Acute Type B Aortic Dissection with Malperfusion in Genetic Aortopathy: The Role of Zenith® Dissection Endovascular Bare Metal Stents

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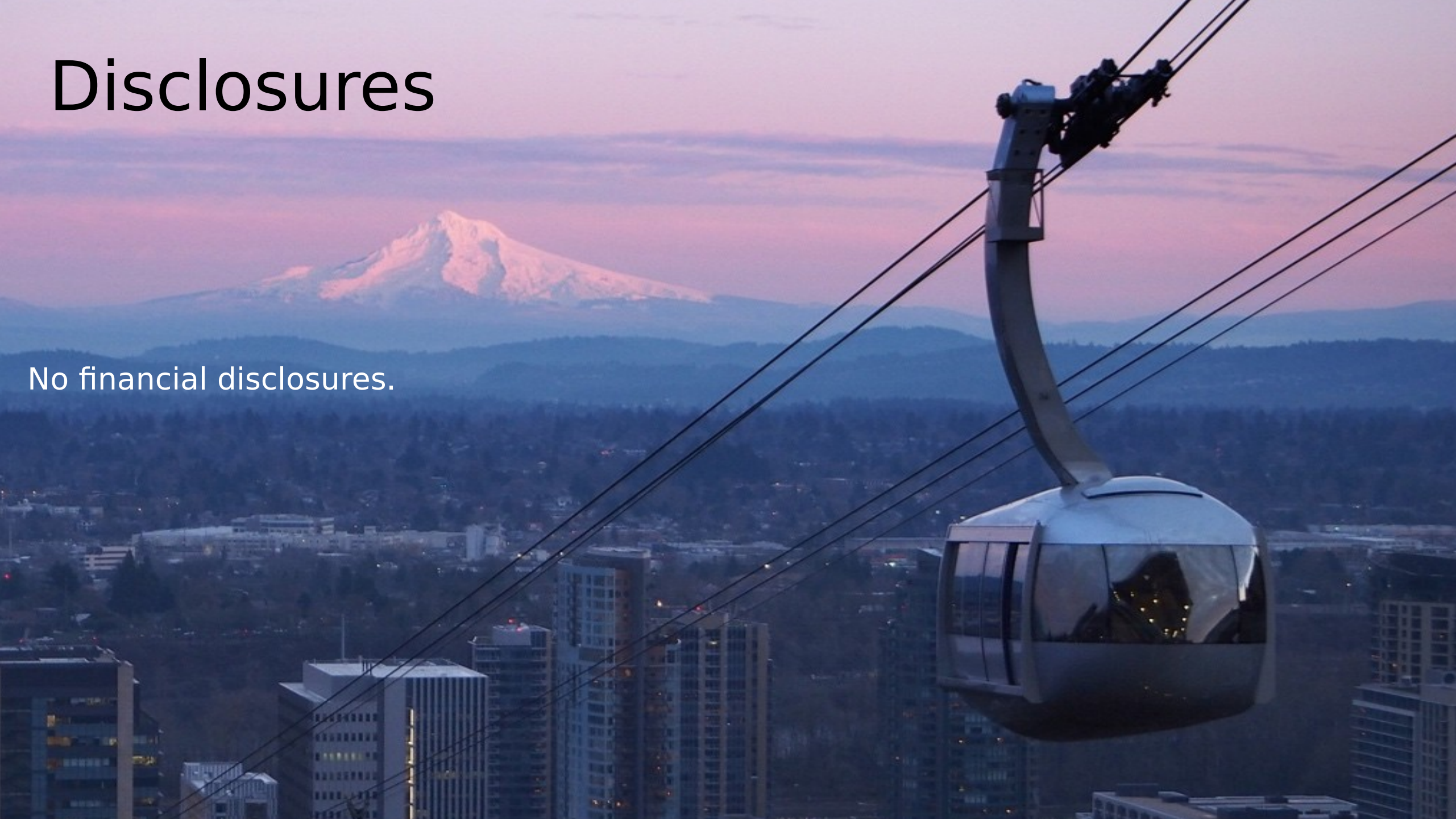
Disclosures



No financial disclosures.

Clinical Problem

- Complicated TBAD in genetic aortopathy presents a major challenge
- Fragile aortic tissue and diffuse dissection patterns
- Frequently **no durable proximal landing zone**
- TEVAR associated with risk of retrograde type A dissection (RTAD)
- **Emergent open repair often not immediately feasible**

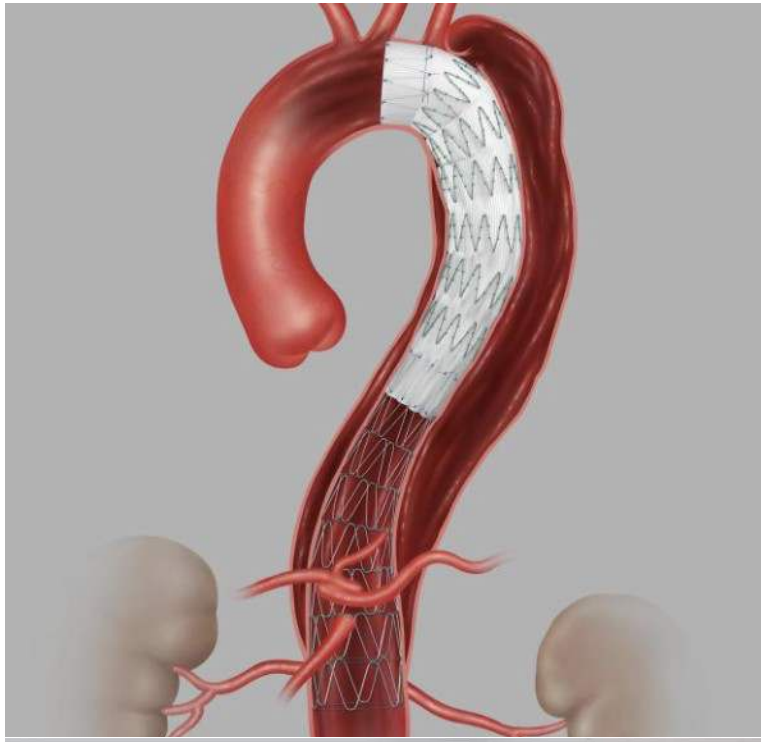
Study Question & Design

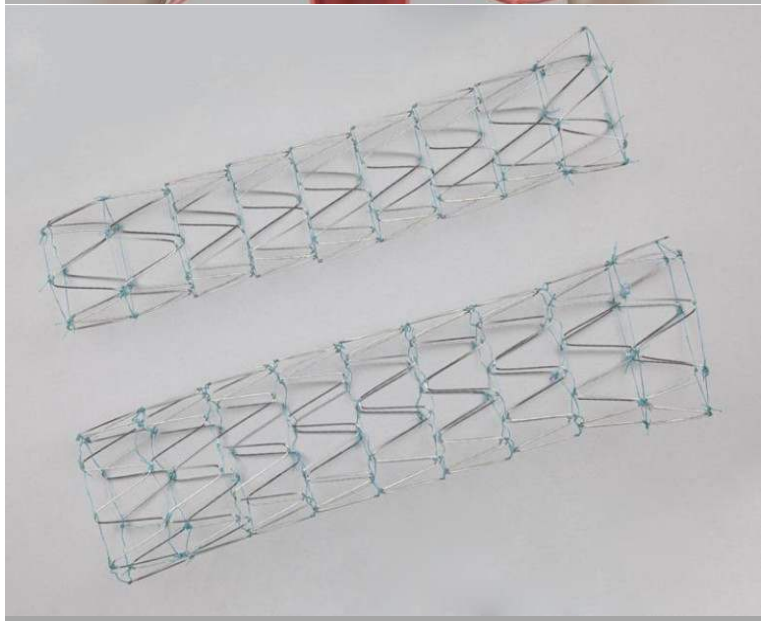
Objective:

- Can dissection bare metal stents (BMS) be used as a stand-alone temporizing strategy to stabilize acute TBAD with visceral or extremity malperfusion in patients who are not candidates for immediate definitive repair?

Study Design (Case Series):

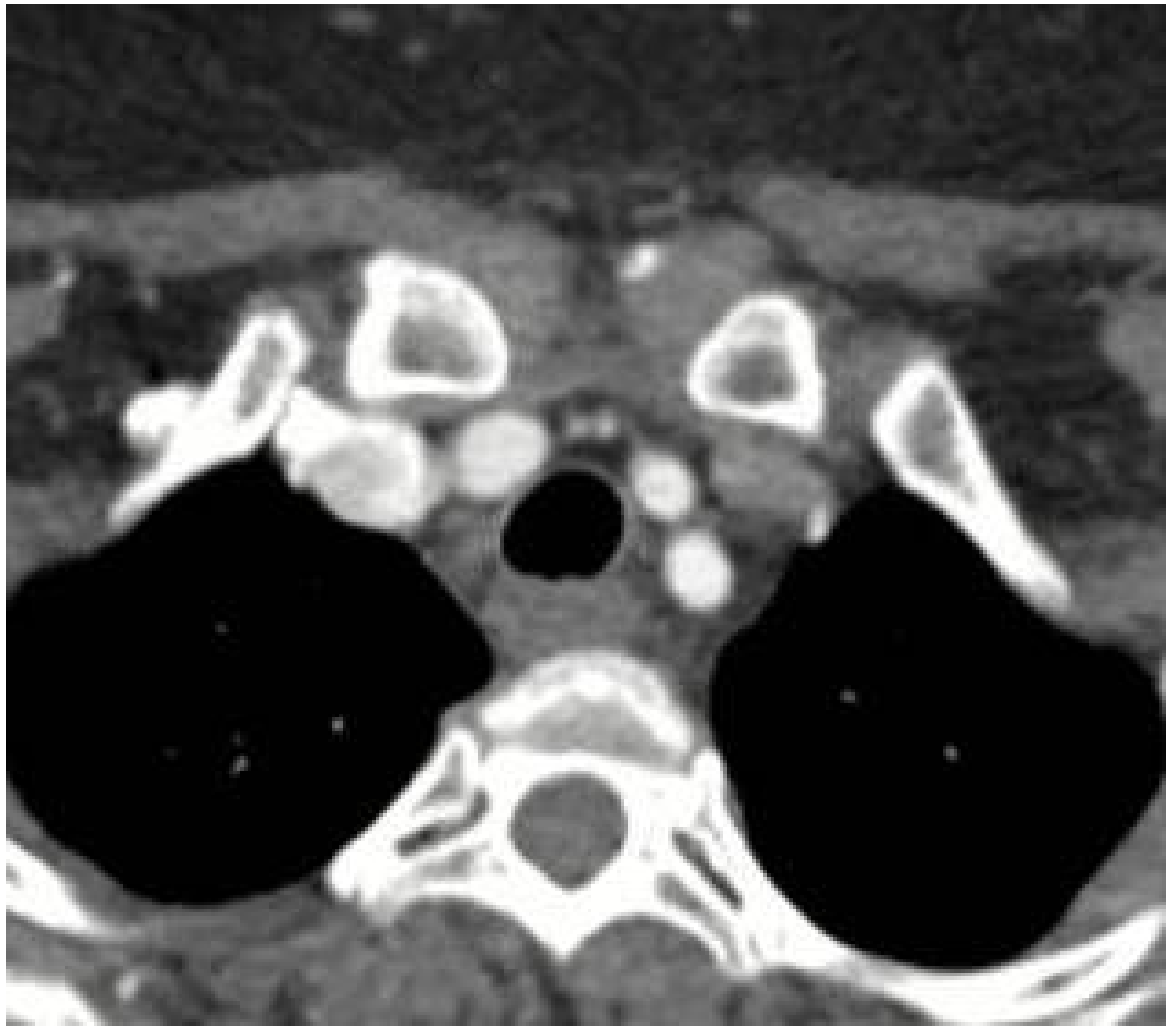
- Three patients with acute TBAD and malperfusion
- Known or suspected inherited aortic disease
- Treated with COOK Zenith TX2 dissection BMS





Case 1 (34F)

- Clinical Scenario:
  - Acute TBAD (zone 3-11) with mesenteric and RLE ischemia
  - Severe HFrEF (EF 30%)
- Anatomic Challenge:
  - Dissected arch with no durable proximal landing zone
  - High risk for RTAD
- Intervention:
  - Zenith dissection BMS deployment into zone 0-9
  - Immediate true lumen expansion and perfusion restoration



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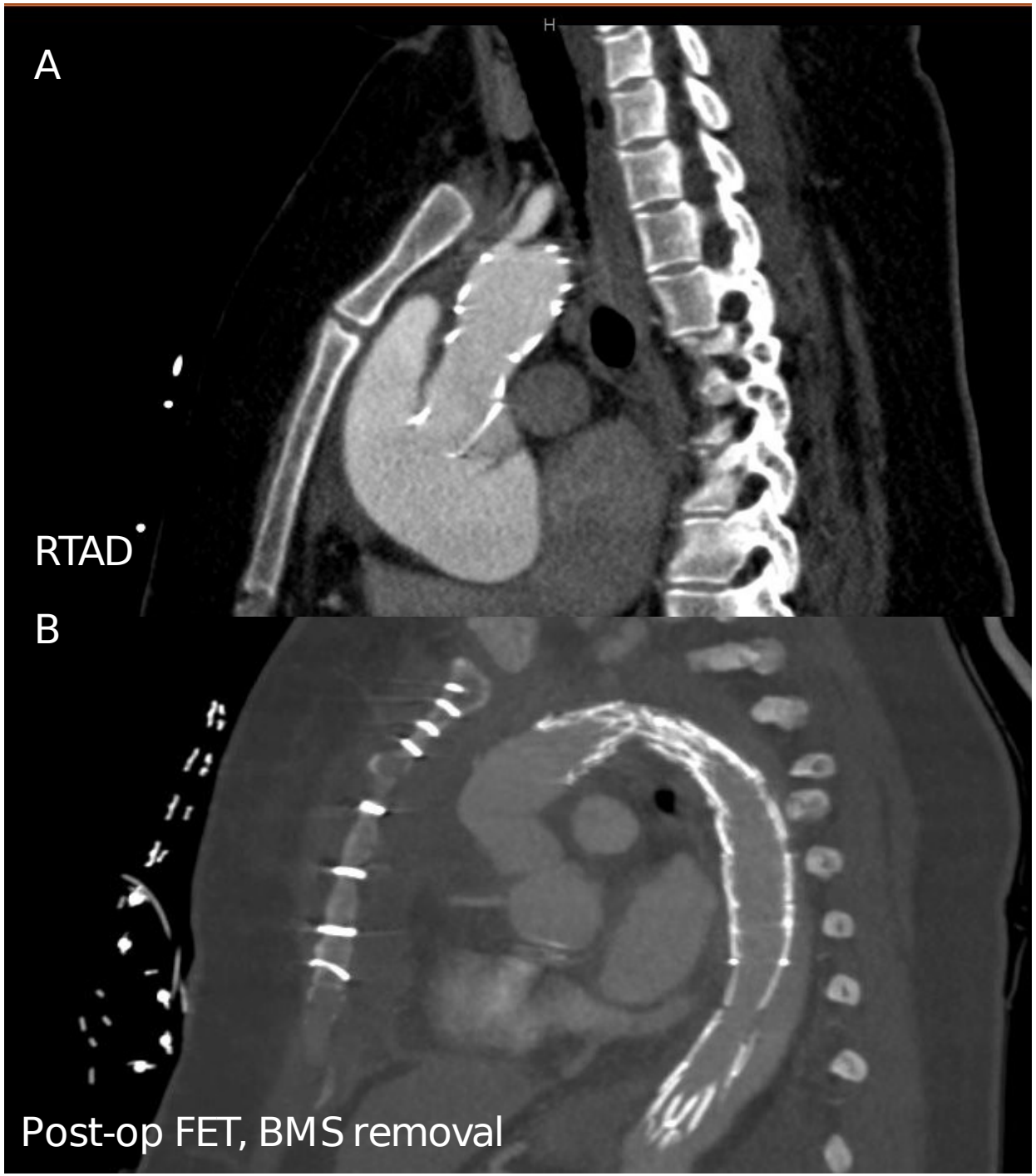
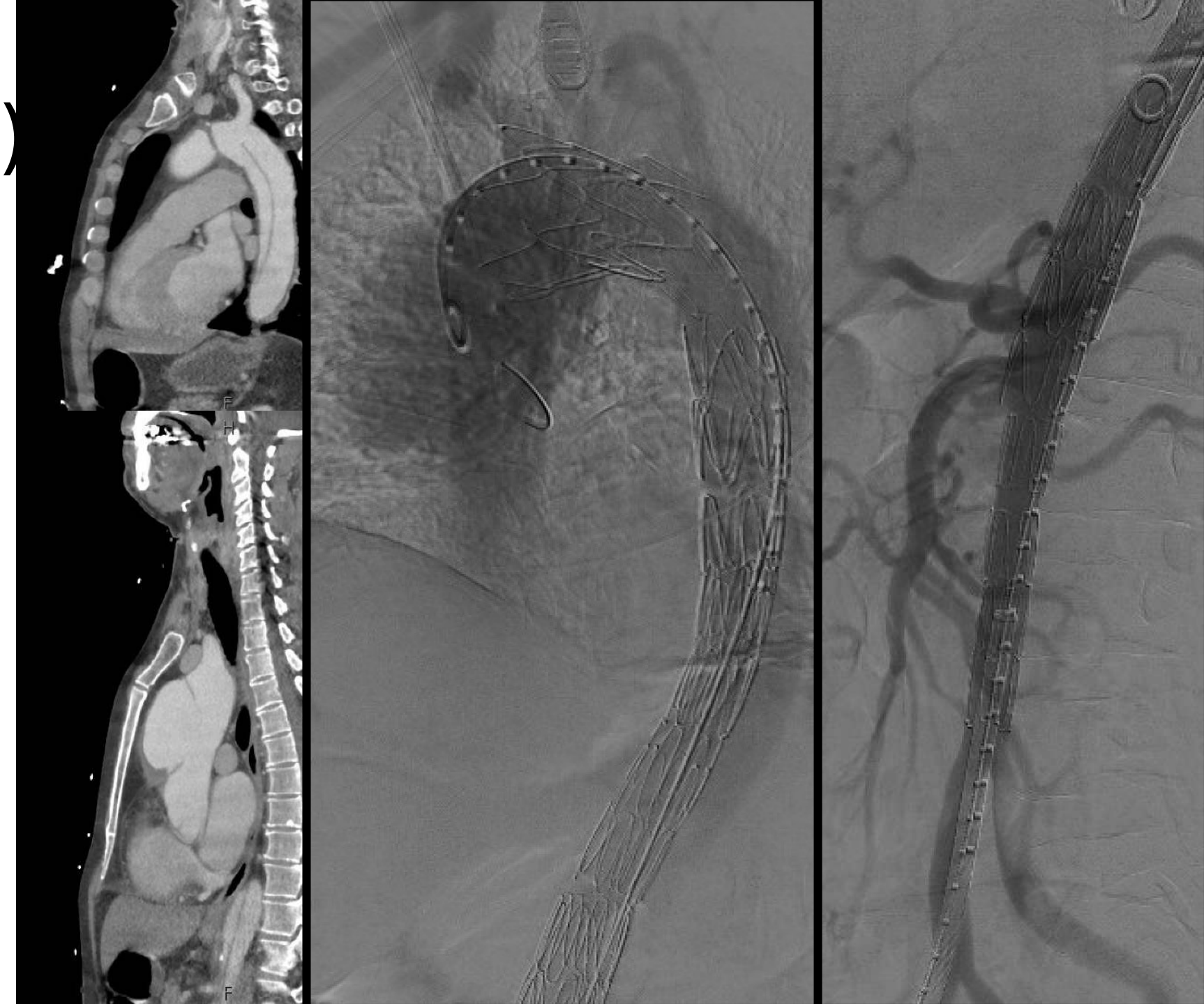
Case 1: Clinical Cou

- Interval Course:
  - Limited RTAD during optimization period 10 months post-BMS placement
  - Managed expectantly
- Definitive Repair:
  - Total arch replacement with frozen elephant trunk ~15 months post-BMS
  - Prior BMS safely explanted without tissue injury

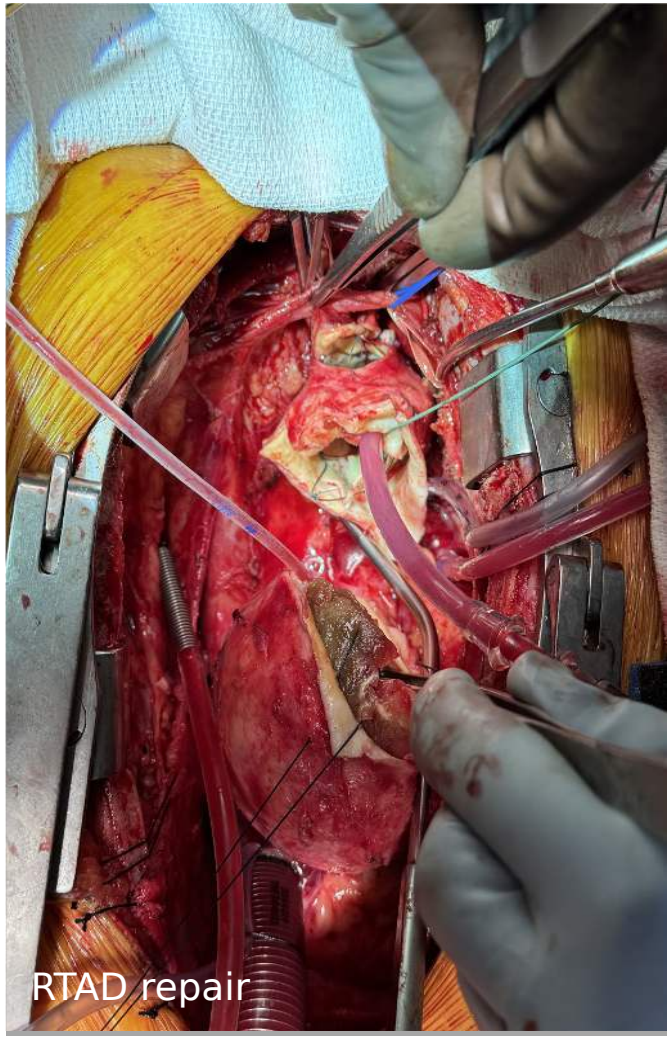


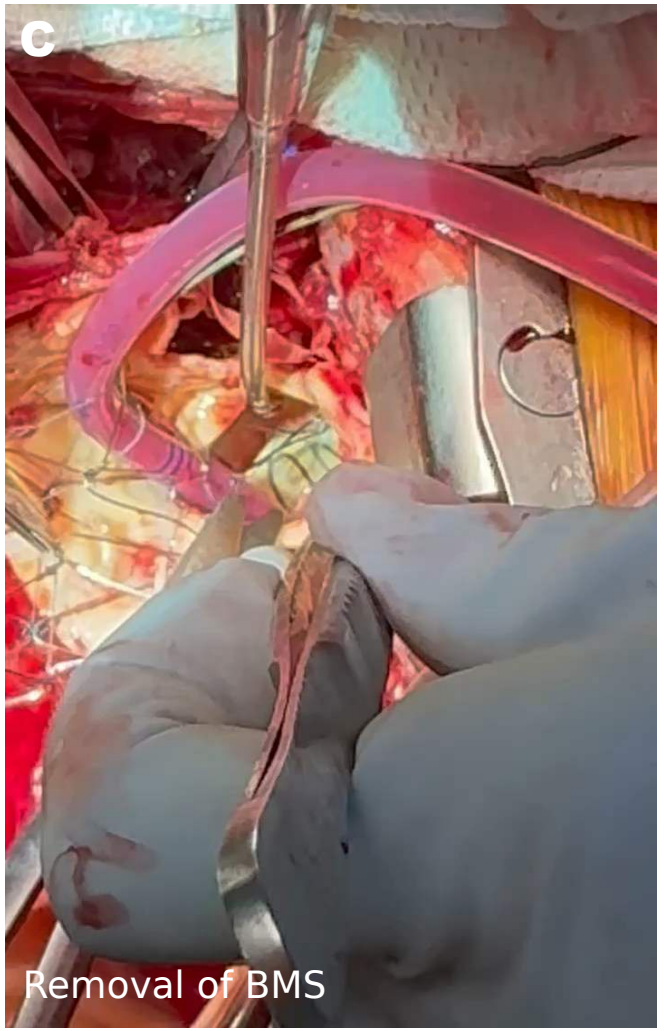
Case 2 (43M)

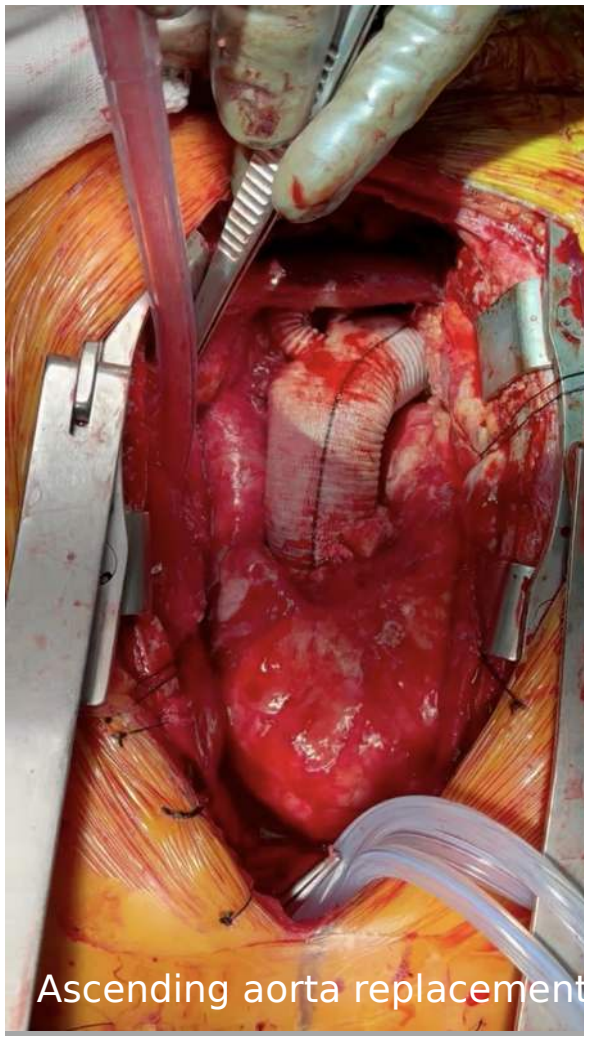
- Clinical Scenario
  - New acute TBAD (zone 3-10) with mesenteric malperfusion
  - Known 77mm ascending aortic aneurysm and unrepaired Type A aortic dissection
- Anatomic Challenge :
  - No suitable proximal landing zone
  - Not a candidate for emergent sternotomy or arch repair
- Intervention:
  - COOK Zenith dissection BMS zone 1-9

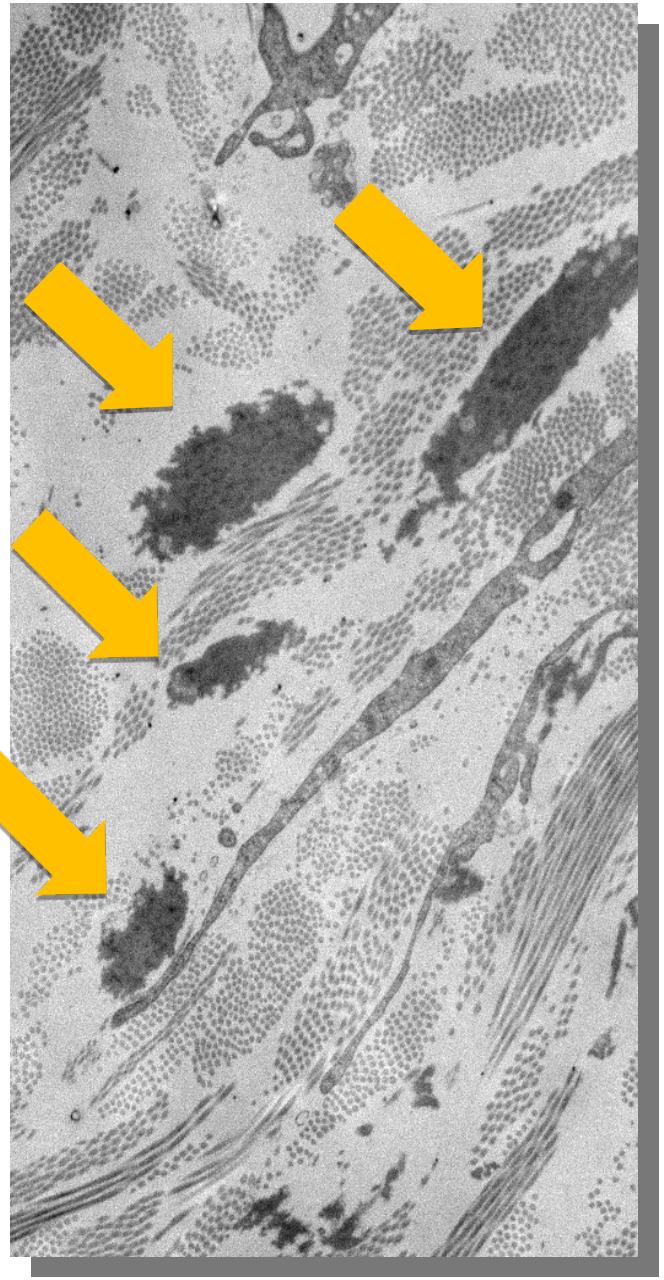


BMS Served as an Effective Bridge to Open Reconstruction









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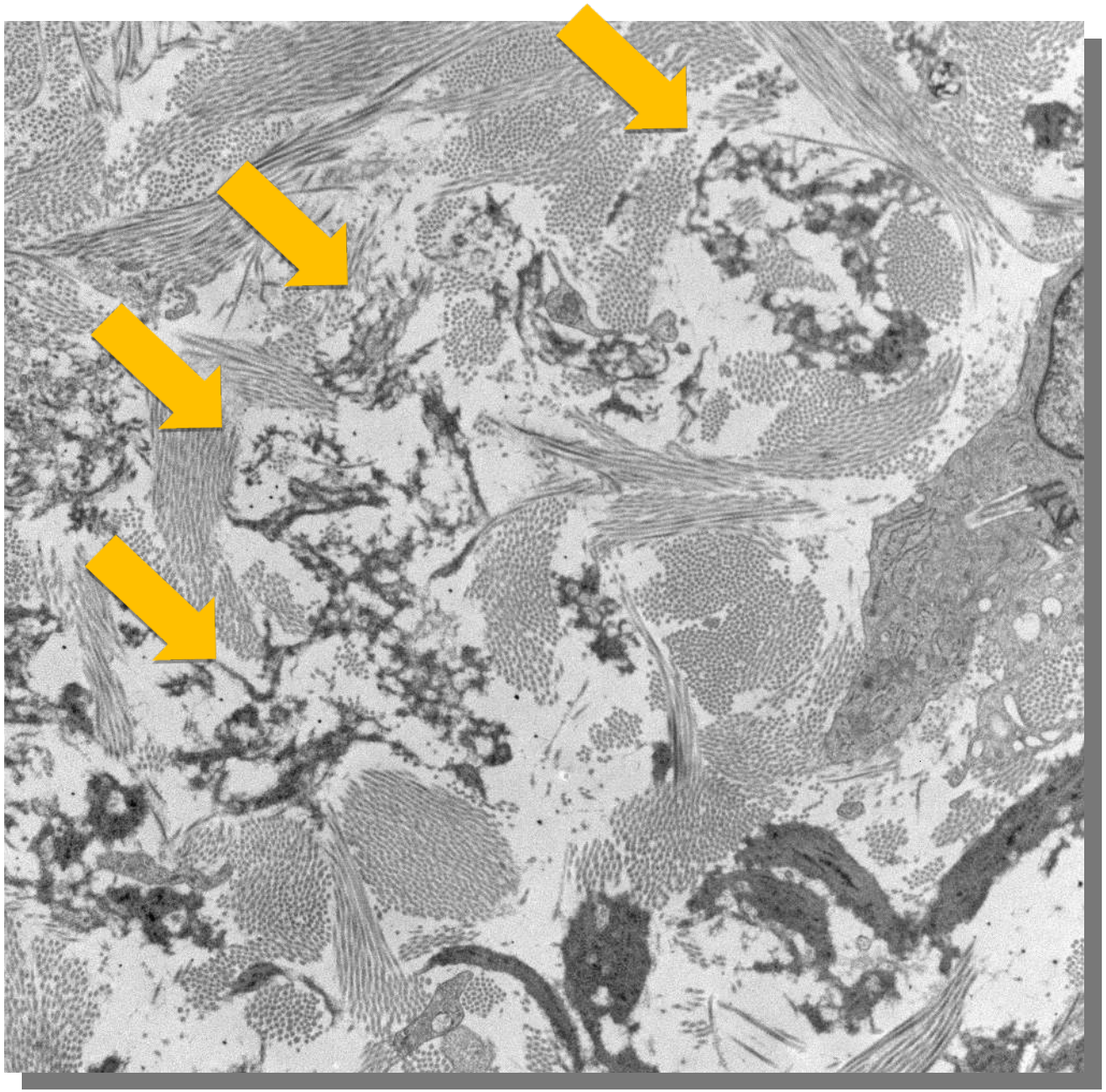
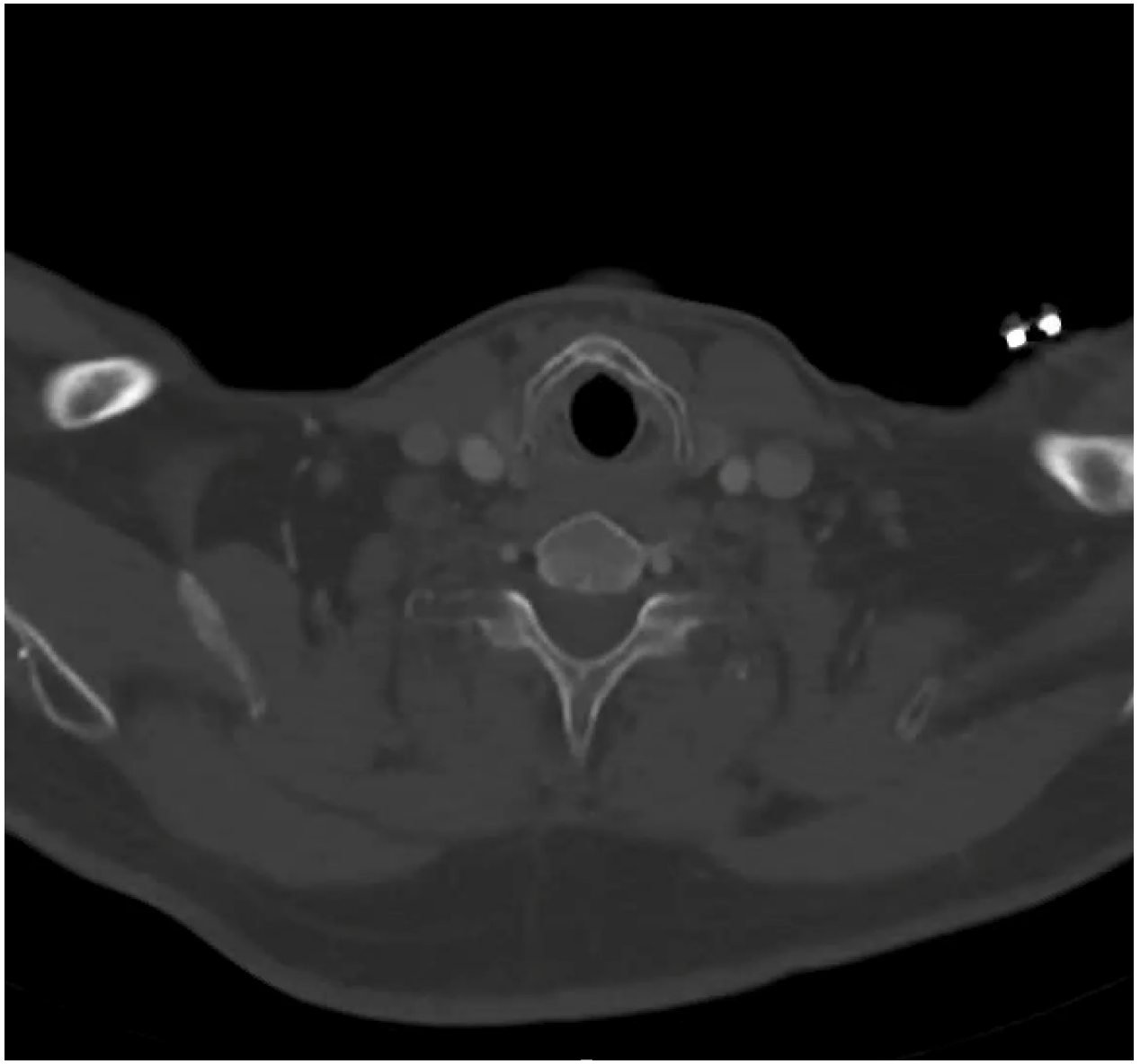


Patient — Severe Elastinopathy

Case 3 (60M)

- Clinical Scenario:
  - Loeys-Dietz syndrome type III (*SMAD3* c.859C>T, p.Arg287Trp)
  - Prior Type A dissection with Bentall procedure (age 40)
  - Awaiting total arch replacement
- Acute Event:
  - New TBAD (zones 4-10)
  - Mesenteric and LLE malperfusion
- Intervention:
  - COOK Zenith dissection BMS (zone 5-9)
  - R renal artery 7x22mm COOK iCAST
  - Open extended right hemicolectomy

Pathology: T3N1M1 invasive adenocarcinoma



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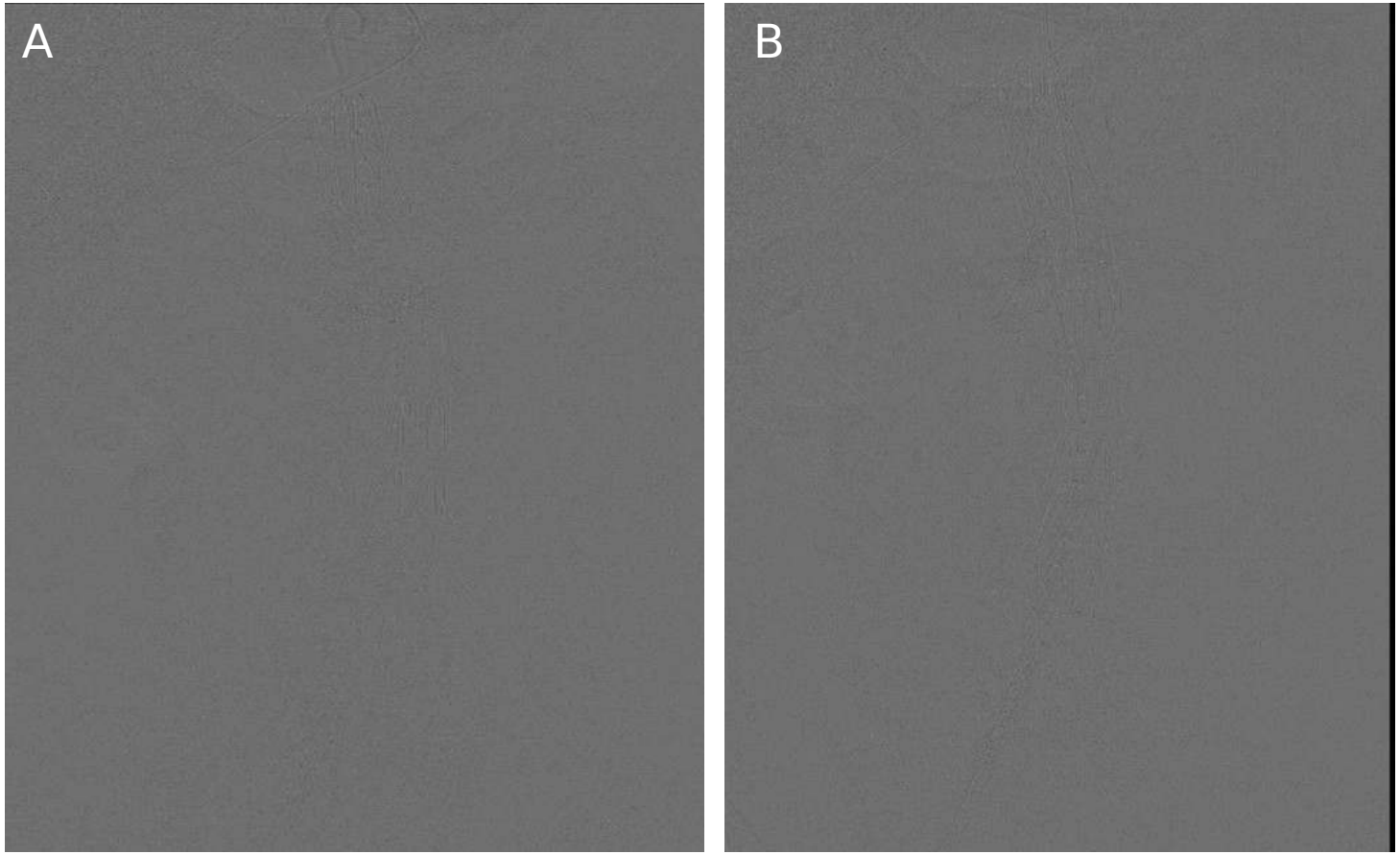

Conclusion

- **Low-radial-force dissection BMS** can serve as an effective temporizing strategy in acute TBAD with malperfusion in patients with genetic aortopathy
- Despite lower radial force, risk of RTAD remains
- Restores perfusion while **preserving future surgical options**
- **Bridge to definitive therapy**

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