

# MedStar Heart & Vascular Institute

CAPABILITIES

PERFORMANCE

OUTCOMES

2025-2026



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## MedStar Heart & Vascular Institute Key Clinical Achievements

### The Society of Thoracic Surgeons



#### 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



### High-performing hospital for heart attack care, heart bypass surgery, heart failure care, and transcatheter aortic valve replacement

MedStar Union Memorial Hospital recognized by U.S. News & World Report



# #38

Hospital in the country for cardiology and heart and vascular surgery

MedStar Washington Hospital Center awarded



### MedStar Health now a Center of Excellence in the treatment of sarcoidosis

by the World Association of Sarcoidosis and Other Granulomatous Disorders (WASOG)

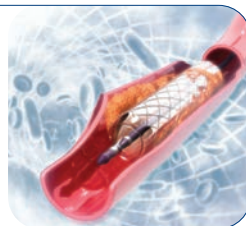


# 1st

Combined Heart-Kidney Transplantation program in Washington, D.C.

### 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



### 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

### MedStarHealth.org/HeartVascularReport

This report includes our data from fiscal year 2024.

Please submit any comments to [jennifer.e.freas@medstar.net](mailto:jennifer.e.freas@medstar.net).

Dear Colleague,

In this biennial Capabilities Report, we are privileged to share recent innovations and key outcomes from MedStar Heart & Vascular Institute. It is our goal to keep you, our partners in caring for the region's cardiovascular patients, abreast of the variety of current options and new horizons in our field.

We aim to provide patients with the most advanced and thoughtful therapies tailored to their individual circumstances, including choices that may not be available elsewhere. As the knowledge base across cardiovascular care rapidly expands, we are meeting the ever-greater need for subspecialized expertise with the addition of focused programs, novel procedures, and new devices. Through this, we remain committed to collaboration and teamwork, ensuring that patients receive the benefit of specialist opinions combined with comprehensive, multidisciplinary perspectives. We have broken down traditional departmental silos and created an environment in which surgeons, proceduralists, medical physicians, and imaging experts come around the patient to discuss a tailored treatment plan—whether that be open surgery, minimally invasive approaches, catheter-directed therapies, a drug regimen, or preventive measures. We give every patient the ability to convene true multispecialty care, which we believe leads to the widest options and most optimal outcomes.

This collaborative culture also allows our faculty to engage in dynamic clinical research. We view care innovation as yet another opportunity for colleagues to come together to propel those investigations forward, working as one team.

Finally, we are committed to strengthening our longstanding relationships with the community and with colleagues such as yourself, through improved access to care, meaningful use of novel technology, and support for you and your patients when seeking complementary care from our specialists. We are grateful to you and look forward to our ongoing partnership in this critical work.

Sincerely,



Stuart F. Seides, MD  
Physician Executive Director Emeritus  
MedStar Heart & Vascular Institute



Thomas E. MacGillivray, MD  
Vice President of Medical Operations  
MedStar Heart & Vascular Institute



# Interventional Cardiology

The large procedural volumes and extensive research contributions of our interventional cardiologists offer patients the assurance that they will receive access to all possible treatment options from highly experienced providers.

While our programs are led by nationally recognized physicians, care remains easily accessible at a number of locations in the Baltimore and Washington, D.C. regions.



## Key metrics

**6,052**

Diagnostic catheterizations

**2,393**

Percutaneous coronary interventions (PCIs)



Average primary PCI door-to-balloon time:

**65 minutes**

*Fiscal year 2024 data*

## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS

### New device targets refractory angina

For patients who have already exhausted conventional options to manage their angina and are not candidates for further revascularization, the new Neovasc Reducer™ may be a potential therapy. As part of the COSIRA II clinical trial we are studying whether this device provides a safe and effective treatment. The proposed intervention implants a small stent into the coronary sinus to modulate blood flow, toward restoring it to ischemic areas. The procedure is minimally invasive and done under local anesthesia, allowing most patients to be discharged within 24 hours.

### Renal denervation emerges as an alternative for managing certain hypertension

We are now offering renal denervation to select patients, including those whose hypertension is not adequately managed by medications and lifestyle modifications. The minimally invasive procedure quiets sympathetic nervous system activity using multipolar radiofrequency or ultrasound ablation on nerves in the renal arteries.

### Latest generation of drug-coated balloon technology for treating restenosis

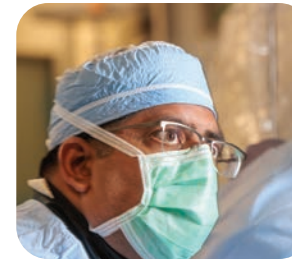
We are participating in two national clinical trials evaluating the safety and efficacy of the SELUTION SLR™ drug-coated balloon technology for the treatment of in-stent restenosis, and SELUTION DeNovo for the prevention of restenosis in patients undergoing coronary intervention without a stent. Unlike with stents, patients undergoing the balloon-only procedure do not require prolonged administration of blood thinners, which could be attractive for those at high risk of bleeding.

### Percutaneous alternative to traditional "fem-pop" bypass

In patients with long and complex obstructive disease of the superficial femoral artery (SFA), endovascular procedures have limited success and surgical bypass has a high complication rate with a prolonged recovery. Percutaneous Transmural Arterial Bypass (PTAB) with the DETOUR™ System is an alternative. Performed by an interventional cardiologist or a vascular surgeon, a detour is created around a long, calcified blockage of the SFA by percutaneously creating a channel through the adjacent femoral vein. A stent is inserted from the top of the SFA, into the femoral vein, and back into the popliteal artery. Current data indicates that PTAB has longer durability than balloon angioplasty or intravascular stenting alone.

### Elective PCI program launches at MedStar Franklin Square Medical Center

MedStar Franklin Square has long performed emergent percutaneous coronary intervention procedures, and now elective PCIs are offered by the same high-volume specialists that perform them at MedStar Union Memorial Hospital. A brand-new cardiac catheterization laboratory, equipped with state-of-the-art technology, accompanies the launch.



Baltimore region team



Washington, D.C. region team

## Interventional Cardiologists

### Baltimore Region

(Image top right, standing, l to r)

David B. Peichert, MD

Antony Kaliyadan, MD

Abhinav Sood, MD

(Seated)

John Wang, MD

Director, Interventional Cardiology

### Washington, D.C. Region

(Image bottom right, standing, l to r)

Brian C. Case, MD

Ron Waksman, MD

Hayder D. Hashim, MD

Itzik Ben-Dor, MD

Nelson L. Bernardo, MD

(Seated, l to r)

Toby Rogers, MD

Lowell Satler, MD

Director, Interventional Cardiology

Michael Slack, MD

# Structural Heart and Valves



Our cohesive teams—in Baltimore and Washington, D.C.—of cardiac surgeons, interventional cardiologists, and imaging specialists have been at the forefront of nearly every structural heart study in recent decades. As a result, our patients receive the most customized, effective, and thoughtfully selected device and technique for their unique circumstance, anatomy, and preference—all through a multidisciplinary decision-making process.



## Key metrics

**551** Total TAVR procedures

**61** PFO closures

Expedited TAVR process timeline (referral to procedure, for elective cases)

**<2 weeks**

**20** Active aortic valve studies

**11** Active mitral valve studies

**3** Active tricuspid valve studies

Fiscal year 2024 data

## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS

### Aortic valve

- Much progress has been made in recent years toward TAVR for isolated aortic regurgitation. The JenaValve Trilogy™ Heart Valve System has completed its pivotal trial, for which we were one of the top enrollers. In addition, we are now participating in the early feasibility study for the J-Valve™ Transfemoral System.
- Despite its wide acceptance, TAVR still carries the potential for stroke or other ischemic events. One promising solution under study is the Emboliner® Total Embolic Protection Catheter, a new TAVR device designed to provide not only greater cerebral protection but safeguard all four of the major arteries supplying blood to the brain.
- Our patient-centered TAVR pathway provides expedited treatment—about two weeks from referral to TAVR. It also allows for all pre-procedure testing and consults to be streamlined around the patient's schedule.
- We remain at the forefront of new TAVR technology, including the ALLIANCE study, investigating the next-generation balloon-expandable SAPIEN X4 Transcatheter Heart Valve.

### Mitral valve

We are building on knowledge from our studies of the MitraClip™, transcatheter mitral cerclage annuloplasty, Tendyne™, the Edwards PASCAL™, and others, to find safer, more effective ways to treat the mitral valve.

- An early feasibility study of the AltaValve™ is investigating a percutaneous approach for MVR and evaluating its potential to reduce complications and length of hospitalizations.
- We continue the investigation of the Intrepid™ system, with completion of the first cases done via femoral access. Femoral access may further reduce complications, potentially offering a new and lower risk solution for patients who are severely ill and poor candidates for conventional mitral surgery or with mitral annular calcification.
- Our participation in the ENCIRCLE Trial of SAPIEN M3 System offers some patients a transcatheter approach consisting of a dock in the mitral position and replacement valve.

### Tricuspid valve

The field has arrived at a point of optimism and excitement, as there are now a number of therapies recently approved and under evaluation. Our team now offers:

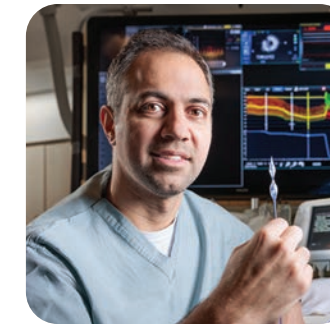
- EVOQUE, the only FDA-approved transcatheter tricuspid valve replacement system.
- TriClip™ TEER device for repair.
- CorMatrix® Cor ECM® replacement valve.



Baltimore region team



Washington, D.C. region team



## Structural Heart Teams

### Baltimore Region

(Image top left, standing, l to r)

John V. Conte, MD  
Cardiac Surgeon

Antony Kaliyadan, MD  
Interventional Cardiologist

Rachel E. Harrison, MD  
Cardiac Surgeon

Abhinav Sood, MD  
Interventional Cardiologist

(Seated, l to r)

John Wang, MD  
Director, Interventional Cardiology

Brian T. Bethea, MD  
Chair, Cardiac Surgery

### Washington, D.C. Region

(Image top right, standing, l to r)

Brian D. Baturin, MD  
Imaging Cardiologist

Preetham Kumar, MD  
Imaging Cardiologist

Ammar S. Bafi, MD  
Cardiac Surgeon

Ron Waksman, MD  
Interventional Cardiologist

Itzik Ben-Dor, MD  
Interventional Cardiologist

Christian C. Shults, MD  
Cardiac Surgeon

Toby Rogers, MD  
Interventional Cardiologist

Jeffrey E. Cohen, MD  
Cardiac Surgeon

(Seated, l to r)

Gaby Weissman, MD  
Imaging Cardiologist

Lowell Satler, MD  
Director, Interventional Cardiology

Thomas E. MacGillivray, MD  
Physician Executive Director,  
Cardiac Surgery, MedStar Health



# Cardiac Surgery

Our cardiac surgery program has been a premier destination for patients since the early 1960's. Since then, we have brought a number of "firsts" to our patients, offering procedures and programs not available elsewhere in the region.

We are proud to be consistently recognized among the nation's top heart programs for superior outcomes and high volumes, and to employ surgeons who are internationally known for their expertise and contributions to clinical research.



## Key metrics

**1,941** Total open cardiac surgery procedures

**160** Surgical mitral valve procedures

**160** Surgical aortic valve procedures

**331** Total open aortic surgery procedures

**37** Surgical mitral valve procedures + CABG

**95** Surgical aortic valve procedures + CABG

**820** Total CABG procedures

**49** Surgical tricuspid valve procedures

**75** Robotic cardiac procedures

Fiscal year 2024 data

## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS

### Multidisciplinary collaboration

The capabilities of our cardiac surgeons are improved and fortified through increased collaboration across multiple specialties. Our heart teams work closely together, keeping the patient as the focus of our treatment choice. You can explore details of our efforts in the following sections:

- Structural heart and valves (page 8).
- Aortic disease management (page 16).
- Cardiac electrophysiology (page 22).
- Advanced heart failure (page 26).

### Deep subspecialization and expertise

A program of this breadth and depth fosters the ability for surgeons to strengthen their distinct areas of focus, which results in a truly elite team of providers, each at the forefront of innovation in their subspecialty. Through this, we can provide uncommon, balanced approaches to nuanced cases—often patients who have been denied care elsewhere.

For example, we offer the Ross Procedure as an alternative to aortic valve replacement, “bloodless” surgery protocol, and unique solutions for complex coronary disease.

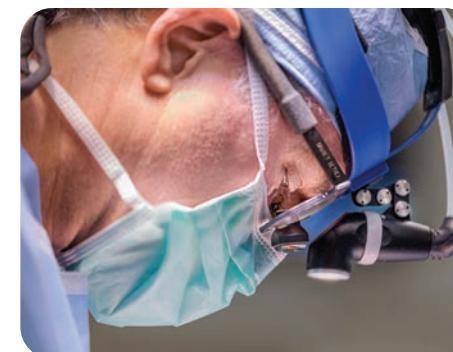
### Robotic cardiac surgery

Our robotic cardiac surgery program offers minimally invasive surgical approaches to repair and replacement of valves, cardiac myxoma removal, coronary artery bypass, and other conditions.

For select patients, this approach may deliver shorter recovery times, less post-surgical pain, and fewer surgical complications such as blood loss, infection, and stroke, than the conventional open-sternotomy approach.



Combined Baltimore and Washington, D.C. teams



### Cardiac Surgeons

(Image top left, standing, l to r)

Jeffrey E. Cohen, MD  
 Ammar S. Bafi, MD  
 Jonathan R. Gower, MD  
 Yuji Kawano, MD  
 John V. Conte, MD  
 Rachel E. Harrison, MD

(Seated, l to r)

Keki Balsara, MD  
 Christian C. Shults, MD  
 Thomas E. MacGillivray, MD  
 Physician Executive Director,  
 Cardiac Surgery, MedStar Health  
 Brian T. Bethea, MD  
 Chair, Baltimore Region





# Aortic Disease

Our aortic disease program carefully integrates surgical, endovascular, and medical techniques to achieve the best outcomes possible for our patients. Our cardiac and vascular surgeons—who perform more aortic interventions than any other program in the region—provide the full spectrum of options for all aortic pathology.



Cardiac Surgeon Christian Shults, MD  
Co-Director, Complex Aortic Center



Cardiac Surgeon Brian Bethea, MD  
Co-Director, Complex Aortic Center



Vascular Surgeon Raghuvveer Vallabhaneni, MD  
Co-Director, Complex Aortic Center

## Innovation toward more tailored solutions

Participation in abundant clinical trials give our patients access to advanced treatments and technology. Treatment plans are always carefully selected according to each person's unique needs, risks, and anatomy. From aneurysms, dissections, and ulcers to congenital defects and other uncommon conditions, our teams offer highly customized solutions.

### Ongoing investigations include:

- Evaluation of the GORE® Ascending Stent Graft in the Treatment of Lesions of the Ascending Aorta (ARISE II).
- Thoraflex Hybrid and Relay Extension Post-Approval Study (EXTEND).
- A Global Post Market Evaluation of Terumo Aortic Endovascular Grafts (TIGER registry).
- RCT of the Nectero EAST System for Small to Mid-Sized Abdominal Aortic Aneurysms Stabilization: Evaluation of Efficacy (stAAAble).
- Safety and effectiveness of the Zenith® Fenestrated+ Endovascular Graft (ZFEN+) in combination with the BeGraft Balloon-Expandable FEVAR Bridging Stent Graft System (BeGraft) for the treatment of patients with aortic aneurysms, where the device sealing zone requires fenestrations with connections to one or more of the major visceral arteries.
- Safety and Effectiveness of the NEXUS™ Aortic Arch Stent Graft System in Treating Thoracic Aortic Lesions Involving the Aortic Arch (TRIOMPHE).
- Evaluation of GORE® EXCLUDER® for thoracoabdominal branch endoprosthesis in the treatment of thoracoabdominal and pararenal aortic aneurysms (GORE TAMBE).
- Evaluation of GORE® TAG® Thoracic Branch Endoprosthesis in treatment of aortic arch and DTAA lesions (GORE TAG).
- Objective Analysis to Gauge EVAR Outcomes Through Randomization (JAGUAR).
- Endurant Stent Graft System vs Excluder Endoprosthesis: A Global, Prospective, Randomized Clinical Trial in Sac Regression (ADVANCE).

## Complex Aortic Center

We offer 24/7 evaluation and treatment for emergent, urgent, and elective cases of complex aortic disease. Our helicopter and ground transport system provides expedited access to care, regardless of patient location. With one phone call, we will initiate transfer and treatment for your patient:

**800-824-6814**  
(Washington, D.C. region)

**410-554-2332**  
(Baltimore region)

**669** Open and endovascular aortic procedures



# Vascular Surgery

As the largest vascular surgery program in the region, our diverse team of specialists are prepared to care for patients with deep venous thrombosis and pulmonary embolism, carotid artery disease, complex aortic pathology, peripheral arterial disease, limb salvage and wound care needs, cosmetic and varicose veins, and hemodialysis access. We also offer 20 noninvasive vascular imaging labs where we provide advanced diagnostic options.



## Key metrics

**8,190**  
Total vascular surgery and access procedures

**>34,800**  
Outpatient encounters

**>38,900**  
Vascular lab studies

*Fiscal year 2024 data*

## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS

### Improving options for deep vein thrombosis

Our DVT program continues to earn international recognition by pioneering new approaches and technology.

Recent major highlights include:

- Becoming first in the world to use the RevCore™ thrombectomy catheter, a novel mechanical thrombectomy device for treating in-stent thrombosis.
- Introducing the mechanical thrombectomy ClotTriever® System to the region—which allows for rapid and complete lytic-free thrombus removal in a single session, agnostic to thrombus age—through the DEFIANCE study.
- Offering the Indigo® Aspiration System, under investigation for percutaneous mechanical thrombectomy in certain patients with DVT.
- Remaining at the forefront of pulmonary embolism treatment through CLEAN PE, a study of the Cleaner™ Pro Thrombectomy System for aspiration thrombectomy in patients with acute PE.

### Leading the region in transcatheter aortic valve replacement (TAVR)

Our multidisciplinary review process ensures that each patient receives the best possible recommendation for their aortic valve disease, whether that be transcatheter aortic valve replacement, TAVR, or surgical aortic valve replacement. Our vascular surgeons continue to lead the region in TAVR volumes and are contributing to the body of research through the PERFORMANCE III trial of the Neuroguard IEP® Direct 3-in-1 delivery system, intended to protect against emboli during transcatheter aortic valve replacement using a stent, balloon, and filter.

### Percutaneous alternatives for revascularization

Our team offers a number of strategies to treat chronic limb ischemia in patients who are not good candidates for traditional bypass. The newly approved DETOUR™ System, provided in collaboration with our interventional cardiology colleagues, offers Percutaneous Transluminal Arterial Bypass (PTAB) for patients with complex peripheral arterial disease. By creating a detour around the blockage in the SFA through a channel through the femoral vein back to the popliteal artery, we can restore flow to the leg. Current data indicates that PTAB has longer durability than balloon angioplasty or intravascular stenting alone. In addition, we continue to offer deep venous arterialization with the LimFlow™ System, which we studied in its early investigations. With LimFlow, we can reduce need for amputation, bypassing the blocked arteries in a minimally invasive approach, restoring blood flow to the feet.

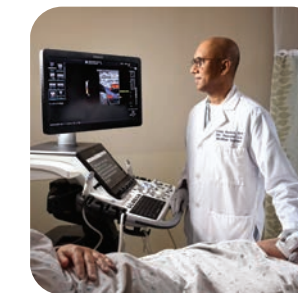
### Expanded access to crucial vascular services

Creating a seamless patient experience for all vascular needs, regardless of location, is a top priority for the program. To that end, we:

- Are now operating 20 noninvasive imaging laboratories across the region with state-of-the-art technology, rapid scheduling, and image interpretations by vascular surgeons.
- Offer the largest vascular hemodialysis access program in the mid-Atlantic region with specialized grafts and minimally invasive options for both routine and highly complex access cases.
- Coordinate a streamlined plan for wound care patients with our colleagues in plastic and podiatric surgery, along with support from other services, for debridement, infection removal, revascularization, and any further interventions that may be necessary.
- Curate personalized and comfortable experiences at each of our 16 Vein Center locations, for patients who need cosmetic or functional treatment of venous disease.



Combined Baltimore and Washington, D.C. teams



### Vascular Surgeons

(Image top left, standing, l to r)

Geetha Jeyabalan, MD  
Othman Abdul-Malak, MD  
Mark Peeler, MD  
Lucy Kupersmith, MD  
Joshua Dearing, MD  
Melissa Meghpara, DO  
Kyle Reynolds, MD  
Jason Crowner, MD  
Misaki Kiguchi, MD  
Kevin Brown, MD  
Ayesha Hatch, MD  
Stephen Stanziale, MD  
Danielle Salazar, MD  
Suzanne Kool, MD  
Cameron Akbari, MD  
Willie Liang, MD

(Seated, l to r)

Jesse Garcia, MD  
Krystal Maloni, MD  
Steven Abramowitz, MD  
Physician Executive Director,  
MedStar Health Vascular Surgery Program  
Raghuveer Vallabhaneni, MD  
Director, Baltimore Region  
Maggie Arnold, MD



# Cardiac Electrophysiology

We offer the region's most established and dynamic heart rhythm program. At 24 hospital and ambulatory sites across Maryland, Washington, D.C., and Virginia, renowned cardiac electrophysiologists manage the full spectrum of heart rhythm conditions for thousands of patients each year.



## Key metrics

**2,242** Total ablation procedures

**213** Left atrial appendage occluder implants

**0.0** LAAO Device Mortality

**>700** Pulsed-field ablations  
*Since beginning in April 2024*

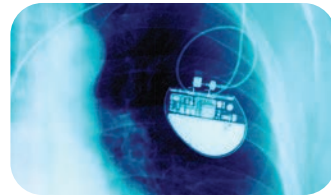
**1.8** LAA Device Complication Rate

**87** Laser Lead Extractions

**32** Hybrid/Convergent ablations

**1.0** LAAO Device Length of Stay

*Fiscal year 2024 data*



## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS

### Dual-chamber leadless pacemakers revolutionize cardiac pacing

Compared to traditional pacing devices, the leadless system consists of two mini capsules delivered via minimally invasive femoral venous access. Advantages include the elimination of chest incisions and scarring and a lower risk of inflammation. Wire-insulation breaks, vein block, and infection—classic complications of traditional pacing systems—are avoided. The Washington, D.C. region's first implantation after regulatory approval was performed at MedStar Washington Hospital Center in November 2023. We have participated in investigational trials since July 2022.

### Pulsed-field ablation is now our predominant approach for managing AFib

Compared to prior methods, this catheter-based, nonthermal therapy is more efficient and safer, as it reduces collateral damage to the surrounding tissue. It is based on electroporation technology which applies a series of high-intensity pulses of energy to achieve fast, complete, targeted ablation of the heart tissue associated with irregular electrical activity.

### Next generation left atrial appendage occlusion strategies

After pioneering the first commercially available LAAO device, the WATCHMAN™ in 2015, we have continued to offer novel systems to our patients. Currently, we are offering the WATCHMAN FLX Pro™ as part of an exclusive and limited market release. It is particularly promising in treating patients with the most severe bleeding problems, as it uses thromboresistant coated fabric. Additionally, the recent OPTION study has shown that a concomitant approach is effective and allows patients to receive simultaneous ablation and LAA closure. Another trial seeks to further investigate the Amplatzer™ Amulet™ LAA Occluder compared to NOAC therapy in some patients.

### Complex lead management

Our multidisciplinary teams provide high-volume expertise for complicated and potentially risky cases in which cardiac device leads must be removed. We carefully evaluate each patient to select the best approach, which may include laser lead extraction technology.

### Hybrid AF™ Convergent Therapy

Performed collaboratively by a cardiac surgeon and cardiac electrophysiologist, this minimally invasive procedure combines epicardial and endocardial ablation for a more comprehensive and effective therapy over simple endocardial ablation alone. This approach is now available as first-line therapy for patients with longstanding persistent AFib. It is also appropriate for any type of AFib that has been highly resistant to prior ablation therapy. Our physicians first introduced the technology to the region in 2011 and were key investigators in its landmark clinical trials.

### Extravascular ICD system

Our program participated in clinical trials to validate the newly approved Aurora EV-ICD™ (extravascular implantable cardioverter defibrillator) System. Similar in shape and longevity to traditional, transvenous ICDs, the EV-ICD offers select patients the advantage of a minimally invasive implantation procedure, preserving the vasculature and reducing the potential for vascular injury or subsequent complications.



Combined Baltimore and Washington, D.C. teams

### MedStar Health Heart Rhythm Innovation Center

The new MedStar Health Heart Rhythm Innovation Center at MedStar Washington Hospital Center launches a new era of advanced care, teaching, and technology development. This one-of-a-kind lab is designed to facilitate teaching and research, and will serve as a knowledge and technology-development incubator for industry, academic centers, government agencies, medical societies, and other local, national, and international visitors. The multimillion-dollar project was funded in part by the Morris and Gwendolyn Cafritz Foundation.

Central features include:

- Large hybrid, interventional procedure/operating room with adjacent control room.
- The very latest technology for electrophysiology therapies as well as complementary cardiac surgical capabilities.
- Integrated audiovisual system, allowing for the recording and transmission of procedures in real time to viewers around the world.
- A 27-seat auditorium, separated from the operating theater by a smart-glass wall, offering unique access for live observation.



## Cardiac Electrophysiologists

(Image top left, 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 P. Jones, MD  
Seth J. Worley, MD  
Susan O'Donoghue, MD  
Manish Shah, MD  
David A. Strouse, MD  
Rajiv A. Kadi, MD  
John H. Shin, MD  
Michael S. Goldstein, MD  
Apostolos Tsimploulis, MD  
Jay A. Mazel, MD

(Seated, l to r)

Cyrus Hadadi, MD  
Glenn R. Meininger, MD  
Director, Baltimore Region  
Zayd Eldadah, MD, PhD  
Physician Executive Director,  
Cardiac Electrophysiology  
Athanasios Thomaidis, MD



# Surgical Therapies for Advanced Heart Failure

From performing the first heart transplant in Washington, D.C. in 1987 to being among the first four hospitals in the world to implant an LVAD in 1988, our team remains committed to progressing these lifesaving therapies and expanding our ability to provide them. We are now one of the largest programs in the country for LVAD implantations and heart transplants.

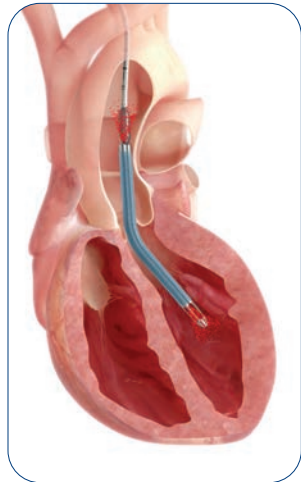
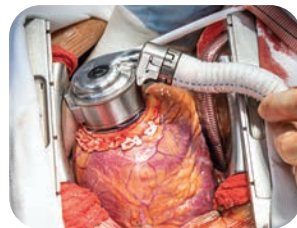
Through close partnerships with community cardiologists, we've made significant progress in our region this year to achieve earlier identification of patients who need these therapies, thereby saving more lives.



## Key metrics



*Fiscal year 2024 data*



## PROGRAM HIGHLIGHTS 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.

### Durable left ventricular assist devices (LVADs)

People are now living with LVADs for more than 10 years, with fewer complications than ever before. As a result, the criteria for LVAD therapy has expanded. Our robust support teams allow us to offer LVADs to those who have been declined by other institutions. Social determinants such as insurance challenges, low income, or lack of family support are not disqualifiers at our program.

### Acute mechanical circulatory support

There has been profound growth in our use of temporary mechanical circulatory support (tMCS), designed to help hearts recover or to optimize a patient in anticipation of an LVAD. New advances now allow for some ambulation and participation in physical therapy, resulting in better conditioned patients with more strength and stamina to withstand further surgical interventions. One of the latest and most promising additions to the tMCS toolbox, is the Impella 5.5®. Impella sits directly inside the left ventricle, mimicking an LVAD, without need for an open operation. With a more robust pump than either ECMO or IABP, Impella delivers greater support, and allows specialists to gauge how well the heart will perform once the LVAD is implanted.

### Unique, long-term support for our patients

Our program offers a distinctive infrastructure to ensure our patients thrive in the long term, not just through the course of their hospitalization. The teams of physicians, social workers, transplant and VAD coordinators, APPs, nurses, and other specialists become intimately involved in the lives of these patients to monitor, educate, and continuously support their overall wellbeing for the duration of their lives. This results in more successful health outcomes. Patients who undergo their surgery at MedStar Washington Hospital Center may receive some follow-up care at our Baltimore locations, increasing convenience and accessible support.



(l to r) Jennifer Verbese, MD, Director of Living Donor Kidney Transplantation; Keki Balsara, MD, Surgical Director of Heart Transplantation and Mechanical Circulatory Support; Steven Potter, MD, Director, Pancreas Transplantation



(l to r) Maria Rodrigo, MD, Medical Director, Heart Transplantation, and Alexander Gilbert, MD, Medical Director, Transplant Nephrology

## Heart-Kidney Transplantation Program: The first in Washington, D.C.



We have recently integrated combined heart-kidney transplantation into our existing heart transplantation program. The dual-transplant service is offered in partnership with MedStar Georgetown Transplant Institute, which is among the top programs by volume in the United States and performs more than 300 kidney transplants annually.

Contemporaneous transplantation of the heart and kidney provides the optimal outcome for a patient suffering from these concurrent disease processes.

The multi-organ transplant is performed in two stages. Our cardiac surgeon first performs the heart transplant. Once the patient is stabilized and the new heart is functioning well, the kidney transplant team implants the donor kidney.



## Medical Management of Advanced Heart Failure

We manage the lifelong course of care for the most medically complex patients, and are passionate about introducing new treatments and improving prognoses.

We use state-of-the-art imaging technology, offer advanced medical therapy through involvement in clinical trials, and facilitate complementary services such as cardiogenetics and palliative care. A close collaboration with our team of surgeons and interventionalists ensures a continuum of care at any level of need.

## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS

### Sarcoidosis Center of Excellence

Our Sarcoidosis Program has been recognized as a Center of Excellence by the World Association of Sarcoidosis and Other Granulomatous Disorders (WASOG). At our Center, patients have access to a multidisciplinary team of experts and the full complement of technologies necessary to effectively manage their unique needs.

### Leaders in emerging treatments for transthyretin cardiac amyloidosis

Historically, ATTR-CA was underdiagnosed, lacked effective treatment, and frequently fatal. Now, the prognosis is much more optimistic. There is a new run of trials underway at our program that have the potential to further improve the clinical status and lives of patients:

- The DepleTTR-CM study commenced in early 2024 and we are one of the leading sites in the country. This trial is investigating safety and efficacy of the depleting agent ALXN-2220 to actively target and remove amyloid deposits entirely.
- In May 2024, we enrolled the first U.S. patient in the gene-editing trial, MAGNITUDE. This study is evaluating the medication NTLA-2001, which uses the gene-editing system CRISPR/Cas9 to find and disable the TTR gene in the liver, where most TTR protein is produced. Interim Phase 1 and 2 clinical trial data showed consistent and long-lasting TTR protein reduction.
- Vutrisiran, a small interfering RNA therapeutic intended to reduce amyloid deposits, was evaluated in the HELIOS-B trial. Our program enrolled the first patient in the world in this trial, which ultimately demonstrated it could reduce mortality and adverse cardiovascular events while preserving quality of life in ATTR-CA patients.



## PROGRAM HIGHLIGHTS AND RECENT INNOVATIONS *(continued)*

### Baroreflex activation therapy helps regulate blood pressure and flow

When the cardiac baroreflex no longer works properly due to heart failure, our specialists can partner with vascular surgery and electrophysiology colleagues to implant the Barostim™ system. The device stimulates the baroreflex through electrical impulses, thereby regulating blood pressure and flow, and balancing sympathetic and parasympathetic regulation of the heart. Barostim offers new hope for patients with systolic heart failure who are not candidates for—or not well managed by—CRT, ICD, or medications.

### Cardiac contractility modulation improves efficacy and force of contraction

The substantial population of heart failure patients who are not candidates for CRT but still suffer from significant symptoms despite GDMT may benefit from the Optimizer® Smart System. The therapy delivers pulses of energy during the absolute ventricular refractory period, improving the efficacy and force of natural contraction. Myocardial contractility is directly improved with enduring impact—regular therapy may have a sustained effect and provide a reverse remodeling effect.

### Benefits of remote monitoring of pulmonary arterial pressure

One of the most promising developments in reducing hospitalizations, reducing symptoms, and delaying the need for advanced surgical therapies for people with heart failure, are permanent cardiac implantable electronic devices (CIED) that measure pulmonary arterial pressure (PAP) through remote monitoring. Since PAP can serve as an early indicator of exacerbated heart failure, our physicians implement the CardioMEMS™ and Cordella™ systems to regularly observe the metric, rather than waiting for symptoms, weight, and blood pressure changes to emerge.

### Recent study links genetics to advanced dilated cardiomyopathy

First author Mark Hofmeyer, MD, along with colleagues at 25 other leading academic U.S. heart failure and transplant programs, published findings that link genetics to advanced dilated cardiomyopathy, and provide a compelling basis for routine genetic testing of first-degree relatives. Results showed that LVAD or transplant patients were more than twice as likely to carry a pathogenic or likely pathogenic variant than patients with only an ICD or with no device, implant, nor transplant.



Baltimore region team



Washington, D.C. region team



## Advanced Heart Failure Specialists

### Baltimore Region

*(Image top left, l to r)*

Sandeep M. Jani, MD  
Medical Director,  
Advanced Heart Failure  
Samer S. Najjar, MD  
Erika D. Feller, MD  
W. David Xu, MD

### Washington, D.C. Region

*(Image top right, standing, l to r)*

Ajay Kadakkal, MD  
Mrinalini Krishnan, MD  
Jonathan R. Gower, MD  
Maria E. Rodrigo, MD  
Medical Director, Transplantation  
Nana Afari-Armah, MD  
Miguel A. Pinilla Vera, MD  
Tania A. Vora, MD  
*(Seated, l to r)*  
Phillip H. Lam, MD  
Keki Balsara, MD  
Surgical Director, Transplantation  
and Mechanical Circulatory Support  
Farooq H. Sheikh, MD  
Medical Director,  
Advanced Heart Failure  
Mark R. Hofmeyer, MD  
Richa Gupta, MD

# Clinical Cardiology and Specialty Programs



For more than 60 years, referring physicians have trusted their patients to our national leaders in many cardiovascular specialties. We continue to expand our general cardiology practices as well as programming for complex diseases that require unique expertise and considerable infrastructure.

In addition to our 10 hospital locations, cardiologists at numerous ambulatory sites offer wide, regional access to sophisticated care throughout Washington, D.C., Maryland, and Northern Virginia.



(l to r) Cardio-Oncology team: Nurse Navigator Lan Phan, RN; Fellow Tanesh Ayyalu, MD; Program leads Allen Taylor, MD, and Seyed Ebrahim Kassaian, MD

## Cardio-Oncology

Due to the rapidly growing population of cancer survivors, the need for cardio-oncology services has become much more pronounced. Chest radiation, conventional chemotherapies, and newer agents such as immune checkpoint inhibitors can contribute to the development of cardiovascular conditions such as coronary artery disease, peripheral arterial events, deep vein thrombosis, atrial fibrillation, and even heart failure. As newer oncologic therapies continue to prove more successful, cardiologists must monitor and care for the patient's heart—often before, during, and long after their cancer treatments.

We have pioneered this niche medical subspecialty since 2012, participating in much of the groundbreaking research and protocol implementation aimed at minimizing cardiovascular impact in people with cancer.

**To refer a patient, please call 202-360-6367 (Washington, D.C.) or 443-444-4700 (Baltimore).**

## Sports and Performance Cardiology

Our Sports and Performance Cardiology Program is one of only a few in the country to offer specialized services that combine sports medicine and cardiology. We care for general cardiology patients and elite athletes, alike, focusing on patients who are seeking to enhance cardiovascular performance or those returning to play after serious cardiac events. We also contribute to the management of complex conditions such as hypertrophic cardiomyopathy, helping patients exercise safely. In our state-of-the-art physiology lab, we conduct cardiopulmonary exercise testing in combination with traditional stress testing with spirometry. We have also expanded our use of advanced cardiac imaging techniques tailored specifically for athletes, including cardiac MRI and 3D echocardiography. These tools have proven invaluable in differentiating between physiological adaptations in athletes and potential pathological conditions.

We support a number of professional teams, including the Baltimore Orioles, Baltimore Ravens, and Washington Capitals. We are also the premier cardiovascular consultants for the University of Maryland athletics.

One of our most significant recent endeavors has been our involvement in Project Rampart, a comprehensive cardiac screening program targeting youth athletes in the city of Baltimore. This initiative, launched in collaboration with local schools and sports organizations, aims to identify and mitigate cardiac risks in young athletes before they become serious issues.

**To engage our sports cardiology services, call 410-366-5600.**



Robert A. Lager, MD  
Chief, Ambulatory Services  
Washington, D.C. Region



Samer S. Najjar, MD  
Regional Chief, Cardiology  
Baltimore Region



Sriram Padmanabhan, MD  
Chief, Cardiology  
MedStar Franklin Square Medical Center



Allen J. Taylor, MD  
Regional Chief, Cardiology  
Washington, D.C. Region



Sports Cardiologist  
Aubrey Grant, MD





Patrick Bering, MD  
Medical Director, Hypertrophic  
Cardiomyopathy at MedStar  
Washington Hospital Center



Sandeep Jani, MD  
Medical Director, Hypertrophic  
Cardiomyopathy and Advanced Heart  
Failure in the Baltimore region

## Hypertrophic Cardiomyopathy

Significant progress has been made in recent years regarding our understanding of hypertrophic cardiomyopathy (HCM), leading to increased awareness of the condition and advances in the management and prevention of complications. Our program offers expertise in the latest guidelines and therapies.

We are one of the few certified programs to provide mavacamten, a novel cardiac myosin inhibitor shown to improve quality of life and exercise tolerance, reduction of symptoms, and favorable hemodynamic effects for adults with a specific symptom profile and subset of HCM. Only available under a Risk Evaluation and Mitigation Strategy, patients must be precisely diagnosed, and regularly titrated, educated, and monitored. The next front is our participation in the ACACIA-HCM clinical trial, currently underway to study the effects of aficamten—a next-in-class cardiac myosin inhibitor—on the quality of life, exercise capacity, and clinical outcomes of patients with symptomatic nonobstructive HCM.

**For information on our HCM specialty care, please call 202-877-2183 (Washington, D.C.) or 410-554-6550 (Baltimore).**

## Cardiodiabetes Clinic

Our cardiodiabetes clinic is designed to provide integrated, coordinated care for patients with type 2 diabetes and related cardiovascular and renal comorbidities, as well as those with risk factors such as high blood sugar, hypertension, elevated cholesterol levels, and excessive belly fat. Based at MedStar Union Memorial Hospital in Baltimore, the clinic provides patients with rapid access to critical services, including cardiologists, endocrinologists, dietitians, and pharmacists. There is also a convenient referral system in place to ensure each patient's primary cardiologist stays closely connected to their care plan.

**To refer a patient to the Cardiodiabetes Clinic, call 410-554-4511.**



Cardiodiabetes Clinic Co-Directors Endocrinologist Malek Cheikh, MD (left), and Cardiologist Kerunne Ketlogetswe, MD (right)

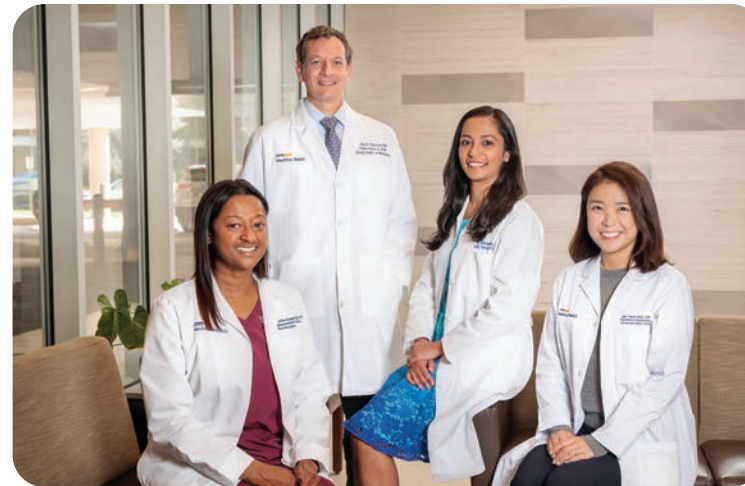


Charles A. German, MD  
Director, Preventive Cardiology

## Preventive Cardiology

The field of preventive cardiology is a growing subspecialty of cardiovascular medicine dedicated to the primordial, primary, and secondary prevention of all cardiovascular diseases. Our program seeks to identify, address, and ultimately lower patients' risk of cardiovascular events. We provide personalized dietary and exercise guidance, and utilize imaging, biomarkers and genetic testing, when appropriate, to understand risk and allocate pharmacotherapy. We see patients with various dyslipidemias including familial hypercholesterolemia, statin intolerance, elevated lipoprotein(a), elevated coronary calcium scores (CAC), hypertension, resistant hypertension, and cardiometabolic disease with a focus on evidence based GLP-1 receptor agonists.

**To refer a patient for services, please call 202-444-5111.**



(l to r) Nurse Navigator Julie Dias-Douglas, BSN, RN; Pulmonologist John Sherner, MD; Regional Director of Pulmonary Hypertension Program and Advanced Heart Failure Specialist Mrinalini Krishnan, MD; Nurse Practitioner Jee Young Choi, CRNP

## Pulmonary Hypertension

The historically poor outcomes associated with pulmonary hypertension (PH) are largely based on an era when fewer treatment options were available. Today, we have diagnostic thresholds that enable us to confirm the condition and begin therapy earlier, as well as many advances in delineating the cause of PH, risk stratifying the patients, and therapeutic management. Though there remains no cure, we offer an array of oral, inhaled, and parenteral medications to optimize quality of life and prevent right heart failure and death, including the newly approved sotatercept-csrk and macitentan/tadalafil for pulmonary arterial hypertension.

Our multidisciplinary cardiology and pulmonary team offers the benefit of shared perspectives and interdisciplinary collaboration.

**To request a consult or screening for your patient, call 202-877-2339 (Washington, D.C.) or 410-554-6550 (Baltimore).**



Cardiac Genetic Counselors  
Hillary Porter (top) and  
Jessica Sweeney (bottom)

## Cardiogenetics

Cardiogenetics has become standard-of-care in many of our cardiovascular services. With the increasing number of inherited diseases, it plays an important role in the comprehensive management of our patients and their families.

Reasons for referral may include:

- Idiopathic cardiomyopathy.
- Aortopathy (history of aortic aneurysm or dissection younger than 65).
- Suspicious arrhythmia, suggesting Brugada or long QT syndrome.
- Diagnosis of heart failure at age 40 or younger.
- Fainting or palpitations during exercise.
- Multiple family members with the same heart condition.
- Sudden, unexpected death in the family due to heart disease.
- Personal history of sudden cardiac arrest.
- Congenital heart disease.
- Peripartum cardiomyopathy.
- High cholesterol or lipid disorders.
- Family history of coronary artery disease.

**To schedule a genetic counseling appointment, call 202-877-4698. To discuss patient candidacy for testing, call 202-877-GENE (4363).**

## Palliative Care

Our palliative care team has pioneered a fully embedded model not broadly seen at other centers. Comprised of physicians, advanced practice providers, social workers, chaplains, and clinical pharmacists, we see highly complex patients across the cardiology spectrum—complex from both a physiological and an emotional standpoint. The service is collaborative and flexible, allowing for changes in prognosis over the course of a patient's life—truly embodying the 'continuity of care' concept.

Services may include:

- Longitudinal supportive care for patients receiving advanced heart failure therapies.
- Acute and chronic pain management around major surgical procedures.
- Ongoing management of dyspnea, weakness, and fatigue.
- Dealing with emotional health challenges.
- Advanced care planning.
- Caregiver support.
- Assistance with complex medical decision-making.
- Automatic engagement with any patient who is on ECMO or in the CVICU for four days or more.



(l to r) Co-Medical Directors, CVICU  
MedStar Washington Hospital Center  
Alexander Papolos, MD, and Benjamin Kenigsberg, MD



Medical Director, CVICU  
MedStar Union Memorial Hospital  
Nimesh Shah, MD

## Cardiovascular Critical Care

Our highest-acuity patients benefit from the deep expertise and state-of-the-art technology available in our Cardiovascular Intensive Care Units and Cardiovascular Recovery Rooms. Intensivists, advanced practice providers, and nurses are cross trained in general critical care and cardiovascular care, ensuring that all nuanced needs of these complex medical and post-operative patients will be well-managed, 24/7.

Our care model is holistic and family focused, and interdisciplinary rounds are done with the patient's caregivers and loved ones. Palliative care is fully integrated, ensuring all available means of comfort and support are provided. Whether a patient is in our CVICUs long term or for just a few hours, we prioritize communication and person-centered care.

In 2024, MedStar Washington Hospital Center was recognized as having the seventh lowest death rate for heart attack patients in the country, according to data collected in the CMS "Complications and Deaths-Hospital" database, due in part to the expertise of ICU teams.

## Specialized, Comprehensive Care Team

The particular challenges of cardiovascular patients, who often have multiple comorbidities, require a uniquely skilled care team. Our advanced practice providers, nurses, anesthesiologists, and hospitalists specialize in and are dedicated to the precise needs of this specific population. This team is foundational to achieving safe, successful, and satisfied patient outcomes.



## Advanced Cardiovascular Imaging

Our cardiovascular imaging program conducts among the highest volumes of imaging studies in the country and offers the most sophisticated technology available, including:

- Transthoracic echocardiography.
- Transesophageal echocardiography.
- Stress echocardiography.
- Cardiac MRI, including quantitative stress perfusion.
- Cardiac CT, including CT fractional flow reserve (FFR).
- Nuclear cardiac stress test.
- Quantitative perfusion cardiac stress PET.
- Cardiac PET for sarcoidosis.
- Technetium pyrophosphate (PYP) imaging technology.

Regardless of where the study is performed in the MedStar Health system, the images are read by our advanced cardiovascular imaging specialists, providing accurate and consistent interpretation.

Renowned imaging experts offer referral services throughout the region. If you have an image that you would like to discuss, you may upload it to: [MedStarImageShare.com](https://www.medstarimage.com).



Ron Waksman, MD, Director  
Cardiovascular Research and  
Advanced Education



John C. Wang, MD, Scientific Director  
Cardiovascular Research, Baltimore region

## Cardiovascular Research

A defining focus of MedStar Health is our commitment to advancing medicine through research. In the most recent fiscal year, we published approximately 244 articles in peer-reviewed journals. Our many ongoing clinical trials are aimed at providing our patients with the best diagnostic and treatment options available.

The MedStar Cardiovascular Research Network is comprised of world-renowned investigators, basic and translational scientists, research nurses, technicians, sonographers, and support staff, and enhanced by our cardiovascular core laboratories, academic Clinical Research Organization, and pre-clinical evaluation.

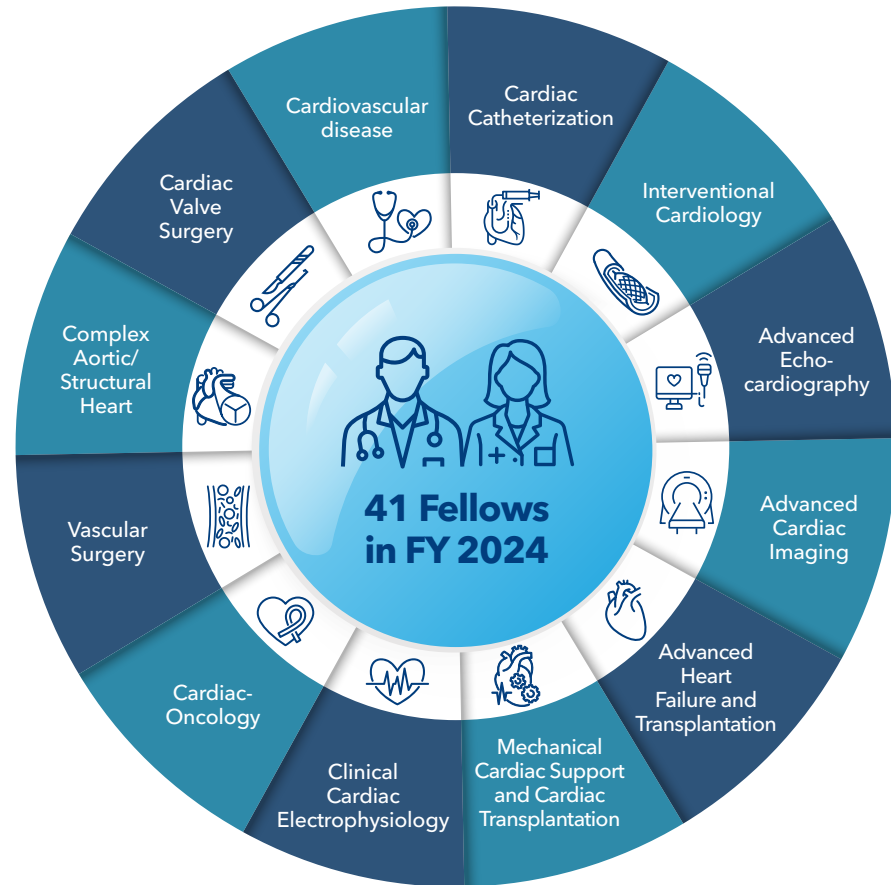
We have long collaborated with the National Institutes of Health, the U.S. Food and Drug Administration, the Centers for Medicare & Medicaid Services, as well as industry and academic institutions, to stay on the forefront of innovation.

Visit [MedStarHealth.org/Clinical-Trials](https://www.MedStarHealth.org/Clinical-Trials) to view active studies.



## Graduate Medical Education

MedStar Health is one of the largest institutional sponsors of graduate medical education in the country. Our cardiovascular fellows gain experience at four diverse medical centers in the Washington, D.C. region, and often participate in pioneering research and clinical trials.



## Continuing Medical Education

In addition to our regularly scheduled weekly series, we offer year-round opportunities for clinicians and trainees from across the globe to connect and learn. Virtual case reviews, in-person symposia, and our annual Cardiovascular Research Technologies (CRT) conference—one of the largest of its kind—offer access to leading experts in all cardiovascular specialties, as well as the latest research and cutting-edge techniques.

We invite you to learn more at:  
[medstar.cloud-cme.com](https://medstar.cloud-cme.com)  
[crtvirtual.org](https://crtvirtual.org)  
[crtmeeting.org](https://crtmeeting.org)



## MedSTAR Transport

MedSTAR Transport service is the region's most established and has set national standards for over 40 years. With our own fleet of helicopters and critical-care ambulances, you can rely on us to coordinate all transfer details for your patient in a prompt, streamlined, and experienced manner. We manage the vital communications and tertiary-level healthcare during transport, removing barriers to accessing our heart and vascular care. Flights are staffed with critical-care personnel based on the patient's needs, and offer options such as ECMO, IABP, LVAS, and pressure control ventilation. Our geographic reach spans Washington, D.C., Maryland, Virginia, West Virginia, Delaware, and Pennsylvania.

## Nancy and Harold Zirkin Heart & Vascular Hospital

Located on the campus of MedStar Washington Hospital Center, the Nancy and Harold Zirkin Heart & Vascular Hospital is a contemporary facility that brings together cardiovascular specialists, accessible outpatient clinics, modern in-patient units, and state-of-the-art CVICUs—all for the convenience and superior care of our patients. On the historic campus of MedStar Washington, this hub provides patients with an intimate and navigable space to receive all levels of their cardiovascular care.

The Nancy and Harold Zirkin Heart & Vascular Hospital was named to recognize longtime Washingtonians Nancy and Harold Zirkin for their generosity and extraordinary philanthropic support.



## Physician Directory

**Thomas E. MacGillivray, MD**, Vice President of Medical Operations

### Advanced Heart Failure

**Farooq H. Sheikh, MD**  
Director, Advanced Heart Failure  
Washington Region

**Sandeep M. Jani, MD**  
Director, Advanced Heart Failure  
Baltimore Region

**Maria E. Rodrigo, MD**  
Medical Director  
Heart Transplantation and  
Mechanical Circulatory Support

Nana Afari-Armah, MD  
Jennifer R. Brown, MD  
Erika Feller, MD  
Richa Gupta, MD  
Mark R. Hofmeyer, MD  
Ajay Kadakkal, MD  
Rania Kaoukis, MD  
Ahmed Khan, MD  
Mrinalini Krishnan, MD  
Phillip H. Lam, MD  
Samer Najjar, MD  
Miguel Pinilla Vera, MD  
Tania A. Vora, MD  
Weining David Xu, MD

### Cardiac Intensive Care

**Benjamin B. Kenigsberg, MD**  
**Alexander I. Papolos, MD**  
Co-Medical Directors,  
Cardiovascular ICU  
MedStar Washington Hospital Center

**Nimesh S. Shah, MD**  
Medical Director, Cardiovascular ICU  
MedStar Union Memorial Hospital  
Paul Clark, DO

### Cardiac Surgery

**Thomas E. MacGillivray, MD**  
Physician Executive Director,  
Cardiac Surgery  
Chair, Cardiac Surgery  
MedStar Washington Hospital Center

**Brian T. Bethea, MD**  
Chair, Cardiac Surgery  
MedStar Union Memorial Hospital

**Keki Balsara, MD**  
Surgical Director  
Heart Transplantation and  
Mechanical Circulatory Support

Ammar S. Bafi, MD  
Jeffrey E. Cohen, MD  
John V. Conte, MD  
Jonathan R. Gower, MD  
Rachel E. Harrison, MD  
Yuji Kawano, MD  
Christian C. Shults, MD

### Cardiology

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

**Samer S. Najjar, MD**  
Chief, Cardiology  
Baltimore Region  
Interim Chief, Ambulatory Practices  
Baltimore Region

**Sriram Padmanabhan, MD**  
Chief, Cardiology  
MedStar Franklin Square  
Medical Center

**Allen J. Taylor, MD**  
Chief, Cardiology  
Washington, D.C. Region

Firehiwot Achamyeleh, MD  
Huzaifa Ahmad, MD  
Bolanle A. Akinyele, MD  
Ebony R. Alston, MD  
Jonathan A. Altschuler, MD  
Rahul Anand, MD  
Federico M. Asch, MD  
Tamara Ashvetiya, MD  
Kusay Barakat, MD  
Orest B. Bartoszyk, MD  
Brian D. Baturin, MD  
Valeriani R. Bead, MD  
Patrick T. Bering, MD  
George D Bittar, MD  
Jeffrey J. Brown, MD  
Shawn Buki, MD  
Ameika Bush, MD  
Luis Calderon, MD  
George H. Clements, MD  
Terrance A. Collins, MD  
Khanh Decareau, MD  
Daniel J. Dooley, MD  
Samuel English, MD  
Louis K. Essandoh, MD  
Robert A. Gallino, MD  
Jonathan D. Gardner, MD  
Vaani P. Garg, MD  
Charles German, MD

**Stuart F. Seides, MD**, Physician Executive Director Emeritus

Mehdi Gheshlaghi, MD  
Raktim K. Ghosh, MD  
Stuart D. Gould, MD  
Aubrey Grant, MD  
Tankala Gupta, MD  
Syed W. Haider, MD  
Lawrence D. Jacobs, MD  
Stephanie S. Jacobs, MD  
Sumbal A. Janjua, MD  
Hasan Javed, MD  
Estelle D. Jean, MD  
Satish N. Jumani, MD  
Christy L. Kaiser, MD  
Kriti Kalra, MD  
Sayed Ebrahim Kassaian, MD  
John J. Kennedy, MD  
Kerunne S. Ketlogetswe, MD  
Matthew Kogan, MD  
Preetham N. Kumar, MD  
Bryan LeBude, MD  
Kenneth M. Lee, MD  
Michael B. Lee, MD  
Conor F. Lundergan, MD  
Rahul Malik, MD  
Salman M. Malik, MD  
Rachel Marcus, MD  
William C. Maxted, Jr., MD  
Martin McNamara, MD  
Diego A. Medvedofsky, MD  
Edward I. Morris, MD  
Richard L. Morrissey, MD  
Mansoor Mozayan, MD  
Etonde M. Musonge-Tarkang, MD  
Sunil K. Nachani, MD  
Keron Navarengom, MD  
Tarana Nekzad, DO  
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Ronak K. Patel, MD  
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Oluseyi O. Princewill, MD  
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Reginald L. Robinson, MD  
Adriana M. Rosario, MD  
Joel Rosenberg, MD  
Alexander Ryzhikov, MD  
Await Sadiq, MD  
Ali K. Salah, MD  
Amish Shah, MD  
Anil K. Shah, MD  
Meena V. Shah, MD  
Reed M. Shnider, MD  
Monvadi B. Srichai-Parsia, MD  
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Kelley W. Sullivan, MD  
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Deidra Varner, MD  
Federico Viganego, MD  
Ramarao Vunnam, MD  
Anam A. Waheed, MD  
Richard I. Weinstein, MD  
Gaby Weissman, MD  
Neil Weissman, MD  
Jared Widell, MD  
Bethel Woldu, MD  
Roquell E. Wyche, MD  
David R. Yu, MD  
Micheas Zemedkun, MD

### Cardiac Electrophysiology

**Zayd A. Eldadah, MD, PhD**  
Physician Executive Director  
Cardiac Electrophysiology

**Glenn R. Meininger, MD**  
Director  
Cardiac Electrophysiology  
Baltimore Region

Sarfraz A. Durrani, MD  
Margaret B. Fischer, MD  
Michael S. Goldstein, MD  
Cyrus A. Hadadi, MD  
Richard P. Jones, MD  
Rajiv A. Khabadi, MD  
Sung W. Lee, MD  
Jay A. Mazel, MD  
Susan O'Donoghue, MD  
Edward V. Platia, MD  
Manish H. Shah, MD  
John H. Shin, MD  
Sunjeet S. Sidhu, MD  
David A. Strouse, MD  
Athanasios Thomaidis, MD  
Apostolos Tsimploulis, MD  
Seth J. Worley, MD

### Interventional Cardiology

**Lowell F. Satler, MD**  
Director  
Interventional Cardiology  
MedStar Washington Hospital Center  
MedStar Georgetown University  
Hospital  
MedStar Southern Maryland  
Hospital Center

**Ron Waksman, MD**  
Director, Cardiovascular Research  
and Advanced Education, MedStar  
Cardiovascular Research Network;  
Associate Director, Cardiology,  
MedStar Washington Hospital Center

**John C. Wang, MD**  
Director  
Interventional Cardiology  
MedStar Union Memorial Hospital  
MedStar Franklin Square  
Medical Center

Itsik Ben-Dor, MD  
Nelson L. Bernardo, MD  
Brian C. Case, MD  
Eric S. Ginsberg, MD  
Hayder Hashim, MD  
Antony G. Kaliyadan, MD  
Scott M. Katzen, MD  
David B. Peichert, MD  
Toby Rogers, MD  
Abhinav Sood, MD

### Vascular Surgery

**Steven D. Abramowitz, MD**  
Physician Executive Director,  
Vascular Surgery

**Raghuveer Vallabhaneni, MD**  
Director, Vascular Surgery  
Baltimore Region

Othman Abdul-Malak, MD  
Cameron M. Akbari, MD  
Maggie W. Arnold, MD  
Kevin A. Brown, MD  
Jason R. Crouner, MD  
Joshua A. Dearing, MD  
Jesse P. Garcia, MD  
Ayesha Hatch, MD  
Geetha Jayabalan, MD  
Misaki M. Kiguchi, MD  
Suzanne S. Kool, MD  
Lucy B. Kupersmith, MD  
Willie Liang, MD  
Krystal C. Maloni, MD  
Melissa K. Meghpara, DO  
Mark O. Peeler, MD  
Kyle B. Reynolds, MD  
Danielle Salazar, MD  
Stephen F. Stanziale, MD

## Contacts at a glance

**MedStar Washington  
Hospital Center**

Advanced heart failure  
**202-297-9307**

Cardiac surgery  
**202-877-7464**

Electrophysiology  
**202-877-7685**

Interventional cardiology  
**202-877-5975**

Vascular surgery  
**202-877-0275**

**MedStar Union  
Memorial Hospital**

To schedule procedures:  
**1-888-529-0200** or  
call the HeartLine:  
**410-554-2332**

**MedStar Southern  
Maryland Hospital Center**

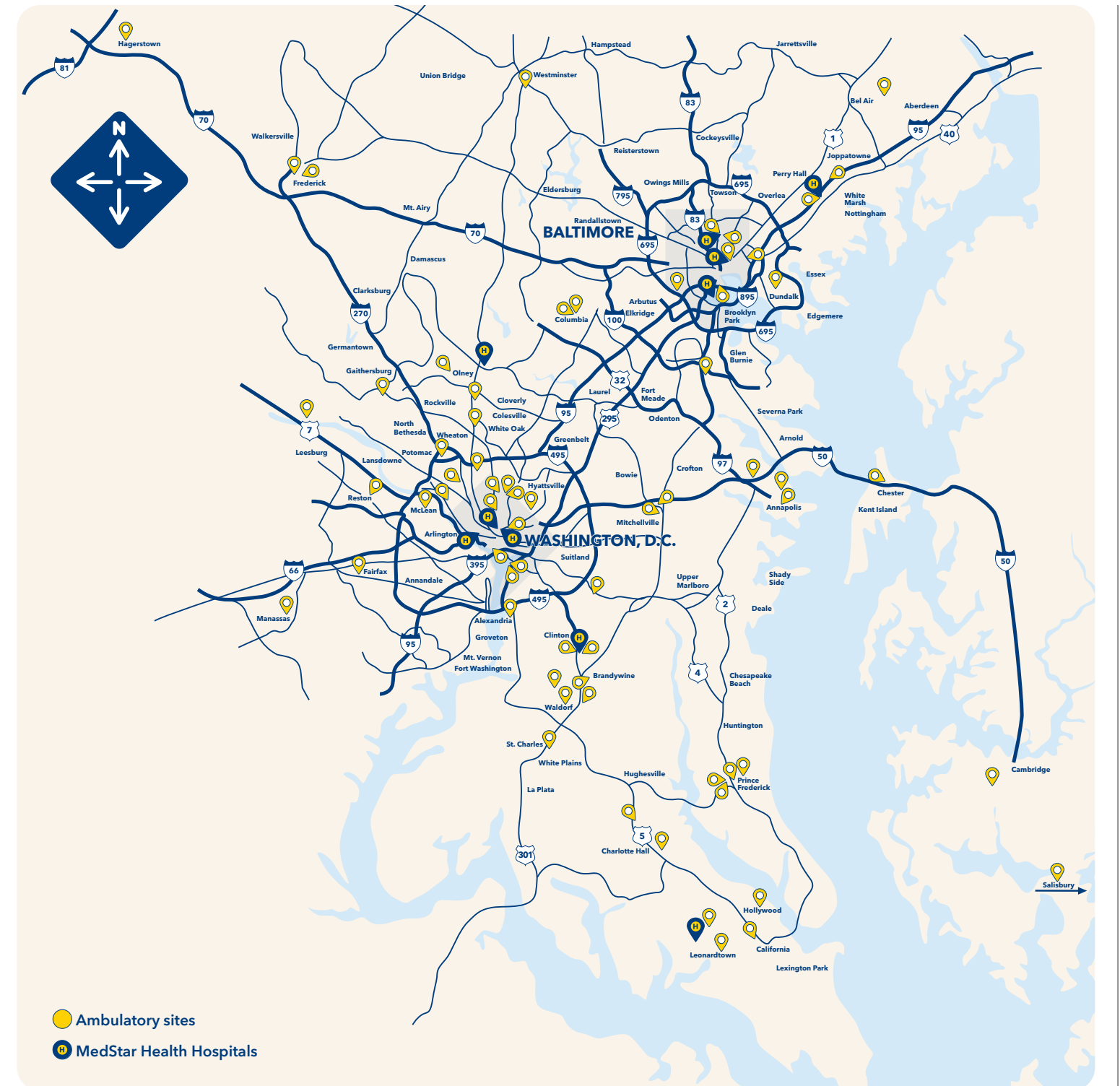
Electrophysiology  
**301-877-5677**

Interventional cardiology  
**301-877-5677**

Vascular surgery  
**301-877-7353**

**MedStar Franklin Square  
Medical Center**

To schedule procedures:  
**1-888-529-0200** or  
call the HeartLine:  
**410-554-2332**



- Ambulatory sites
- MedStar Health Hospitals



# MedStar Health

MedStar Franklin Square Medical Center  
MedStar Georgetown University Hospital  
MedStar Good Samaritan Hospital  
MedStar Harbor Hospital  
MedStar Montgomery Medical Center  
MedStar National Rehabilitation Hospital  
MedStar Southern Maryland Hospital Center  
MedStar St. Mary's Hospital  
MedStar Union Memorial Hospital  
MedStar Washington Hospital Center

## **MedStar Heart & Vascular Institute**

110 Irving St., NW  
Washington, D.C. 20010

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