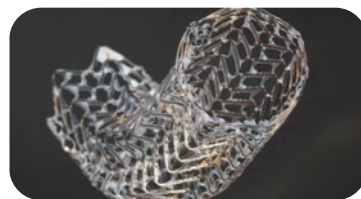
MedStar Union Memorial Hospital and MedStar Washington Hospital Center are among the more than 30 investigative sites worldwide evaluating the device's performance, safety, and efficacy in a diameter range of 10-to-28 mm for iliac veins and the IVC.

“This device has a lot of great qualities to it,” says Raghuveer Vallabhaneni, MD, Director of Vascular Surgery in the Baltimore region. “It's very flexible and has good radial force. It also comes in appropriate sizes to treat the IVC. And the fact that it's the first stent specifically designed for the IVC sets it apart from other devices currently available.”

Dr. Vallabhaneni notes that by providing a disease-specific treatment, vascular surgeons can help patients suffering from consequences of prior blood clots or occlusion of their proximal deep venous system. These patients often experience markedly edematous or ulcerated legs, making it difficult and painful for them to walk.

“Improved quality of life is definitely an outcome that we'll be looking at as the trial results are evaluated,” he adds.

For more information, contact Dr. Vallabhaneni at 410-554-2950 or raghuveer.vallabhaneni@medstar.net.



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The latest in vascular surgery research

Alternative to 'watchful waiting' for abdominal aortic aneurysm that doesn't yet meet intervention criteria.



Javairiah Fatima, MD, vascular surgeon and co-director of the Complex Aortic Center at MedStar Washington Hospital Center, is investigating a new, minimally invasive treatment for patients with small-to-medium-sized abdominal aortic aneurysms.

Patients with small-to-medium-sized abdominal aortic aneurysms (AAA) often have little choice but to wait until the bulge grows large enough for an endovascular repair—usually a diameter of 5.5 cm or more. While healthy lifestyle changes can help slow the rate of aneurysm growth, the risk of rupture or dissection gradually increases over time, potentially occurring before reaching the established threshold for surgical intervention.

A breakthrough approach may offer a valuable, minimally invasive treatment option for AAAs between 3.5 and 5.0 cm in diameter. The Nectero Endovascular Aneurysm Stabilization Treatment (Nectero EAST®) system is currently undergoing a nationwide clinical trial: stAAAbLe.

Consisting of a dual-balloon delivery catheter and a stabilizer mixture containing pentagalloyl glucose (PGG), Nectero EAST delivers the drug locally into the aneurysmal wall. The drug binds to elastin and collagen to potentially strengthen the aortic vessel wall and reduce the risk of further degradation. The procedure can be completed in less than an hour, with no permanent implant left behind.

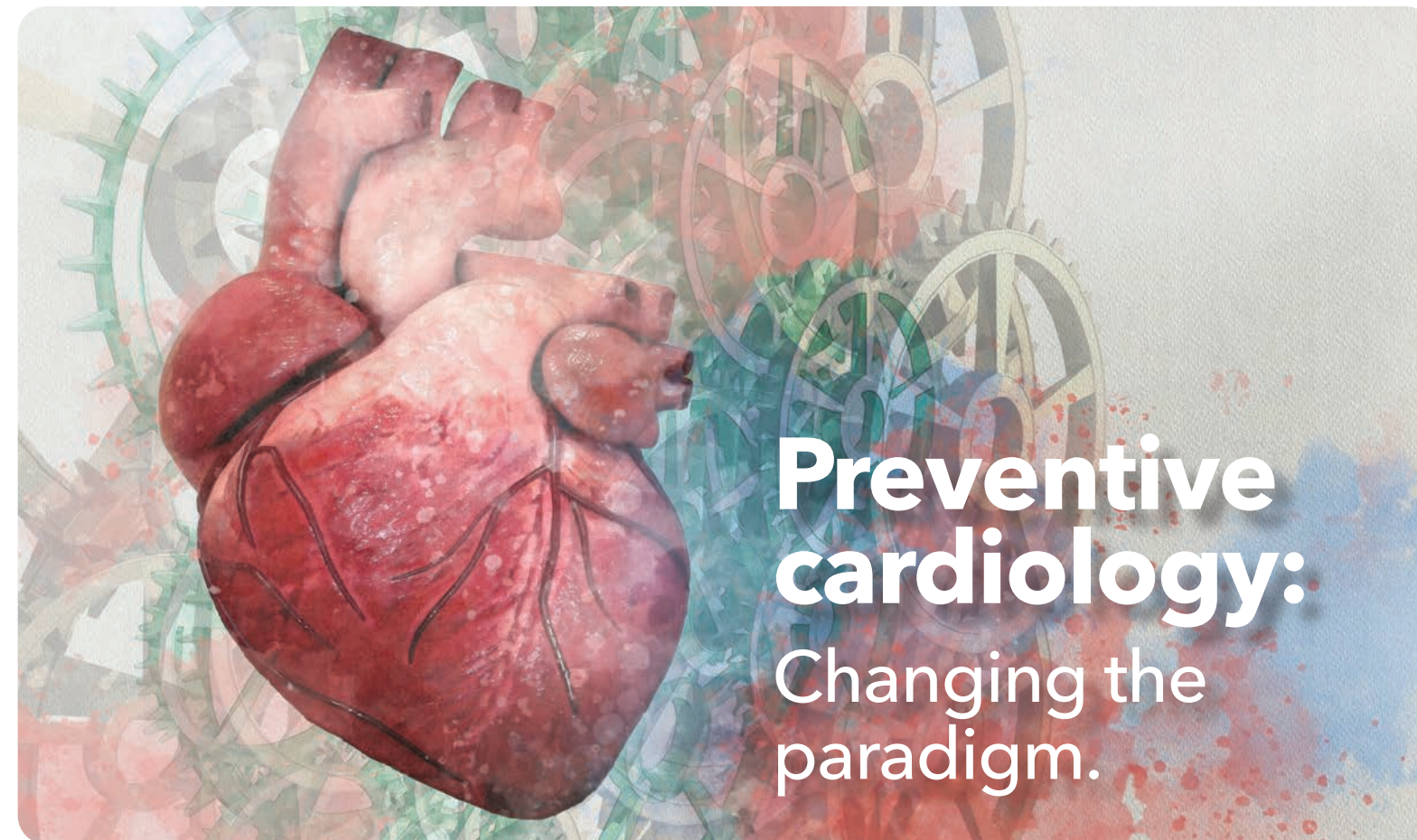
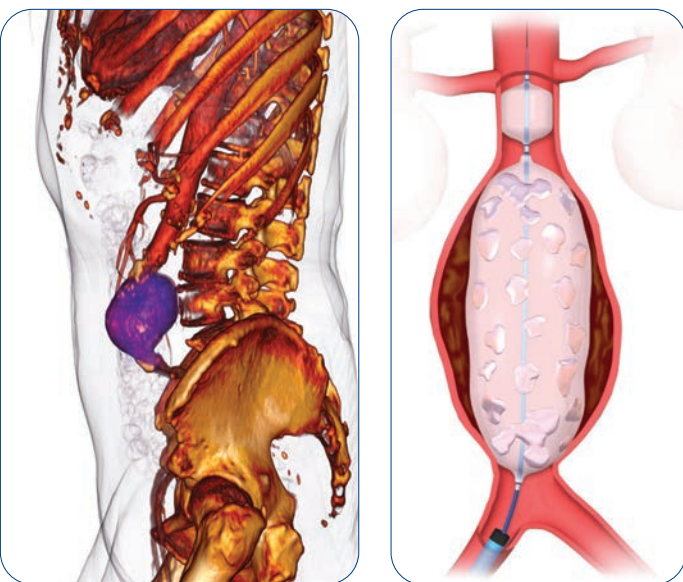
Vascular Surgeon Javairiah Fatima, MD, co-director of the Complex Aortic Center at MedStar Washington Hospital Center, says the potential availability of a locally delivered, single-dose endovascular therapy could be a boon to patients.

"In addition to inhibiting aneurysm growth and reducing the risk of rupture, this therapy may be enough to eliminate the need for further treatment, assuming they continue to maintain healthy lifestyles," she says.

Patients in the stAAAbLe trial who undergo the Nectero EAST therapy will be monitored for procedure efficacy compared with periodic surveillance over two years, and then annual follow up for five years.

"We've already enrolled several patients in the study, and will be watching the results closely," Dr. Fatima says.

For more information about the stAAAbLe trial, contact Dr. Fatima at 202-877-0275 or javairiah.fatima@medstar.net.



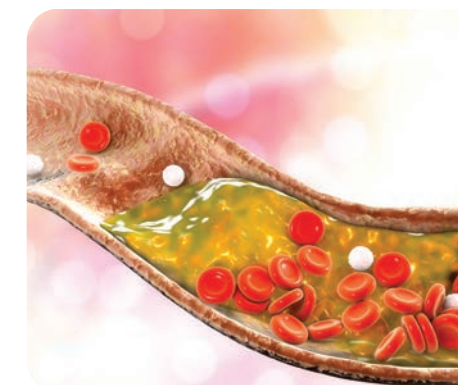
Preventive cardiology: Changing the paradigm.

Despite the many remarkable advances in the diagnosis and management of cardiovascular disease, it remains the leading cause of death and disability.

This continued position has fueled interest in the field of preventive cardiology, a growing subspecialty of cardiovascular medicine dedicated to the primordial, primary, and secondary prevention of all cardiovascular diseases.

"A strong need has long existed for the development of more aggressive prevention strategies," says Allen J. Taylor, MD, chair of Cardiology in the Washington, D.C. region. At the same time, he notes that important progress is being made.

"Today there are more tools available than ever before," he says. "First, we now have a much greater understanding of the risk factors for cardiovascular disease. This, combined with significant changes in key prevention guidelines, particularly those aimed at cholesterol and blood pressure management, has created a big impact. In the meantime, researchers and clinicians continue to invest in the development of better interventions and treatments to address the prevalence of heart disease among Americans. It's quite a dynamic field right now."



Reducing inflammation—a key driver of heart disease.

Scientists have known for decades that inflammation plays a major role in the development of atherosclerosis and its clinical consequences, including heart attacks and strokes. "But until recently, medicines tested specifically to fight cardiovascular inflammation hadn't panned out because they were ineffective or came with dangerous side effects," Dr. Taylor says.



Low-dose colchicine, an anti-inflammatory historically used to control gout, has been shown to further reduce cardiovascular risk in patients already treated with statins and other preventive medicines.

This changed in June of 2023, when the U.S. Food and Drug Administration approved the use of low-dose colchicine, an anti-inflammatory historically used to control gout, to reduce the risk of myocardial infarction, stroke, and cardiovascular death in adult patients with established atherosclerotic disease or multiple risk factors for cardiovascular disease.

"Inflammation is a normal part of the immune system's response to injury and generally subsides once its healing work is done. But when the wall of the coronary arteries are under constant attack—from LDL cholesterol for

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Washington Region Cardiology Chair Allen J. Taylor, MD

example—the inflammation doesn't subside. Rather it becomes part of a process that causes accumulation of plaque in the artery walls, which can rupture," says Dr. Taylor.

"The bedrock strategy for heart attack prevention has been to lower LDL cholesterol with statins. The addition of low-dose colchicine—which in one study reduced cardiovascular risk by 31 percent in patients already treated with statins and other preventive medicines—enables doctors to simultaneously hit two biological targets that cause heart attacks."

Decreasing elevated lipoprotein(a): a complex genetic risk.

Elevated levels of lipoprotein(a), also known as Lp(a), are understood to dramatically increase one's risk of cardiovascular disease. A form of cholesterol, it has some characteristics in common with LDL cholesterol, causing plaque to build up in arteries and reduce blood flow to the heart, brain, kidneys, legs, and other parts of the body.

Although effective strategies to reduce LDL cholesterol and other lipids exist, there are no approved drug treatments to lower Lp(a), in part due to the fact that elevated Lp(a) levels are determined by genetics; lifestyle changes such as diet or exercise have no impact.

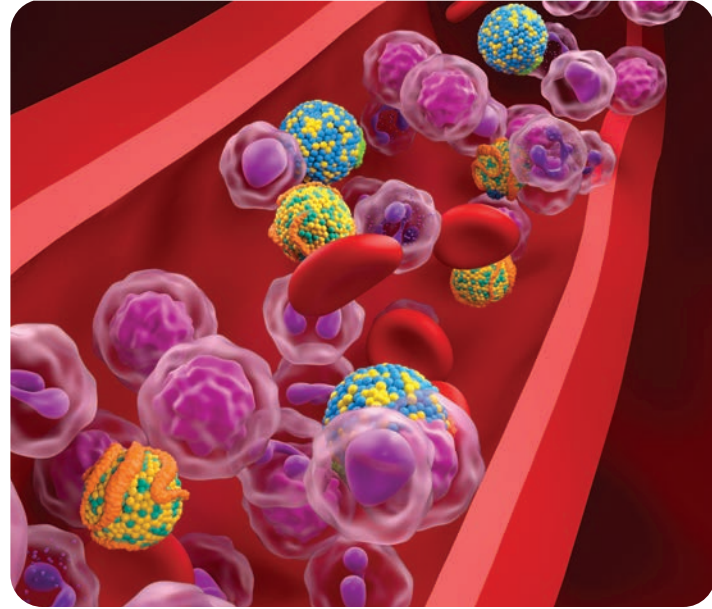
Fortunately, there are several clinical trials underway. Findings from a recent phase one trial presented at the end of last year showed that a single dose of an experimental therapy called lepodisiran reduced Lp(a) to undetectable levels for nearly one year. In addition, the OCEAN(a) trial is underway at MedStar Health evaluating another experimental therapy—olpasiran—in reducing elevated Lp(a).

"The clinical impacts of Lp(a) elevation, once underappreciated, have grown increasingly apparent

—Continued from previous page



Washington Region Chief of Ambulatory Practices Robert A. Lager, MD



Lp(a) elevation can increase the risk of myocardial infarction, stroke, and calcified aortic stenosis. Now, there are several clinical trials underway evaluating promising therapies to reduce levels in certain patient populations.

in recent years," explains Robert A. Lager, MD, a clinical cardiologist at MedStar Washington Hospital Center, and physician lead of MedStar Cardiology Associates. "Those impacts manifest as a heightened risk—and often an accelerated course—of cardiovascular disease, primarily premature myocardial infarction, increased stroke risk, and calcified aortic stenosis. So, I am a strong advocate for patients getting their Lp(a) levels checked. It just takes a blood test."



Cardiologist Amy Marino, MD

Managing cardiovascular disease in women with an open mind.

Cardiovascular disease in women continues to receive significant attention. While it's the leading cause of death among this population, there are still consequential disparities in diagnosis and treatment.

"While women can have typical symptoms of heart disease, they often present differently. Women are more likely to have atypical or subtle symptoms, which can result in delayed care," explains Cardiologist Amy Marino, MD. "Women have been underrepresented in studies, and education regarding sex-specific differences has lagged. Hence, when compared to men, women continue to be undertreated."

Women have a unique risk of epicardial coronary artery disease, microvascular disease, and heart failure with preserved function. In addition to the traditional risk factors, there are also ones unique to women, including hypertensive disorders of pregnancy, gestational diabetes, polycystic ovary syndrome, and delivering pre-term.

Dr. Marino notes that there have been advances in diagnoses and treatment. "For example, with invasive functional testing, MRI, and PET, we can better



diagnose and subsequently treat microvascular dysfunction, a condition common in women that often goes undiagnosed."

"Physicians should be screening women for both traditional and sex-specific risk factors and listening closely for typical symptoms such as chest pain in addition to atypical symptoms like shortness of breath, heartburn, and fatigue, which may indicate a heart problem," she adds. "Women need appropriate risk factor modification and counseling, and patients determined to be high risk should be referred for aggressive preventive care early."

In addition to the traditional risk factors for heart disease, those unique to women include:

- hypertensive disorders of pregnancy.
- gestational diabetes.
- polycystic ovary syndrome.
- delivering pre-term.

Women may need to be specially screened for:

- epicardial coronary artery disease.
- microvascular disease.
- heart failure, often with preserved function.



Sports cardiologist brings unique personal passions to his practice.

“We are beginning to think about athletes a little bit differently than the general patient population,” says new MedStar Health Sports Cardiologist Aubrey Grant, MD.

“We’ve seen high profile cases recently of athletes suffering sudden cardiac death, which has shed light on the importance of understanding who is at risk, and what pathologies and conditions predispose people to sudden cardiac death associated with sports.”

To that end, Dr. Grant has one foot in cardiology and one in sports medicine. Known as Sports Cardiology, the subspecialty remains relatively uncommon, with only a small number of fellowship-trained clinicians in the country.

About 50 percent of Dr. Grant’s patients are elite athletes. He consults with the Baltimore Ravens, the Washington Mystics, and the Washington Capitals, and recently attended the Baltimore Orioles spring training.

“Certain endurance performance over time can create adaptations in heart tissue that sometimes mimic heart pathology,” he says of his elite-athlete patients. “For instance, thickening of the heart muscle in some athletes can be

confused with heart disease. But it doesn’t necessarily need treatment. What we’ve seen historically is that some of these athletes have been disqualified from sports or they’ve gone through expensive cardiac testing to determine the cause. And often, there’s no reason for alarm.”

Accounting for the other half of his practice are general cardiology patients. For instance, he collaborates with colleagues treating patients with hypertrophic cardiomyopathy to help them exercise safely.

“We want everyone to be active and to do so safely, not just the professional athletes,” he says.

Dr. Grant says community education is also a big part of his job.

“For the athletic teams, it’s essential to have emergency action plans and access to automated defibrillators,” he explains. “And for everyone, I teach that ‘prevention beats intervention.’ I try to prevent people from having procedures and taking medication. I view exercise as actual medicine and recommend some sort of exercise every day.”

State-of-the-art testing capabilities.

Dr. Grant practices primarily at MedStar Union Memorial Hospital in Baltimore and MedStar Health Lafayette Centre in Washington, D.C. He uses a state-of-the-art sports and performance physiology lab, equipped with a large treadmill and bicycle. Here, cardiopulmonary exercise testing is conducted in combination with traditional stress testing with spirometry, to analyze the metabolic demands athletes face during peak performance and determine their VO2 max. This comprehensive approach allows effective enhancement of fitness levels.

A personal passion for addressing healthcare disparities.

Dr. Grant’s passion for addressing healthcare disparities led him and a friend to establish a company that offers training sessions for physicians. Using virtual reality headsets, participants simulate what it’s like to interact with the healthcare system as individuals from diverse backgrounds. The immersive training provides insights into the lived experiences of patients, and thereby helps clinicians better empathize with the social determinants of health that underscore cardiovascular outcomes in the United States.

Early influences lead to a life-long commitment to service and caregiving.

For a former soccer player from Davidson College, transitioning into sports cardiology was seamless. “Athletics and exercise have always played a significant role in my life,” he explains. His passion for medicine and his commitment to addressing healthcare disparities were inspired by his grandmother. She had a deep fear of doctors and often told him to pursue a medical career, hoping to have a doctor in the family she could trust.

A native of Mitchellville, Md., Dr. Grant feels a deep connection to his hometown, a sentiment that predates even his birth. He attributes this to his family’s history, particularly his father’s journey. His father, whom he regards as incredibly intelligent, graduated from Bladensburg High School and was accepted into Georgetown University. To manage the expense of tuition at Georgetown, Dr. Grant’s grandfather took a job parking cars on campus so that his son could attend tuition-free.

Dr. Grant’s commitment to service and caregiving was instilled early on, shaped by his experiences volunteering alongside his mother, who was the director of senior services for Prince George’s County. As a teenager, he spent weekends delivering meals and assisting in senior centers, as well as working in the Cath Lab at MedStar Washington Hospital Center. These experiences deeply influenced his desire to serve and care for others.

Dr. Grant received his medical degree from Meharry Medical College where he graduated Cum Laude, followed by residency at Emory University School of Medicine and a fellowship at Georgetown University/MedStar Washington Hospital Center. He then was one of two cardiologists



accepted annually into one of the few sports cardiology fellowships in the country—the Cardiovascular Performance Program Fellowship at Massachusetts General Hospital/ Harvard Medical School.

He finished his fellowship in June 2023, became engaged and bought a house in July, started his practice at MedStar Health in August, and was married in December. This year, the couple welcomed their first child together. It’s been a busy few years for Dr. Grant, and he is eager to continue his mission, combining his personal passions with his clinical expertise.

To refer a patient to Dr. Grant, please call 410-366-5600.

Outpatient hub for cardiovascular subspecialties opens at MedStar Union Memorial Hospital.



MedStar Union Memorial Hospital has reimagined cardiovascular subspecialty care in its new 10,000-square-foot outpatient center located in the Calvert Street Building on the hospital campus.

A \$6 million investment—made possible, in part, through generous philanthropic support—the project brings together Cardiac Electrophysiology, Vascular Surgery, Cardiac Surgery, and Advanced Heart Failure specialists conveniently under one roof, as well as echo labs, vascular labs, device clinic, and simple procedural offerings.

“This outpatient expansion is a testament to MedStar Health’s ongoing commitment to making state-of-the-art subspecialty care more accessible and streamlined,” says Samer Najjar, MD, regional chief of Cardiology in Baltimore. “It is not uncommon for a patient to be under the service of two, three, or even four of these specialty practices. Bringing the providers and services to one central location can make a meaningful difference to these patients.”

Enhanced access is particularly important for patients who are symptomatic or have difficulty walking, as navigating large hospital campuses and multiple appointments at a time can be challenging. The thoughtful design prioritizes the experience of the patient.

“The project highlights our culture of multidisciplinary care,” shares Raghuvver Vallabhaneni, MD, director of Vascular Surgery in Baltimore. “We believe patients are best served through collective perspectives and collaborative care. This new setup maximizes our ability to practice in this manner.”

Appointments at the Calvert Street Building are made through each specialty practice.



Clinic rooms have ample space for loved ones to provide critical support during appointments.



Advanced-imaging displays help patients visualize their anatomy and better understand their condition or procedure.



The onsite device clinic offers evaluation/monitoring of implantable devices.



There is convenient access from Calvert Street and the adjacent parking garage.

The American Heart Association names Reginald Robinson, MD, its 2024 Physician of the Year.

The American Heart Association (AHA) has named MedStar Health Cardiologist Reginald Robinson, MD, its 2024 Physician of the Year. In particular, he is being honored for his long-standing dedication to improving health equity. A graduate of Morehouse College and Howard University School of Medicine, Dr. Robinson has long been committed to caring for the African American community. He is not just a clinical provider for his patients, but an educator, an advocate, and a trusted advisor. His treatment approach is holistic, using lifestyle changes as well as traditional cardiology.

“I am deeply honored to receive this award,” says Dr. Robinson. “To be recognized by my peers for my work and contributions to the field of cardiology to improve the care of patients is really humbling. Thank you to the leadership team at AHA who nominated me. Your support and friendship mean more than ever I can ever express in words.”

Dr. Robinson has more than two decades of service and leadership with the AHA. He is an Ambassador for EmPOWERED to Serve, an AHA program harnessing the passion of individuals and organizations to overcome barriers to health equity. He was past president of the AHA’s Board of Directors for the Eastern States region

from 2021 to 2023. In that role, he helped fight heart disease and stroke across thirteen states from Virginia to Maine and Washington, D.C. He also served as president of the AHA’s Greater Washington Region Division Board of Directors from 2012 to 2014. In 2020, Dr. Robinson received the Eastern States Volunteer Health Equity Award from the Greater Washington Region board.

“Reggie Robinson is the consummate physician,” says Stuart Seides, physician executive director emeritus at MedStar Heart & Vascular Institute. “He embodies the kind of knowledge, compassion, and humanity that inspires comfort and confidence in his patients and colleagues alike. It has been my privilege to know him throughout his career at MedStar Health, and this honor is very well-deserved.”

Dr. Robinson’s expertise is in general clinical cardiology, treating heart arrhythmia, hypertension, cardiovascular disease, congestive heart failure, and other diseases of the heart. He sees patients at MedStar Washington Hospital Center and at the MedStar Health Cardiology Associates location in Bowie, Md.

Dr. Robinson can be reached at 202-877-5800.



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CRTvirtual: Fellows Boot Camp Saturdays, July 20 to August 10, 2024 Virtual

Each interactive session will highlight a live case or hands-on demonstration, followed by didactic lectures and panel discussions on a range of topics, including access closure, stent management, atherectomy, and in-depth imaging and physiology.

[CRTvirtual.org](https://www.CRTvirtual.org)

Mastering Cardiac and Vascular Complications

August 16 to 17, 2024
Yours Truly Hotel, Washington DC

This symposium will review challenging complications in cases of coronary, structural heart, and endovascular procedures, and discuss early recognition, management, and prevention.

[MCVCMeeting.org](https://www.MCVCMeeting.org)

CRTvirtual: Masters Course Saturdays, September 7 to 28, 2024 Virtual

This course will target complex topics including complex coronary (CTO, thrombus management, and calcified lesions); structural (TAVR, MR, and TEER for tricuspid regurgitation); intravascular imaging (IVUS, OCT); and physiology (FFR, iFR). Attendees will learn out-of-the-box techniques to handle complications and upgrade their knowledge of conducting and interpreting imaging, physiology studies and CMD.

[CRTvirtual.org](https://www.CRTvirtual.org)

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202-877-7808

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Cardiac Ultrasound and Advanced Imaging Conference
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