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MedStar Heart & Vascular Institute

Aortic Disease Management Program

Dear colleague,

We are pleased to share this annual update with you on our Aortic Disease Management Program. Inside you will find information on some of our recent offerings, including new devices, technology, and clinical trials.

Our cardiac and vascular surgeons perform more aortic interventions than any other in the mid-Atlantic region, including the most complex of cases. We have access to the full spectrum of options, including transcatheter, minimally invasive, and surgical approaches. Treatment plans are always carefully selected according to each person's unique needs, risks, and anatomy.

Patients also receive the benefit of a multidisciplinary team perspective, comprised of specialists in cardiac and vascular surgery, cardiology, cardiovascular imaging, cardiovascular critical care, cardiovascular anesthesiology, advanced practice providers, and dedicated cardiovascular nurses.

We are honored to help care for your patients, regardless of condition complexity, in urgent or elective circumstance. Please feel welcome to contact us directly if you'd like further information on our program.

Sincerely,

Christian C. Shults, MD, and Javairiah Fatima, MD (Co-directors, MedStar Health Complex Aortic Program; Program leads, Washington, D.C. region)

Ricardo O. Quarrie, MD, and Raghu Vallabhaneni, MD (*Program leads, Baltimore region*)



When the need is urgent, we provide immediate transfer and treatment.

In both Washington and Baltimore, our Complex Aortic Centers provide immediate care for all complex aortic conditions, including acute dissections, ruptures, aneurysms, and penetrating ulcers.

Our program:

- Offers a rapid and streamlined referral process with just one phone call
- Transports patients from your location directly to the care of cardiovascular specialists at MedStar Washington Hospital Center or MedStar Union Memorial Hospital via our own helicopter or ambulance
- Provides closed-loop communication and easy image-sharing abilities
- Accepts all transfers

You and your patients will be taken care of with urgency, organization, and expertise.

With one phone call, we will initiate transfer and treatment for your patients:

800-824-6814 (Washington region) 410-554-2332 (Baltimore region)

Contact us

For more information or to discuss a patient, please contact us: **Washington:** Cardiac Surgery 202-877-7464 Vascular Surgery 202-877-0275 **Baltimore:** Cardiac Surgery 410-554-6550 Vascular Surgery 410-554-2950 You may also upload patient images through our secure portal: **MedStarImageShare.com**



Comprehensive management of aortic disease

Our team continues to add new approaches and devices to our treatment toolbox, providing a large variety of options for patients, customized to their unique needs and anatomy.

Several of the available options, including minimally invasive, transcatheter, and open approaches, include:







Aortic Valve

- Aortic valve replacement
 - o Transcatheter, minimally invasive, or surgical
 - New generation of mechanical and tissue valves (recognized center for INSPIRIS RESILIA 1 and On-X valves)
 - Ross procedure-using the patient's own pulmonary valve and artery to replace a diseased aortic valve and/or root
- Aortic valve repair
 HAART annuloplasty ring

Aortic Root

- Aortic root replacement
 - Valve sparing root replacement (David procedure) **2 3**
 - Resects aneurysm, retains native valve, delays valve degeneration and need for anti-coagulation
 - Traditional root replacement (Bentall procedure)
 - Minimally invasive approach in select cases
 - Removes aneurysm and replaces degenerated native aortic valve with:
 - KONECT RESILIA aortic valve conduit
 - Freestyle porcine aortic root
 - Homograft (cryopreserved human aortic root)
 - On-X Valve Conduit

• Ross Procedure













Ascending Aorta

- Ascending open replacement ④
- Minimally invasive ascending aortic replacement
- Ascending endovascular replacement
- Hybrid repair

Aortic Arch

- Open replacement
 - Standard arch replacement with re-implantation of the arch vessels
 - o Thoraflex[™] aortic arch replacement ^⑤ (arch graft replacement with connected stent)
 o GORE[®] single branch (TBE) ^⑥
- Endovascular replacement
 - TRIOMPHE study to investigate the NEXUS® Aortic Arch Stent Graft System, offering a less invasive procedure for patients with arch aneurysms and/or dissections **7**
- Hybrid replacement
 Standard TEVAR
 - Aortic arch debranching with subsequent TEVAR



536 Open and endovascular aortic procedures

Fiscal year 2022













Descending Thoracic Aorta

- Approaches for aneurysmal disease, aortic dissection, and other pathology:
 - \circ Minimally invasive endovascular repair $oldsymbol{8}$
 - Standard open repair
 - Hybrid repair

Thoracoabdominal Aorta

- Open thoracoabdominal aortic aneurysm repair
- Minimally invasive endovascular repair
- Clinical trial to evaluate aortic endograft to repair thoracoabdominal aortic aneurysm (TAAA)
 ORE TAMBE trial ()
- FDA-approved Investigational Device Exemption (IDE) to use physician-modified endografts with fenestrations and branches (FEVAR and BEVAR) tailored specifically to each patient's individual anatomy. Extends the ability to offer less invasive aortic repair to patients who are considered high risk for open thoracoabdominal aortic repair using commercially available endografts. (1)

Infrarenal Aorta

- Open aortic aneurysm repair
- Endovascular aortic aneurysm repair (EVAR)
- Ongoing clinical trials for novel therapies and devices
 - \circ JAGUAR trial
 - TREO device



New aortic disease guidelines from the American College of Cardiology/American Heart Association recommend that, at experienced centers with multidisciplinary aortic teams, the threshold for surgical intervention in patients with aortic aneurysms be lowered to 5.0 cm from the previous 5.5 cm.

These new guidelines present an opportunity for patients to be treated more promptly, reducing significant anxiety and impediments to daily living.

MedStar Health's Physician Executive Director of Cardiac Surgery, Thomas MacGillivray, MD, served as a reviewer on the publication of the new recommendation.



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MedStar Heart & Vascular Institute

Nationally recognized excellence in the Baltimore-Washington region

MedStar Heart & Vascular Institute is a national leader in the research, diagnosis, and treatment of cardiovascular disease, and has been recognized by *U.S. News & World Report* and The Society of Thoracic Surgeons as one of the top cardiovascular programs in the nation. MedStar Heart & Vascular Institute and the Cleveland Clinic Heart, Vascular & Thoracic Institute, the nation's #1 heart program, enjoy a robust clinical and research relationship based on shared expertise. Patients benefit from rapid-cycle quality improvements and the latest treatment protocols.

Referring physicians have access to recognized national leaders in multiple cardiac and vascular sub-specialties and local access to MedStar Heart & Vascular Institute cardiac and vascular physicians located throughout Maryland, Northern Virginia, and the Greater Washington, D.C., and Baltimore regions.

For more information or to make an appointment or referral, visit MedStarHealth.org



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