

March 2026



The University of Texas at Austin
Dell Medical School

Emergent Hybrid Zone 0 Endovascular Arch Repair

For Ruptured Acute on Chronic Type B Dissection
in a Marfan Patient

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Ascension
Seton



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DISCLOSURES

No financial disclosures
Will share unpublished data

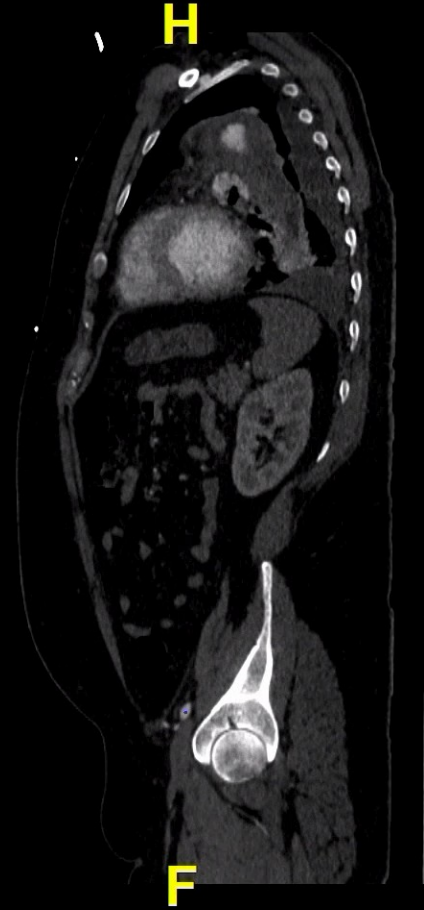
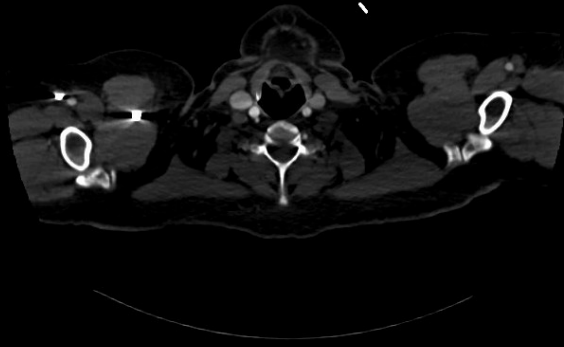
MARCH 2026

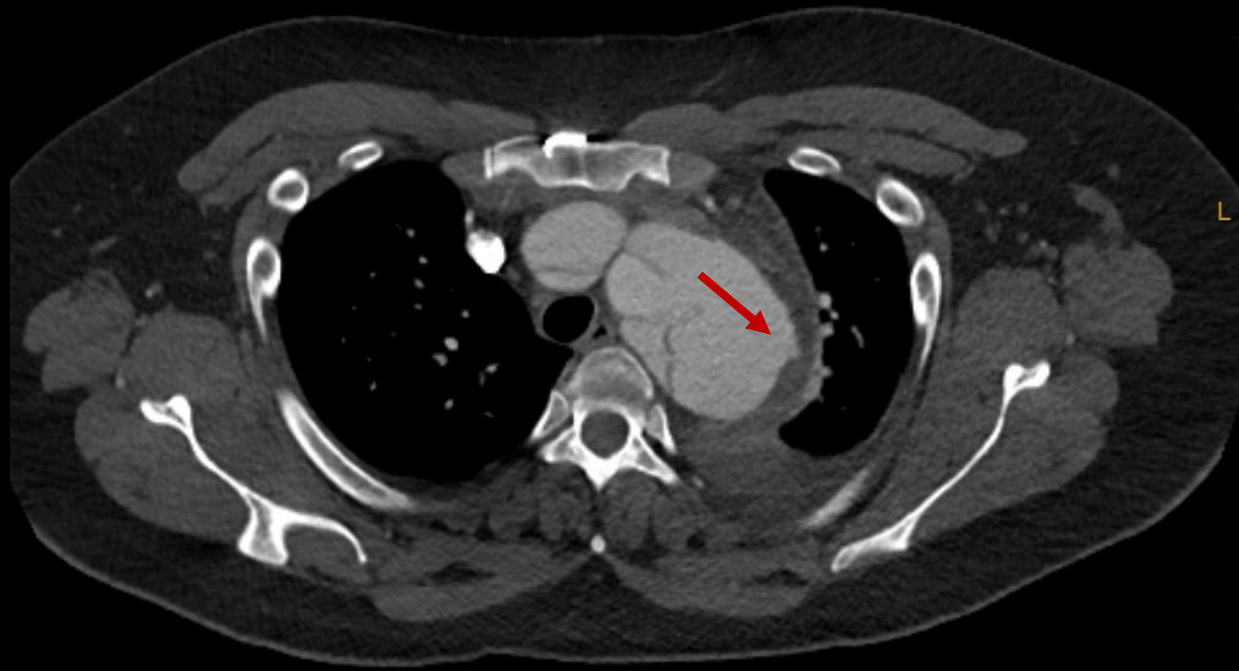
Presentation

25M transferring with chest pain and a 6.5cm Extent II TAAA with acute on chronic type B aortic dissection

PMH: ATAAD (5 years prior), Marfan syndrome, BMI 37

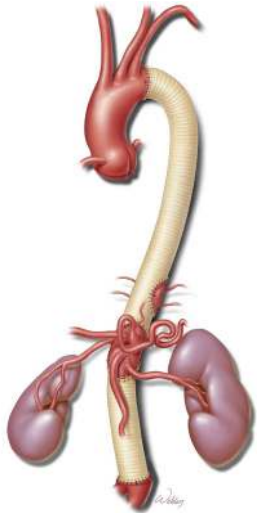
PSH: Mechanical root, Ascending aorta replacement



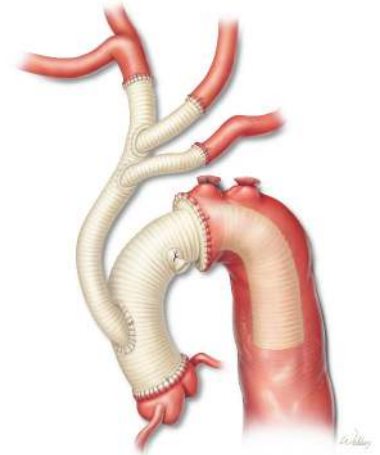


Emergent Surgical Considerations

Open Extent II Thoracoabdominal Repair



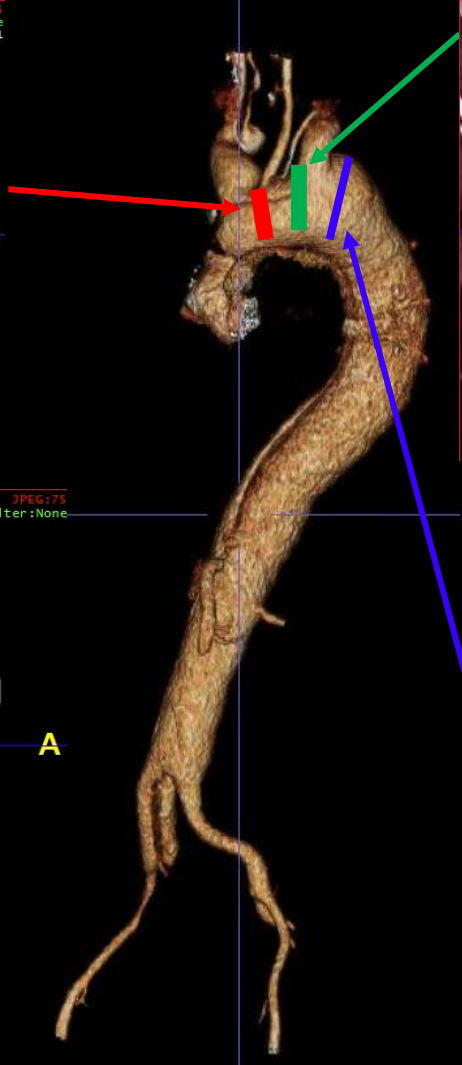
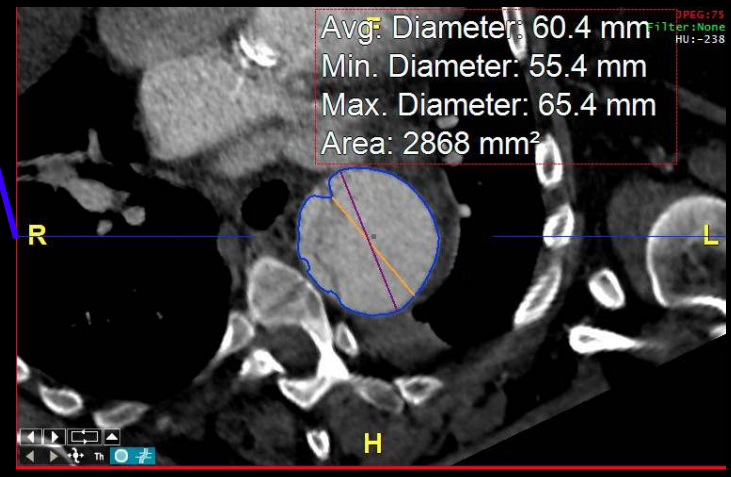
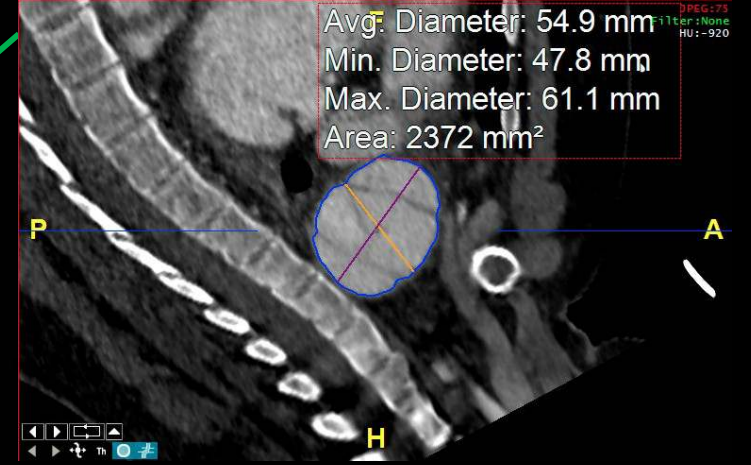
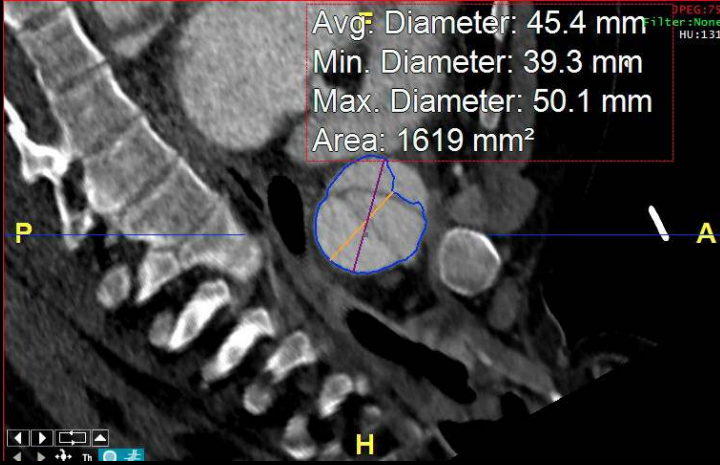
Total arch replacement with FET

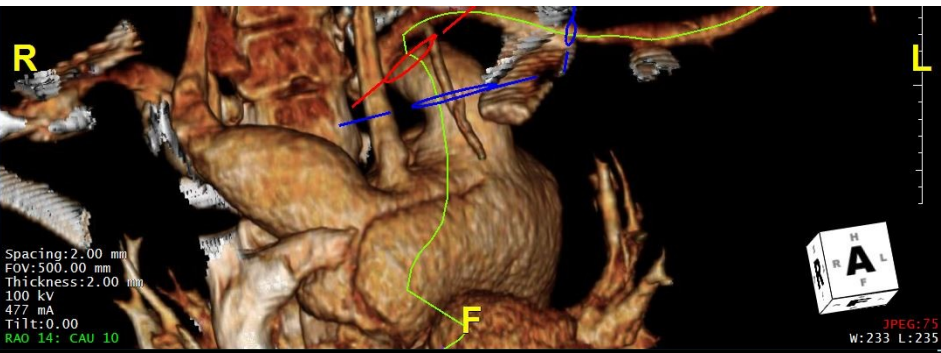
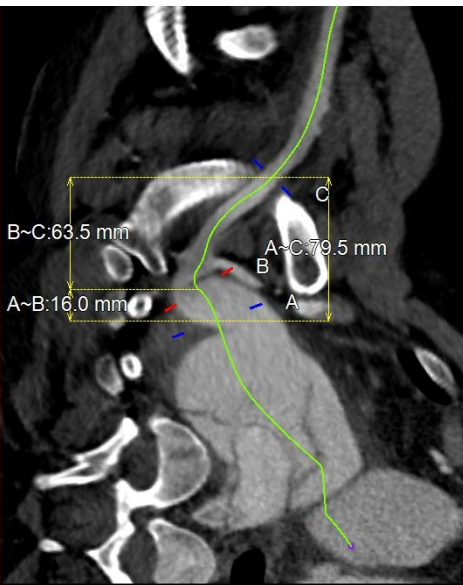
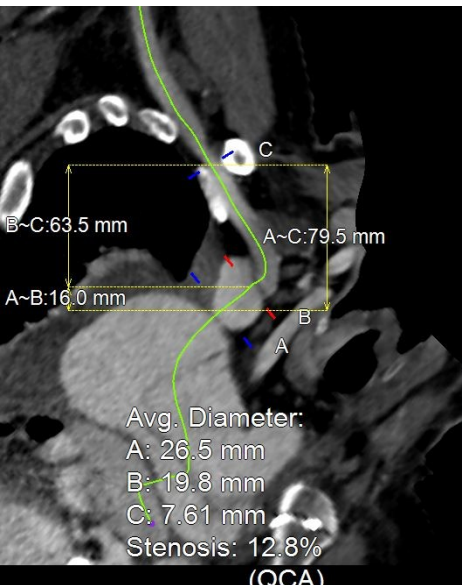


Endovascular Zone 0/1 salvage with debranching and TEVAR and false lumen occlusion techniques

Coselli JS, LeMaire SA, Weldon SA. Extent II repair of thoracoabdominal aortic aneurysm secondary to chronic dissection. *Ann Cardiothorac Surg.* 2012 Sep;1(3):394-7. doi: 10.3978/j.issn.2225-319X.2012.08.03. PMID: 23977525; PMCID: PMC3741775.

Coselli JS, Krause HM, Green SY, Zhang Q, Amarasekara HS, Price MD, Preventza O, LeMaire SA. A 23-year experience with the reversed elephant trunk technique for staged repair of extensive thoracic aortic aneurysm. *J Thorac Cardiovasc Surg.* 2022 Apr;163(4):1252-1264. doi: 10.1016/j.jtcvs.2020.09.148. Epub 2020 Nov 26. PMID: 33419554.





Measurement Summary

Zone 0 Asc: 32mm

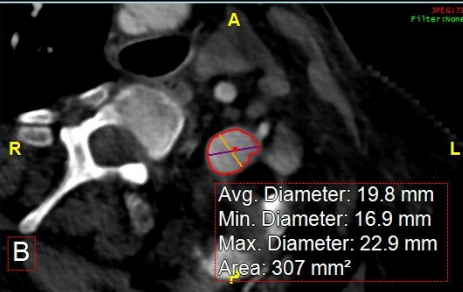
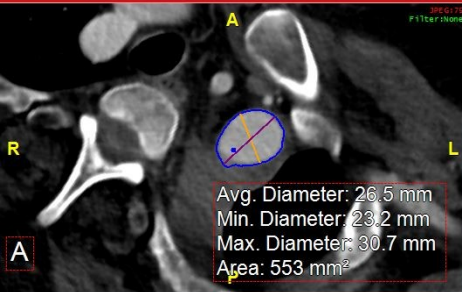
Zone 1: 46mm

Zone 2: 55mm

Distal Innominate: 30mm

Distal LSCA: 20mm

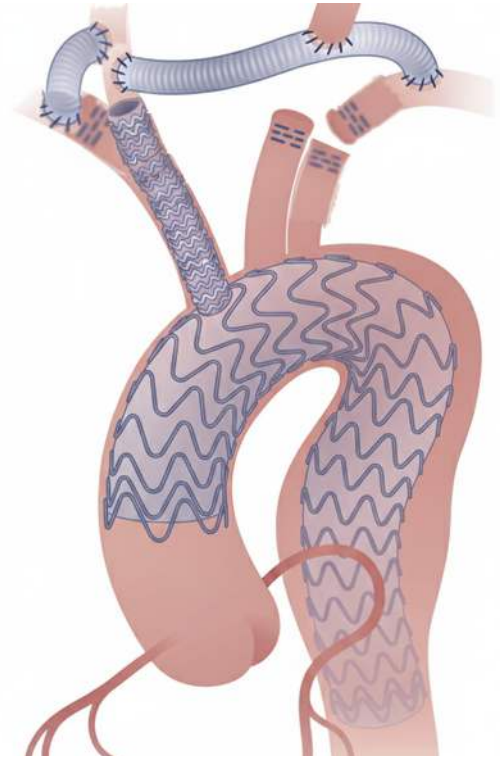
CA: 47mm



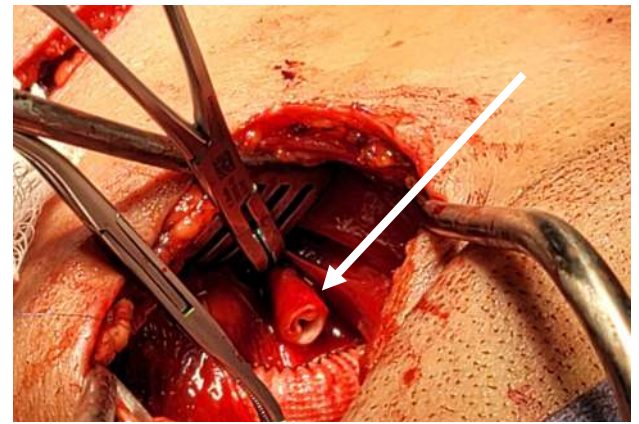
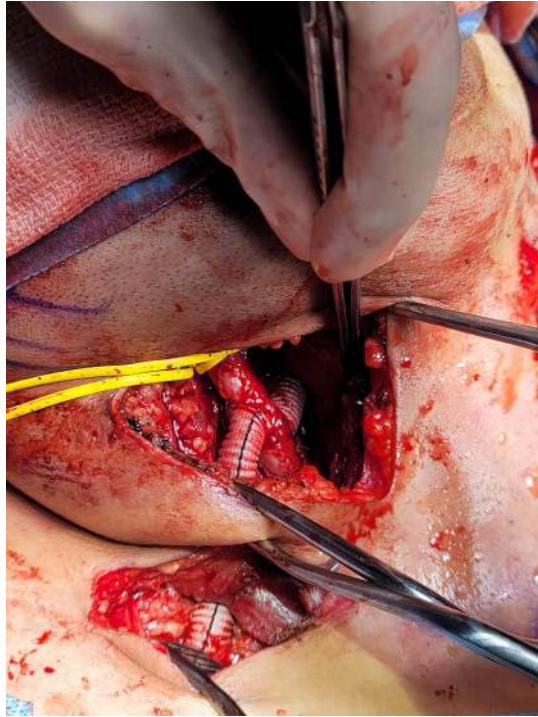
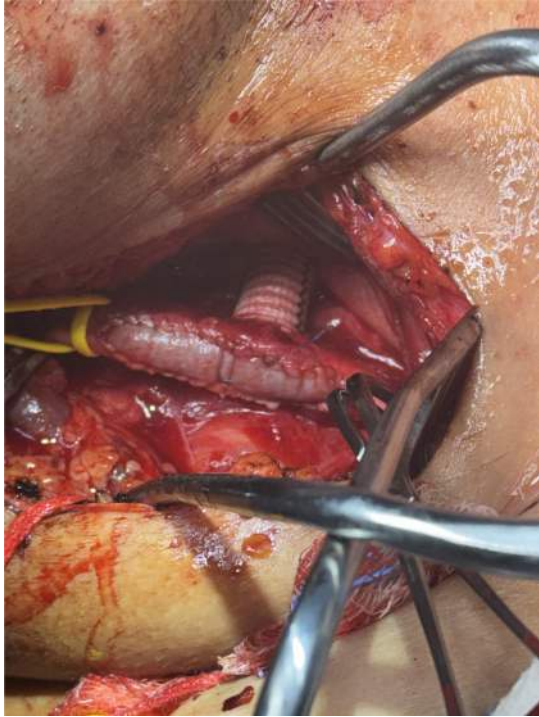
Debranching

RCC as single inflow

- RCCA septectomy with RSCA bypass
- RCCA to LSCA bypass
- LCCA septectomy with translocation to graft
- Proximal LSCA ligation

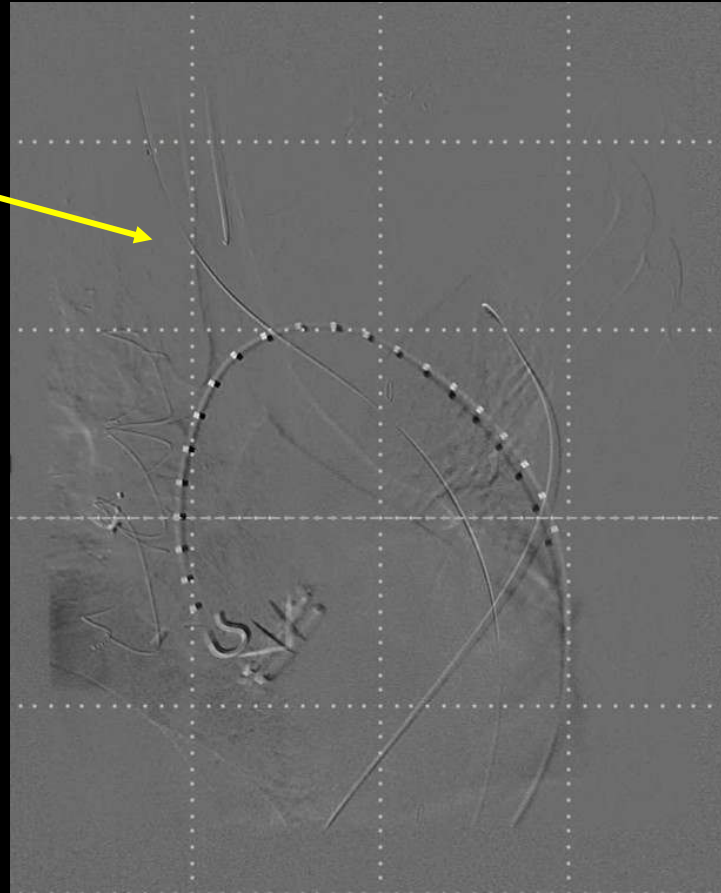


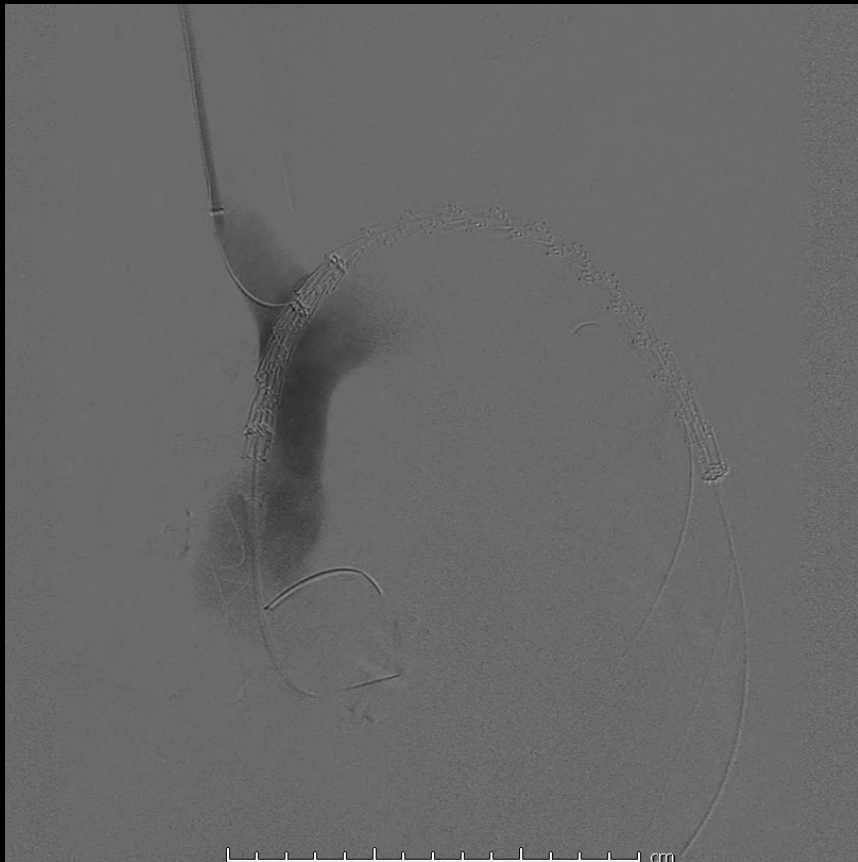
Cervical Debranching



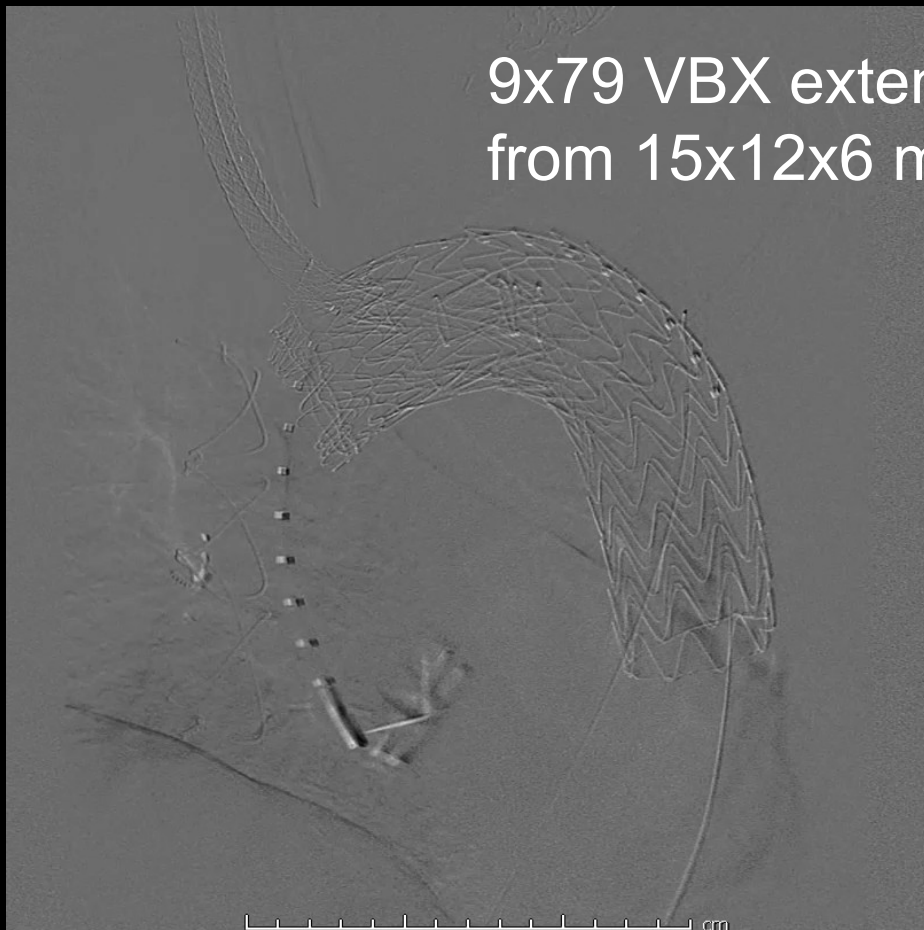


RCCA to
R CFA
access

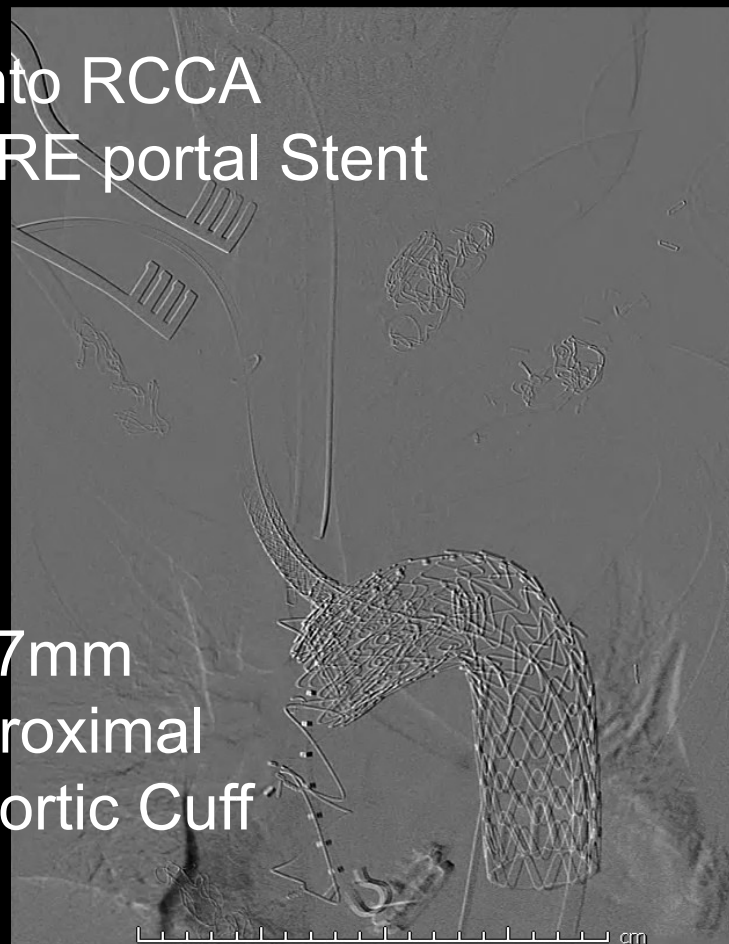


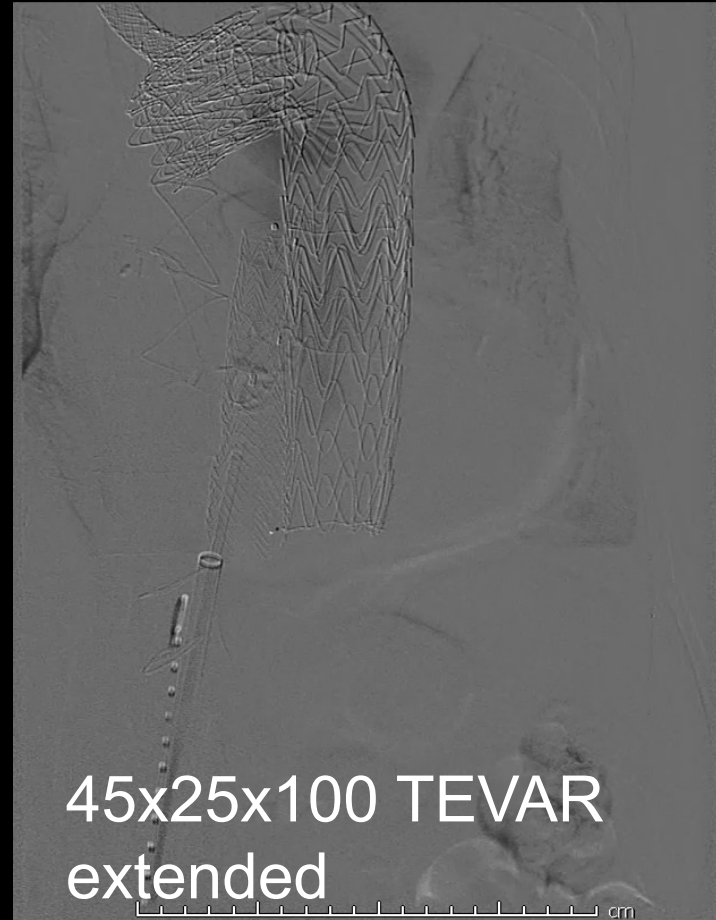
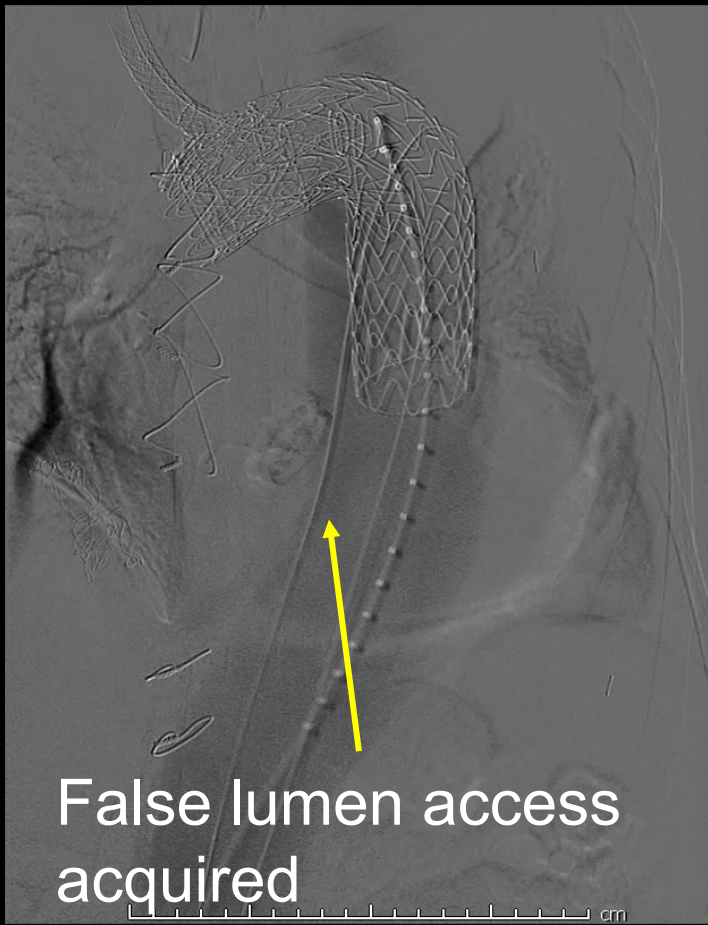


9x79 VBX extension into RCCA
from 15x12x6 mm GORE portal Stent



37mm
Proximal
Aortic Cuff







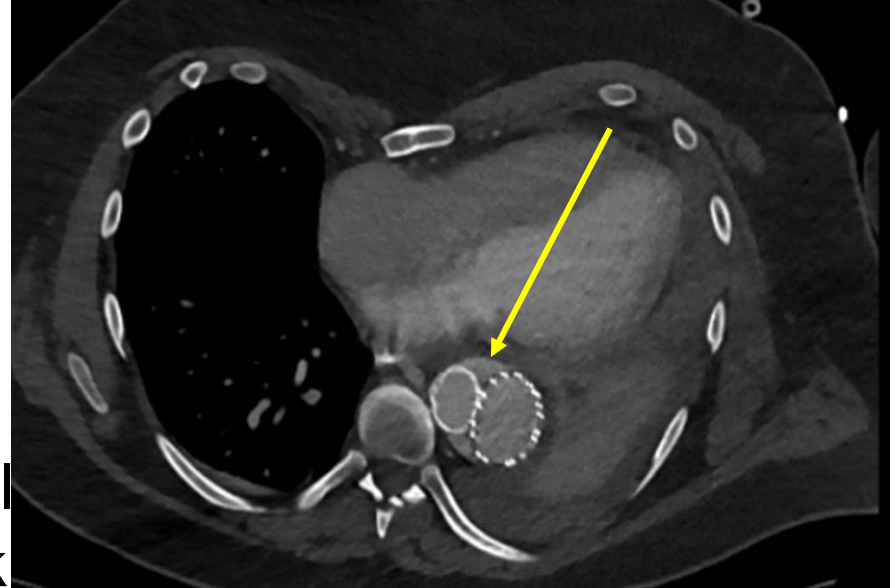
Modified CandyPlug with
GORE 27mm iliac limb and
18mm Amplatzer plug

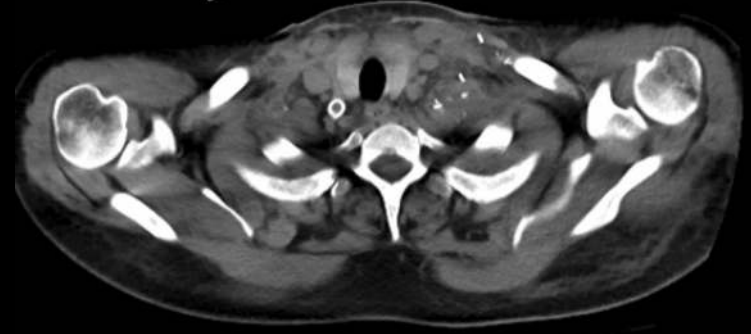
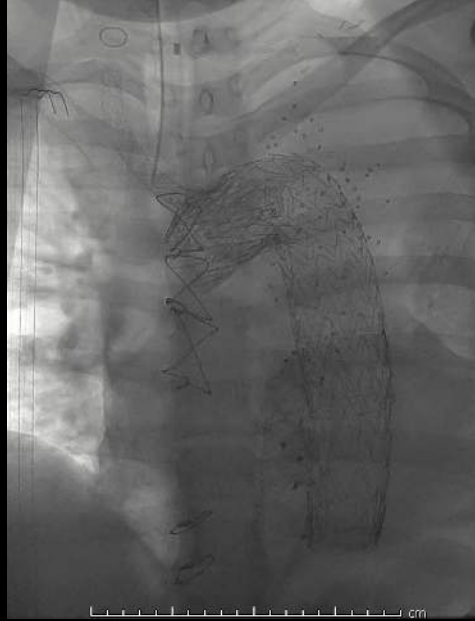
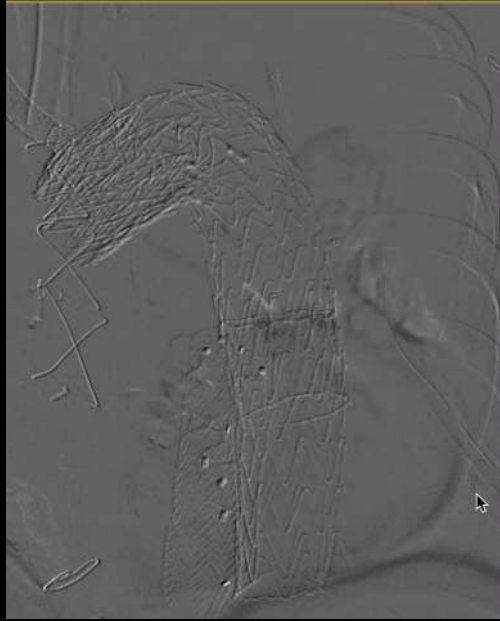
Still with 1B endoleak in
DTA, no antegrade filling of
zone 3 aneurysm, elected
to reverse with protamine
and watch for false lumen
thrombosis



Post Op

- Tolerated procedure, extubated neuro intact
- Hb and Cr stable
- POD 4 CT demonstrated stable aneurysm with proximal seal and persistent gutter leak and IB endoleak





Postoperative Course

Remaining Post Operative course uneventful, chest pain resolved

Anticoagulation restarted POD 7 for AVR

Discharged POD 13

Patient seen in clinic 1 month f/u, doing well - CTA demonstrated majority of zone 3 / 4 false lumen thrombosis with minimal residual gutter leak distal zone 4.

Plan for staged open extent II TAAA repair incorporating proximal TEVAR after further recovery



THANK YOU



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