2022 MID-ATLANTIC CONFERENCE

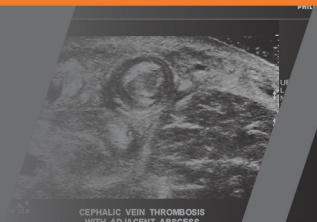
10th ANNUAL CURRENT CONCEPTS IN

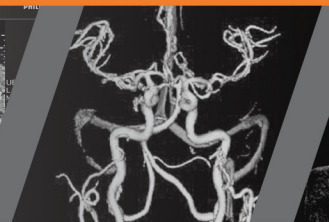
VASCULAR THERAPIES

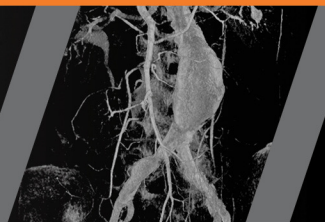
2022

Hilton Virginia Beach Oceanfront
Virginia Beach, Virginia

APRIL 28-30







Sentara Vascular Specialists

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Collaboration Between Vascular Surgery and Cardiothoracic Surgery(CTS): How Do They Do It ?

Dipankar Mukherjee MD, FACS, RPVI, DFSVS

Chief of Vascular Surgery

INOVA Fairfax Hospital

Falls Church, VA

DISCLOSURES:

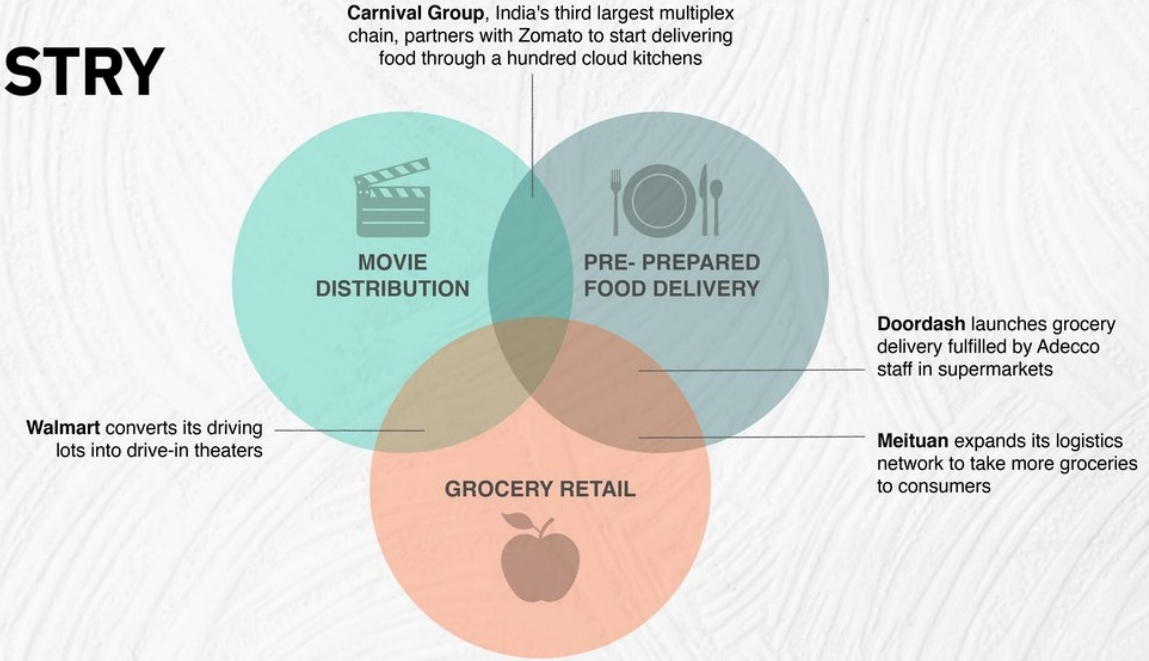
Consultant for Endologix

Speaker for Janssen Pharmaceuticals

MASSIVE VALUE MIGRATION THROUGH A YEAR IN CRISIS

MIGRATION ACROSS INDUSTRY BOUNDARIES

The pandemic forces companies to reimagine their assets into new business models. Movie theaters transformed to dark kitchens and grocery retail parking lots transformed to movie theaters.



PLATFORM REVOLUTION

For more Insights on the Platform Economy, Visit **platform**.blog

Source: Platformation Labs Research

Next Generation Inova

- Inova Strategy = Sea change, building on many strengths
- Transformation of nearly all aspects of organization
- Our Drive to Excellence

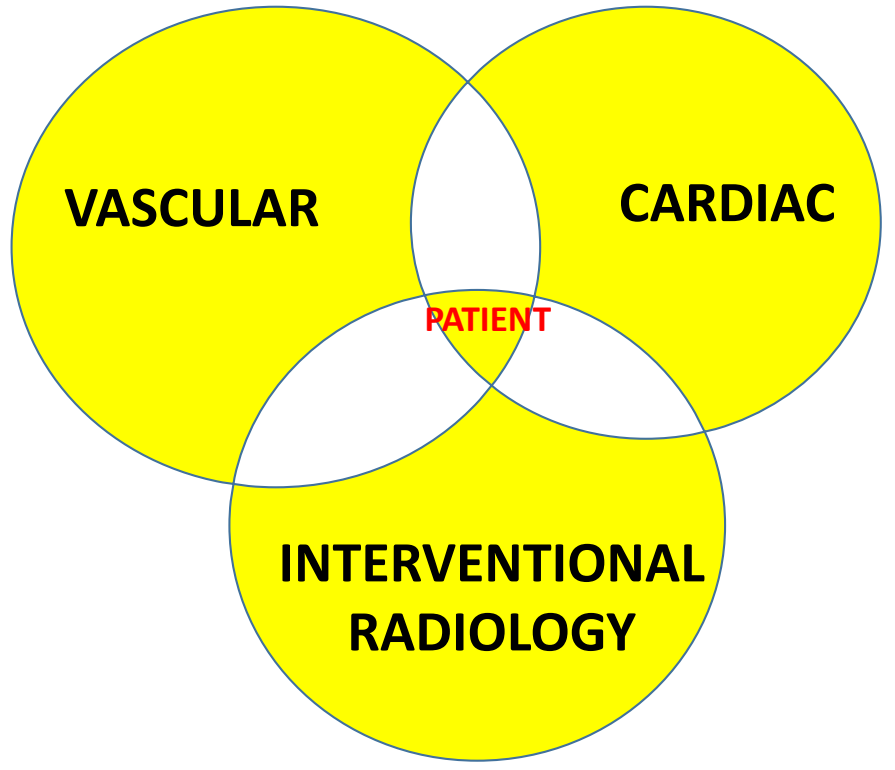
Mandate

Provide a people-centered, high reliability, high value, seamless system of care

Our Imperatives for Transforming Care

- We must create an environment of **zero harm.**
- We must **know each patient** and **honor what matters most to them** with empathy and compassion.
- We must create a culture of **psychological safety** that empowers each team member to fully engage.
- We must **collaborate in teams** with equal voices, embracing patients and their families as integral members of the care team.
- We must embrace and practice **best evidence**, forgoing tradition and individual preference.

The INOVA Model



CARDIAC SURGERY

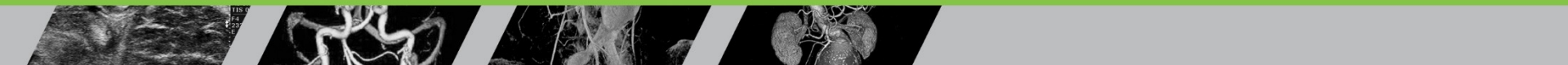
- Experience managing the disease process over the years.
- Referrals from ER and OSH to Cardiac Surgery by INOVA protocol.
- Essential in the management of complications of retrograde Type A AD, conversion to open repair for any reason, and pericardial tamponade.
- Post-operative protocol driven care in CVICU with 24/7 coverage by mid-level providers including BP control, spinal drain, and multiple-system optimization. management
- Resource intensive protocol with optimal use of hospital resources.
- Access to Cardiac Anesthesia and state of the art Hybrid OR.

VASCULAR SURGERY

- Expertise in management of large bore access.
- Experience with management of the abdominal aorta and Iliac arteries.
- Experience with management of PAD.
- Experience with management of branch vessel compromise, SMA, Renal, Iliacs with TAAD.
- Provide continuity of care for AAA, carotid stenosis, and PAD in the clinic.

INTERVENTIONAL RADIOLOGY

- Expertise with coil embolization and closure of proximal Lt. Subclavian artery following Zone 2 TEVAR.
- Secondary interventions for Type 2 endoleaks.
- Experience with management of branch vessel compromise SMA, Renal, Iliacs with TAAD.
- Seamless access to Interventional Radiology room and staff for secondary procedures.



PUBLICATIONS AND TRIALS

- Fairman RM, Tuchek M, Lee A, Kasirajan K, White R, Mehta M, Lyden S, **Mukherjee D**, Bavaria J. Pivotal Results of the Medtronic Vascular Valiant Thoracic Stent Graft System: The VALOR II Trial. J Vasc Surg. 56(5):1222-1231.e1. 2012.

- NAVION Trial from MEDTRONIC , TRIOMPHE Trial from ENDOSPAN.

- **Mukherjee D**, Collins DT, Ryan L. Retrograde stenting of the superior mesenteric artery (SMA) is probably the procedure of choice for dissection of the aorta with mesenteric compromise. J Vasc Surg Cases Innov Tech. 5(4):431-434. 2019.

- Parker MH, **Mukherjee D**, and Ryan L. Management of large bore access complications in the era of trans-catheter aortic valve replacement. Vascular, 29(4), pp. 610–615. 2021.

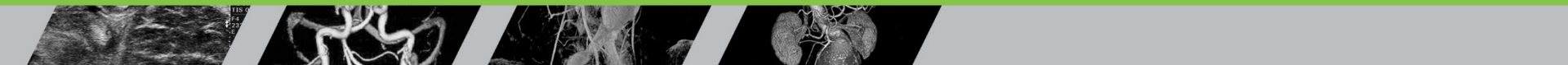
- **Mukherjee D**, Lewis E, Ryan L. Endovascular Repair of Symptomatic Right Subclavian and Innominate Artery Aneurysms Arising From a "Bovine Arch" in a Patient With a "Hostile" Chest Vasc Endovascular Surg . 2021 Apr;55(3):290-294.

PUBLICATIONS

- Parker MH, Colpitts DK, Gilson GF, **Mukherjee D**, and Ryan L. Carotid-Axillary Bypass as an Alternative to Carotid-Subclavian Bypass Following Coverage of Left Subclavian Artery During TEVAR. Vasc Endovascular Surg. 2021 Apr;55(3):265-268. doi:10.1177/1538574420983655

- Mukherjee D, Tang D, Spinosa D, Lewis E, and Ryan L. Retrograde carotid stenting using newly released venous stents for cerebral mal-perfusion in Type A Aortic Dissection (TAAD). J Endovasc Ther. 2021 Oct 8:15266028211050313. doi:10.1177/15266028211050313.

- Ryan L, Collins DT, and **Mukherjee D**. A first time repair of pseudoaneurysm of the ascending aorta with a Valiant Navion Evo thoracic endograft®. Cardiovasc Revasc Med. 2018-12-01, Volume 19, Issue 8, Pages 31-34. doi.org/10.1016/j.carrev.2018.06.009



Complicated Type B Aortic Dissection with Mesenteric Compromise

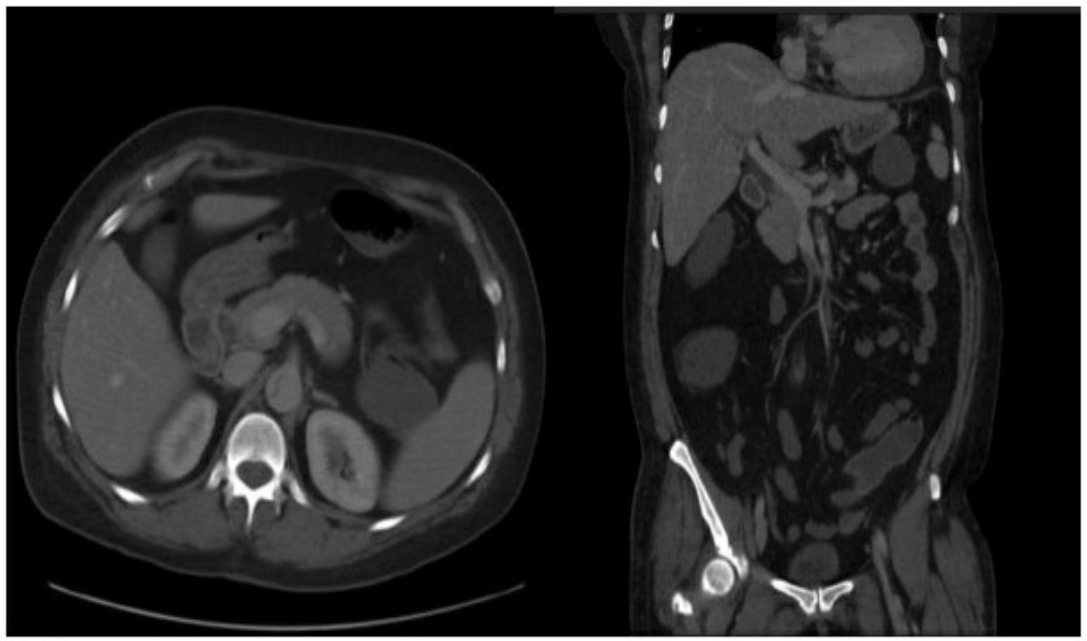


Fig 2: Computed tomography angiography (CTA) imaging of both dynamic and static obstruction of the superior mesenteric artery (SMA).

Complicated Type B Aortic Dissection with Mesenteric Compromise.

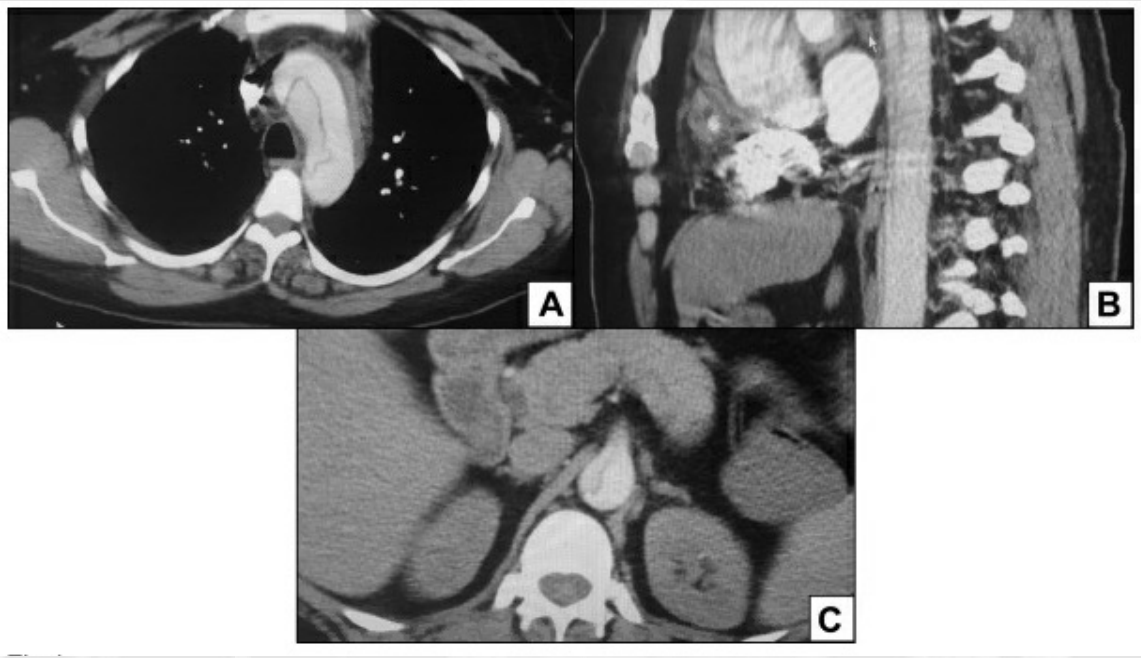


Fig 1: Computed tomography angiography (CTA) imaging on initial assessment of the patient. **A,** Dissection in the aortic arch. **B,** Severely narrowed true lumen in the descending thoracic aorta (coronal). **C,** Dissection extending into the superior mesenteric artery (SMA).

Complicated Type B Aortic Dissection with Mesenteric Compromise

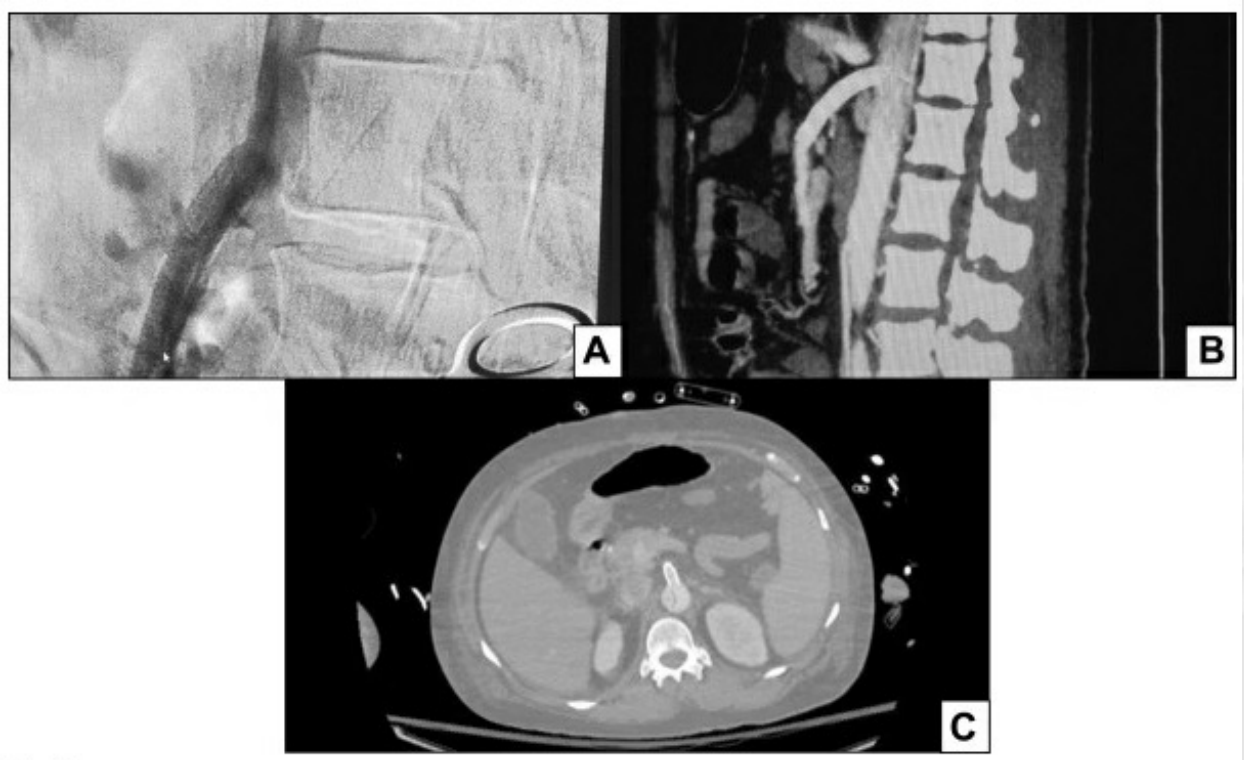


Fig 3: Imaging of intraoperative and postoperative findings for revascularization of the superior mesenteric artery (SMA) by retrograde stenting. **A,** Intraoperative angiogram. **B,** Postoperative computed tomography angiography (CTA) image. **C,** True lumen expansion after hemiarch replacement.

Carotid Dissection

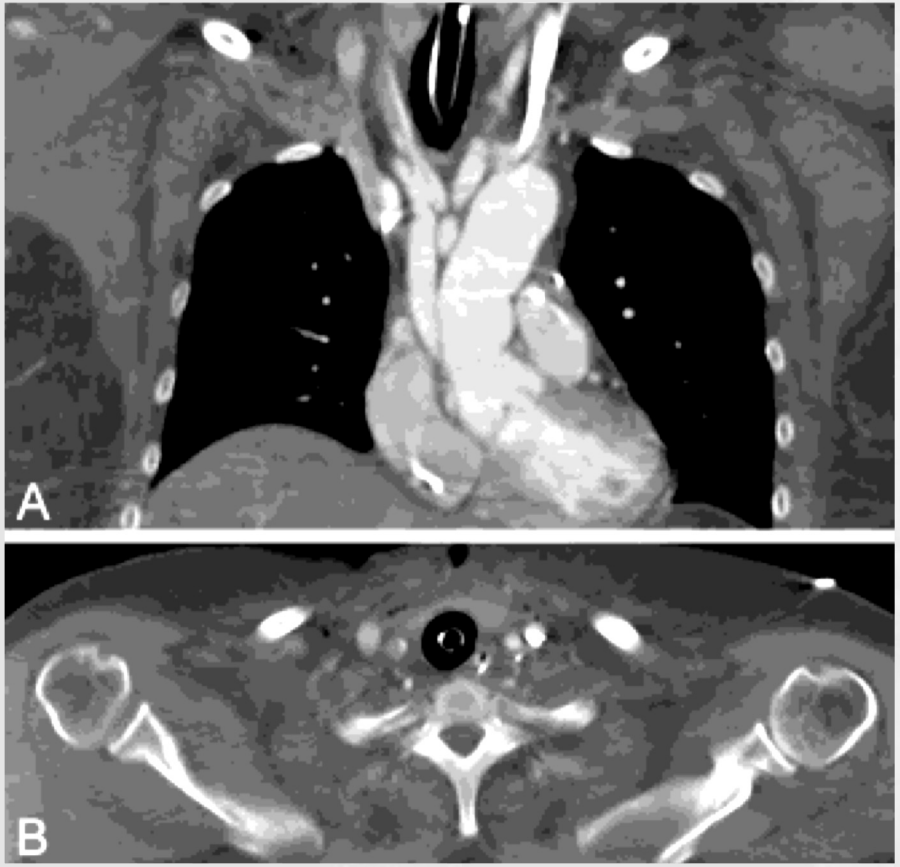


Figure 1: Coronal view of the computed tomography angiography chest demonstrating type A Aortic Dissection with innominate and right common carotid artery involvement. Computed tomography angiogram images showing Type A Aortic Dissection with extension of dissection involving the innominate and right common carotid arteries.

Intra-operative Image of Carotid Dissection

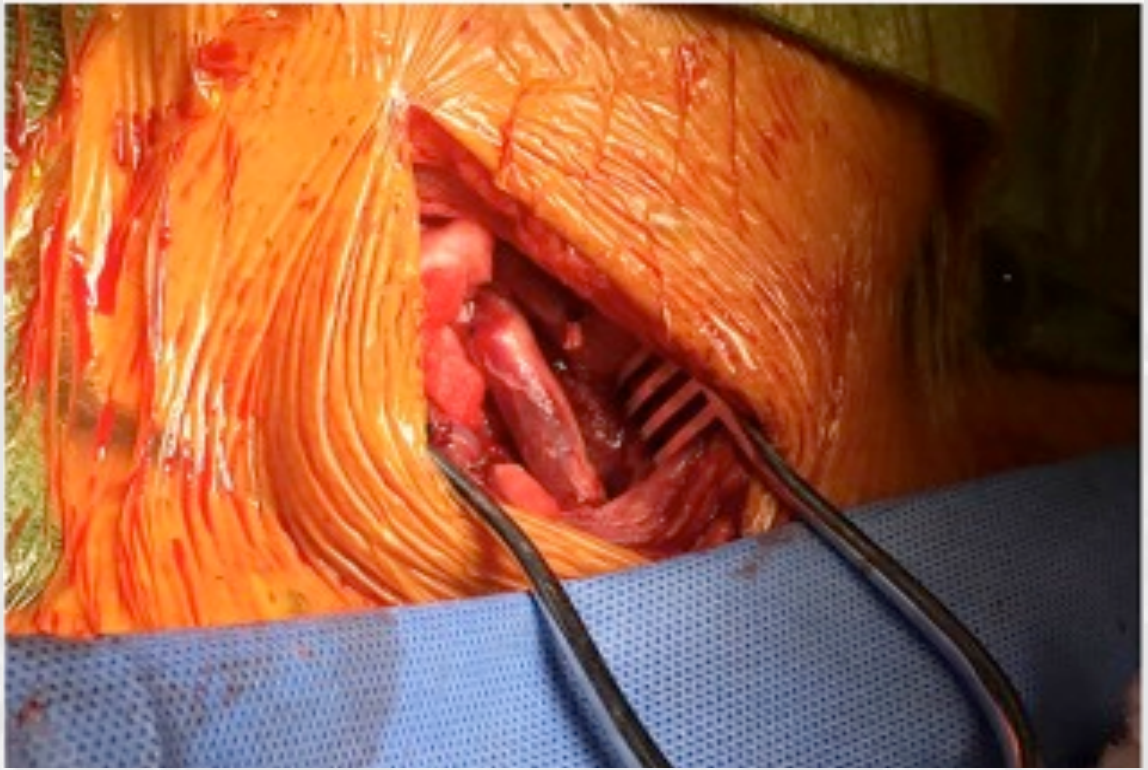


Figure 2. Intra-operative photography demonstrating dissection involving the right common carotid artery and stopping just short of the carotid bifurcation

Stenting of CCA and Innominate Arteries

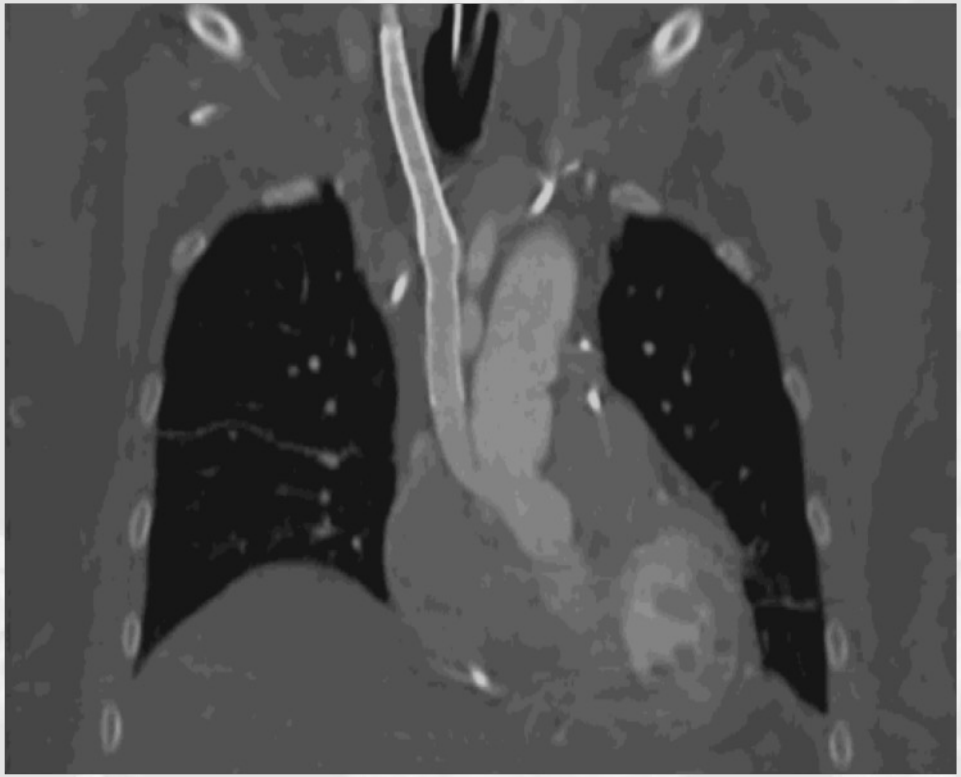
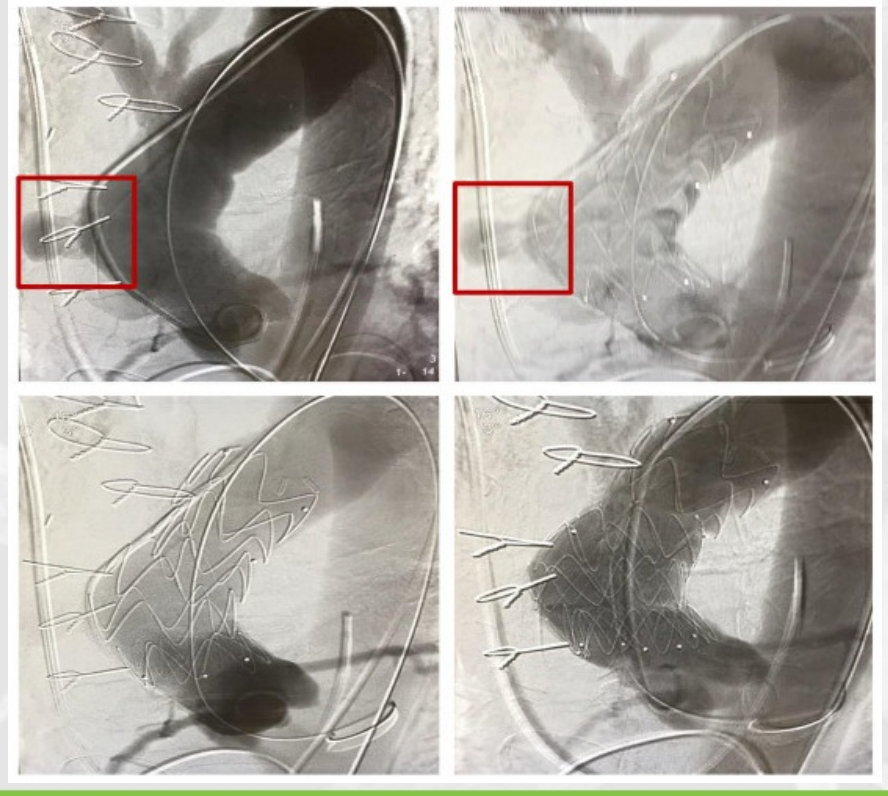


Figure 3. Post procedure computed tomography angiography demonstrating true lumen recapture of the innominate and common carotid arteries

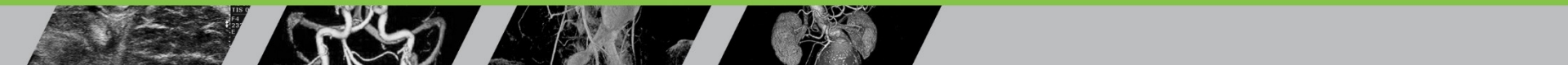
Endovascular Repair of Ascending Aorta – The Final Frontier

Endovascular Repair of Ascending Aortic Pseudoaneurysm



THE NEW REALITY

- In the early days of the US space program, astronauts competed against one another to be the first in space and had to be the best individual for the role.
- In 2022 the mission is collective success of the program and hence the team is most important. Each member of the team is vital to each other's success and the program success.
- "WE" rather than "I" has become the mantra.



Case:

65 year old patient female patient presents with Thoracic aneurysm extending up to the base of the left subclavian.

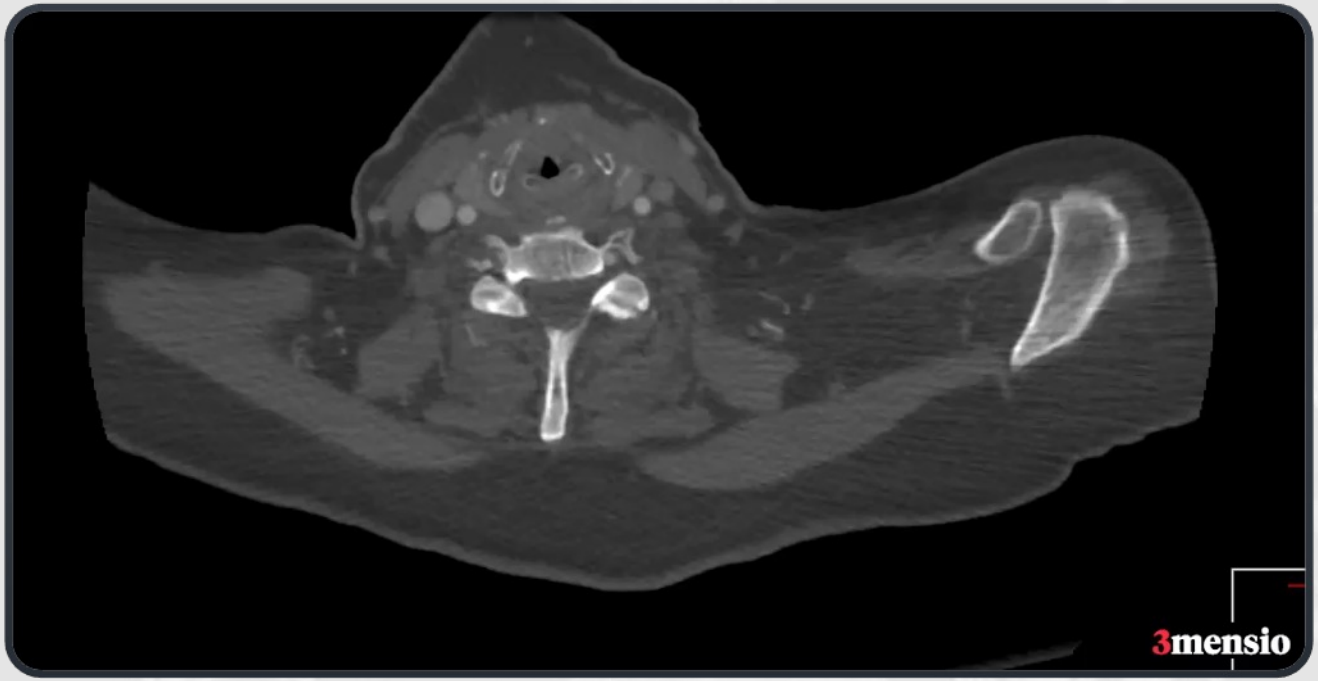
6.1 cm in diameter at its largest point

Significant thrombus burdern at level of LSA

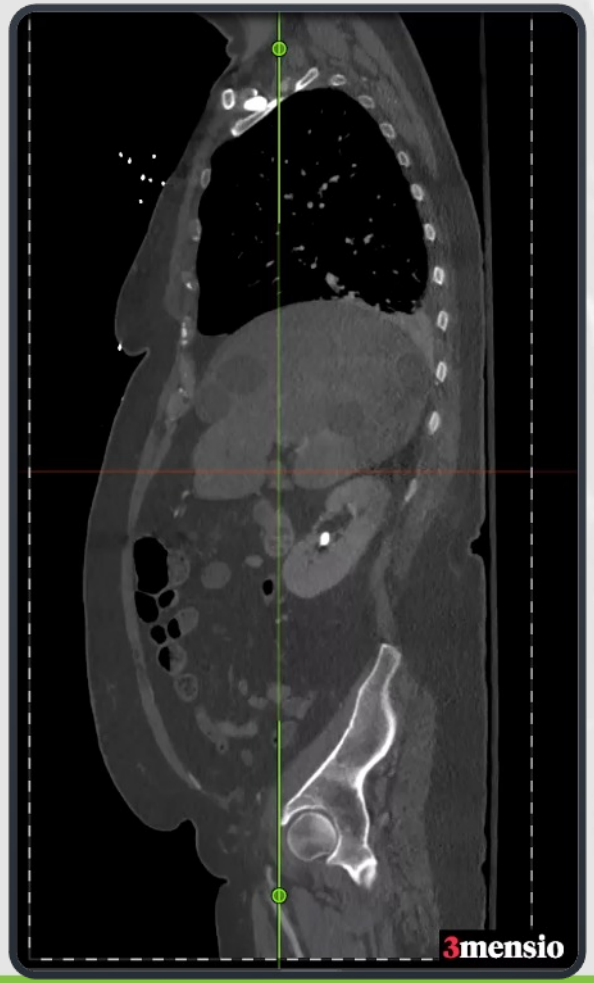
Not a good candidate for LSA – LCC bypass

Previously repaired ascending

Acute arch



Axial Run-through

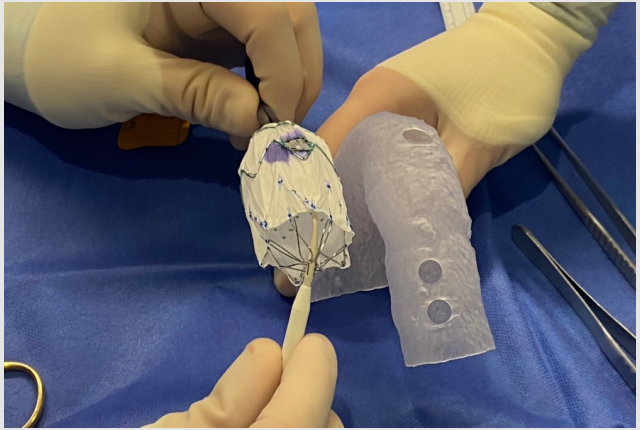


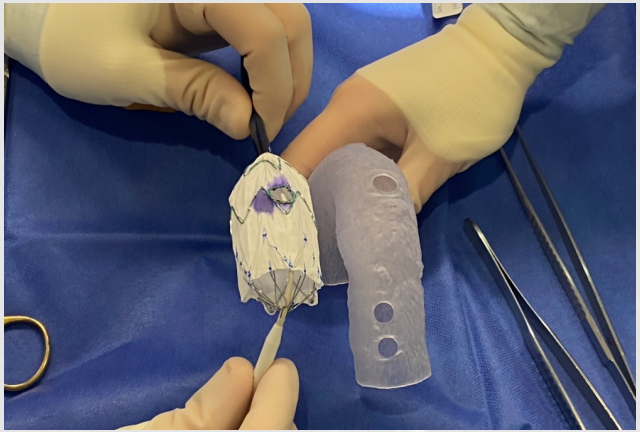
Sagittal Run-Though

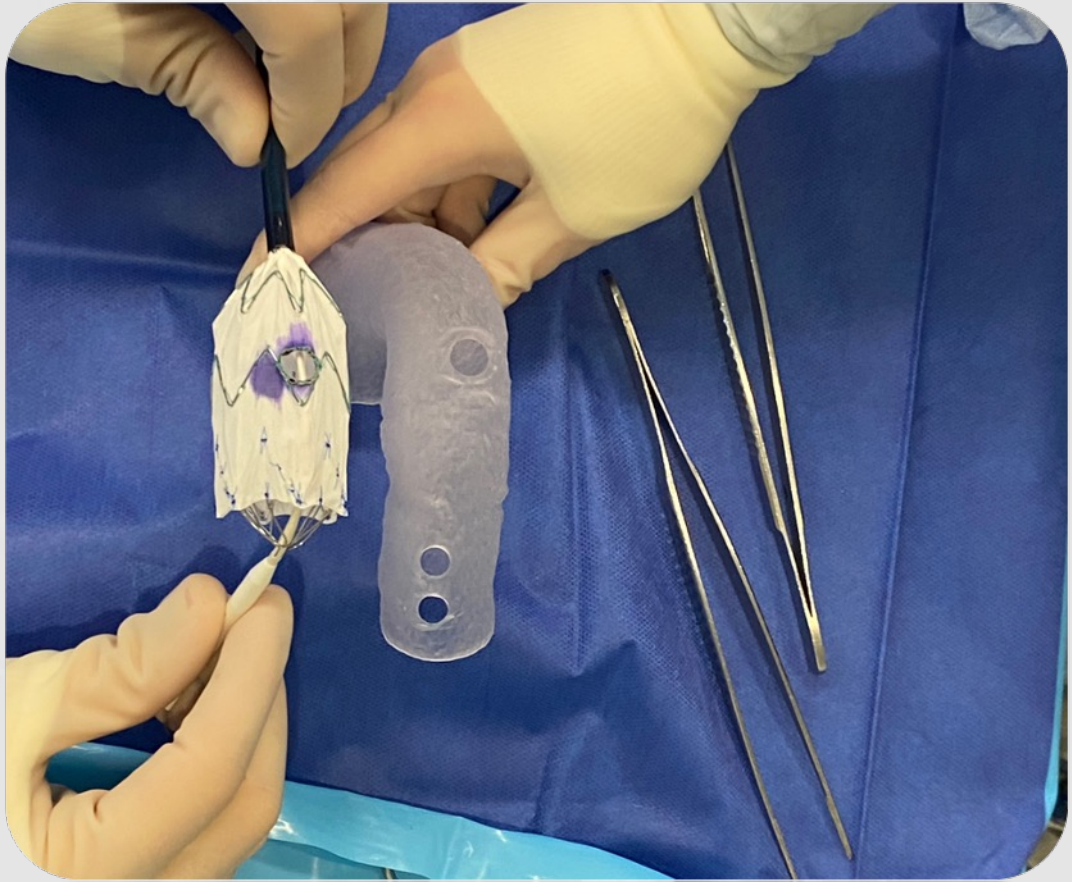
What would you do?

Single LSA Fen modification of Cook AlphaH thoracic device

With the use of both 3D imagining software, and a 3D printed model of the patient's exact anatomy, we were able to create a graft to match the patient's exacta anatomy.



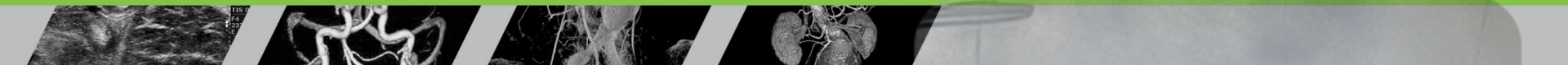




Deployment of device

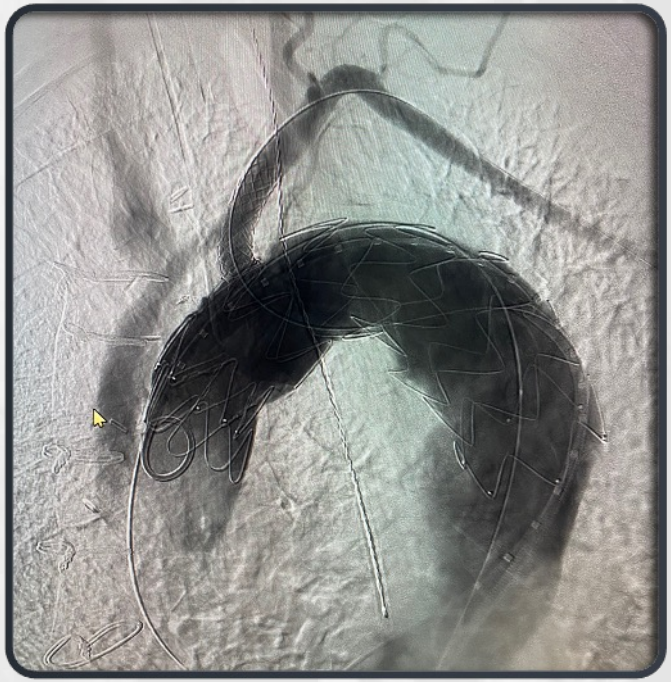
With the pre-curved inner cannula of the Alpha device, it will only deploy in one orientation.

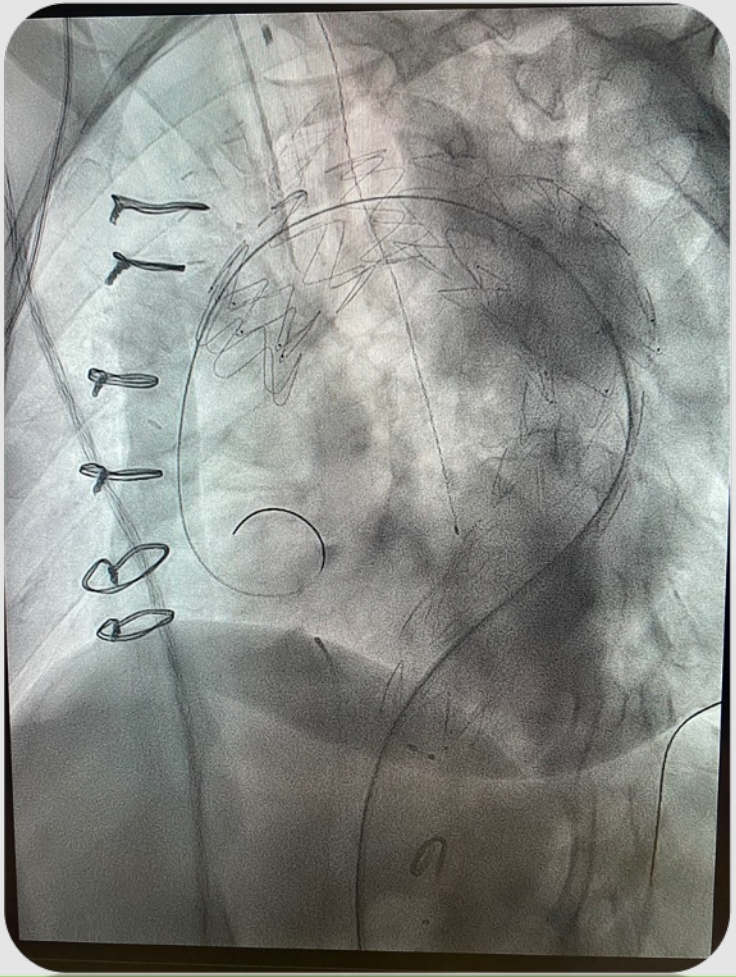
Planning and sizing on the front end is key to an accurate deployment



Cannulation of LSA fen and Placement of VBX Stent

Completion angio of Proximal component





FINAL RUN