

Zenith Alpha TAA: why Alpha TAA is my preferred thoracic endograft

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Key Technical Goals in TEVAR

- Deliver the graft safely at the intended landing zone
- Exact deployment at the foreseen position
- Achieve seal
- Retrieve Delivery System easily and safely



Zenith Thoracic – Timeline

Zenith® Thoracic: Evolution



Zenith® TX2®



Zenith® TX2®
with Pro-Form®



Zenith® Dissection
Endovascular System



Zenith Alpha™
Thoracic

2001

Zenith TX1®

2004

Zenith® TX2®
with Z-Trak Plus®

2006

2009

Zenith® Dissection
Endovascular Stent

2010

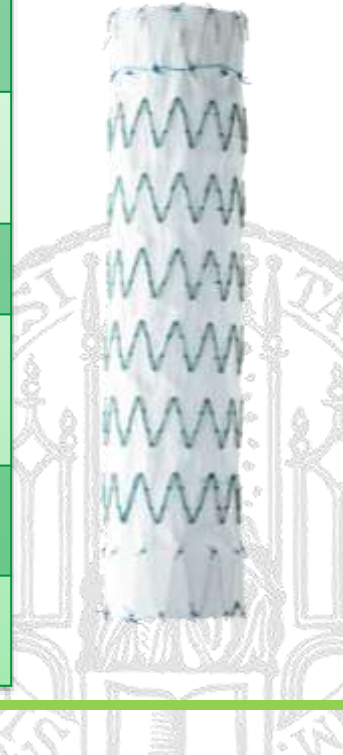
2011

2013

Comparison to Zenith® TX2®



Zenith Alpha™ Thoracic Endovascular Graft	Zenith® TX2® Endovascular Graft
Nitinol stents	Stainless steel stents
Thinner, more tightly woven polyester	Standard polyester
Bare rounded proximal stent	Covered proximal stent
16–20 Fr introduction system	20–24 Fr introduction system
24–46 mm graft diameter	22–42 mm graft diameter
MR compatible	MR conditional



Low Profile and Delivery System

Low profile (16F–20F ID)

- Nitinol stents
- Thin, tightly woven polyester

Delivery System

- Rotation handle
- Kink-resistant Flexor® sheath with hydrophilic coating



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Table 3. Regression analysis for mortality in elective TEVAR.

	Odds ratio (OR)	95% C.I. for OR
Use of conduit	3.78	1.98–7.43
Female gender	1.043	0.60–1.81
Coverage of the left subclavian artery	1.816	1.055–3.126
ASA class I–II	Reference	Reference
ASA class III	0.65	0.15–2.90
ASA class IV	1.54	0.35–6.71
ASA class V	21.05	2.27–195.44
Ventilator dependent	4.15	1.34–12.90

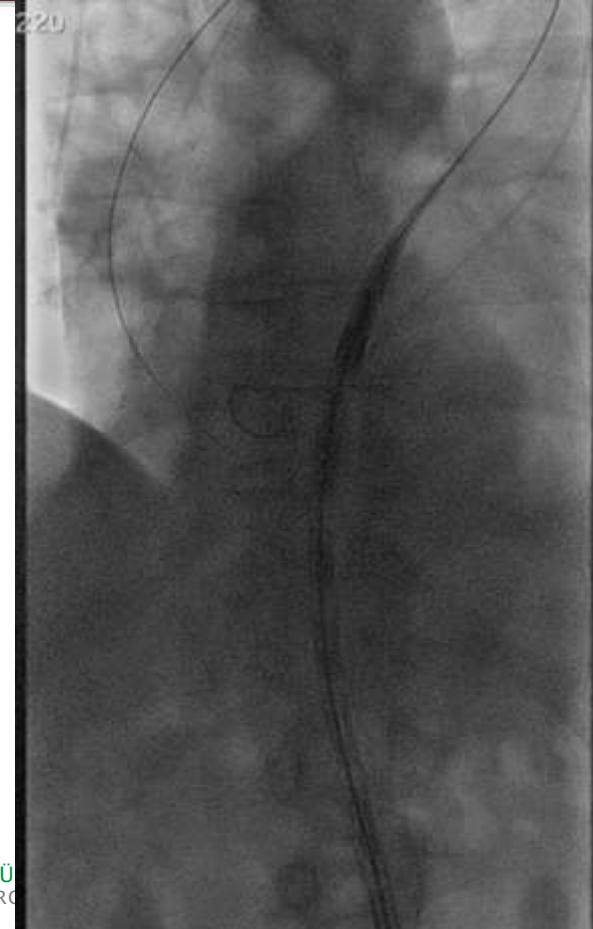
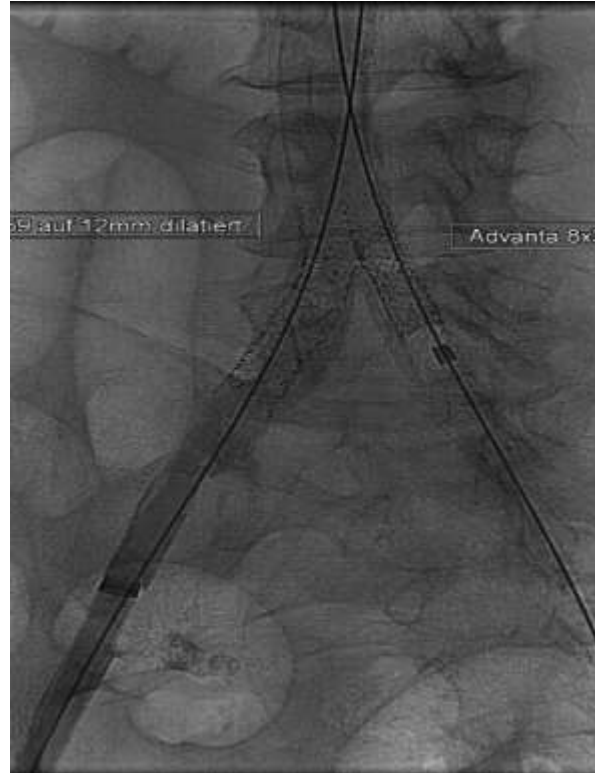
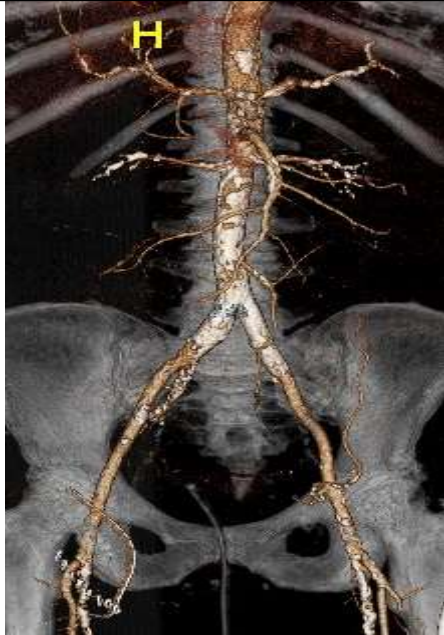
TEVAR: Endovascular repair of thoracic aortic aneurysm.

❖ Use of iliac conduits (challenging native access) is associated with increased mortality for TEVAR

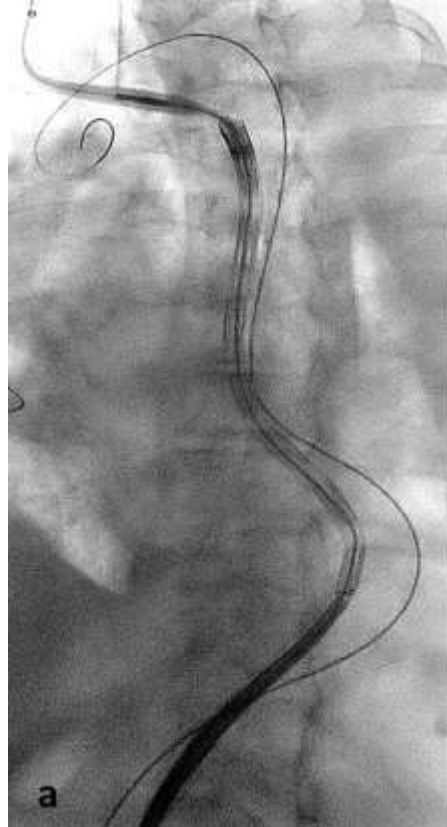
...a need for decreased device delivery size and improvements in endovascular technology.

Trackability of the Alpha Thoracic

- 82-year-old male with 60mm TAA and stenotic iliacs and aortic angulation

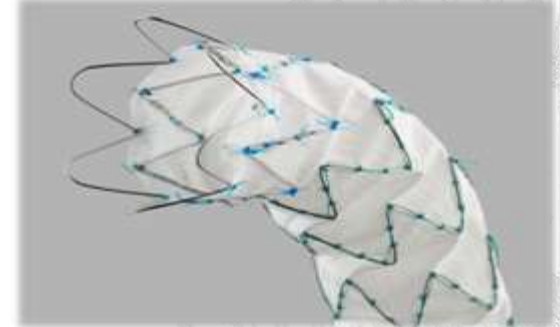
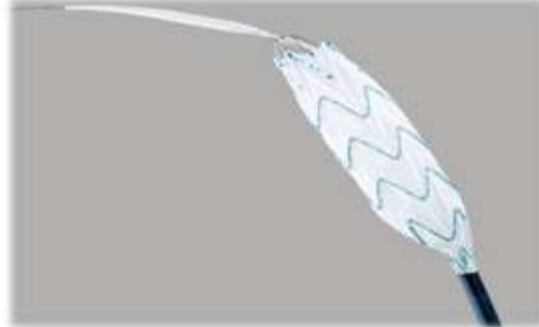


Trackability of the Alpha Thoracic in tortuous aorta



Highly Flexible Inner Nitinol Cannula

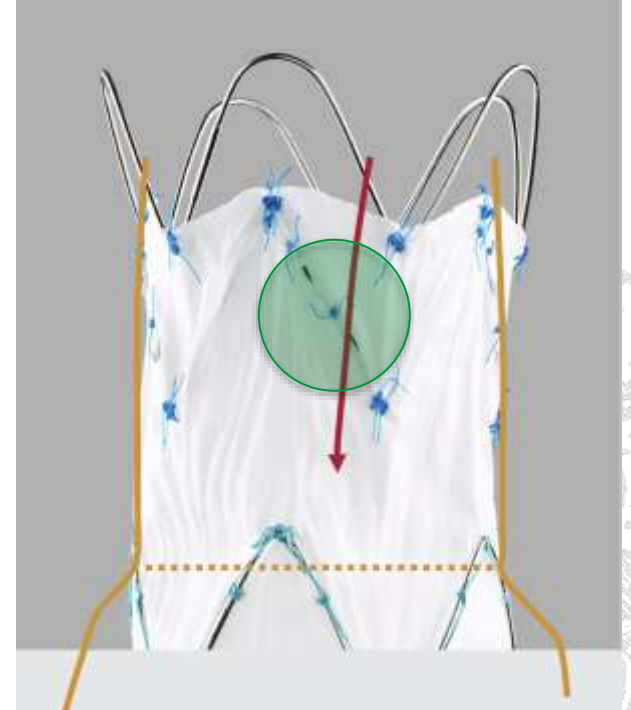
- ❖ Precurved introduction system—cannula has “candy cane” shape that hugs the inner curve
- ❖ Bare proximal stent optimizes apposition
- ❖ Utilizes Pro-Form for 40–46 mm diameter grafts



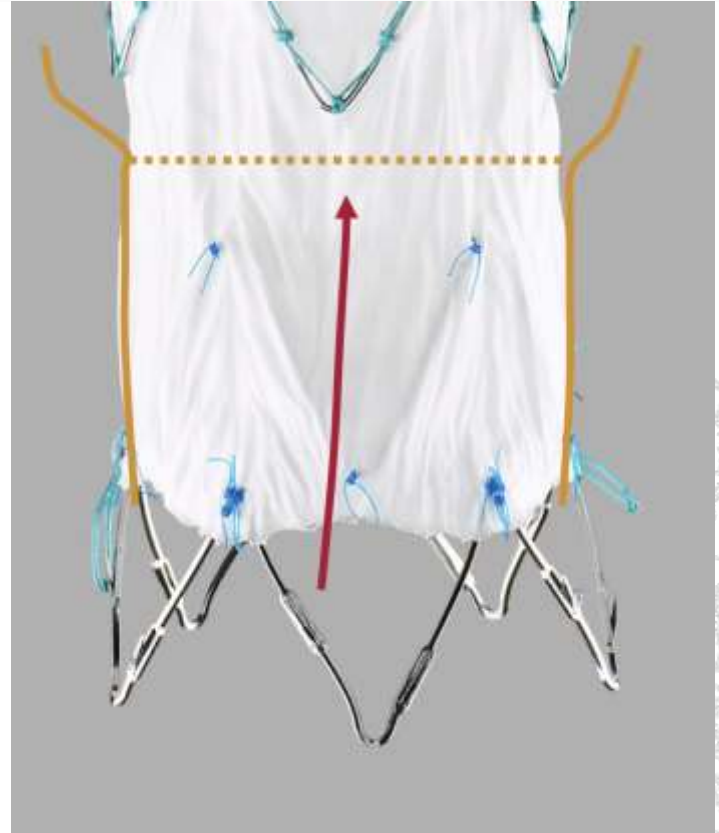
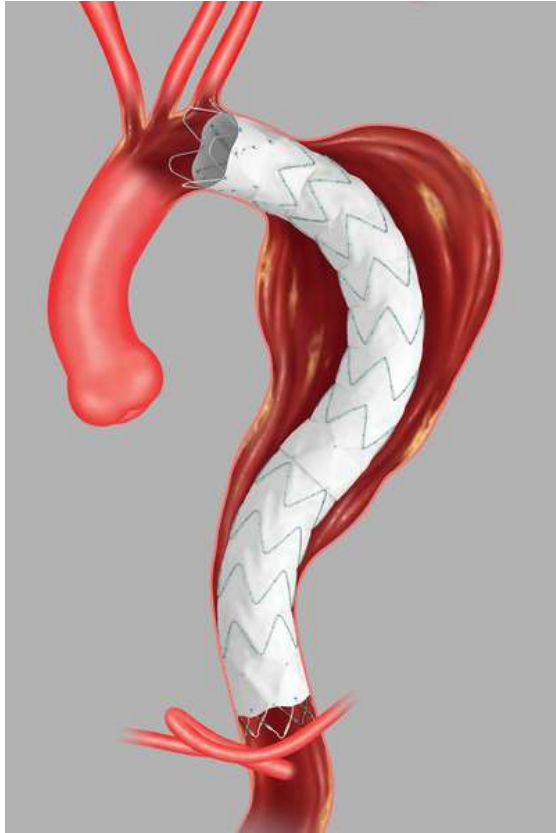
Bare proximal stent optimizes apposition



Barbs prevent from distal migration
(active fixation)



Distal Component



Key Players on thoracic endografting

	Cook Alpha Thoracic (ID)	Medtronic Valiant Navion (OD)	Gore CTAG (ID)	Bolton Relay Prp	Jotec 3G
Profile	16–20 Fr	18–22 Fr	18–24 Fr	19–23 Fr	20–24 Fr
Sheath required	No	No	Yes	No	No
Tip Capture	Yes	Yes	No	Yes	No
Distal Taper	Yes	Yes	Yes	Yes	No
Distal component	Yes	No	No	No	No
Sizes (mm)	24–46	20–46	21–45	22–46	24–44
Lengths (mm)	105–233	100–200	100–200	100–250	100–230
Precurved Delivery system	Yes	No	No	Yes	No

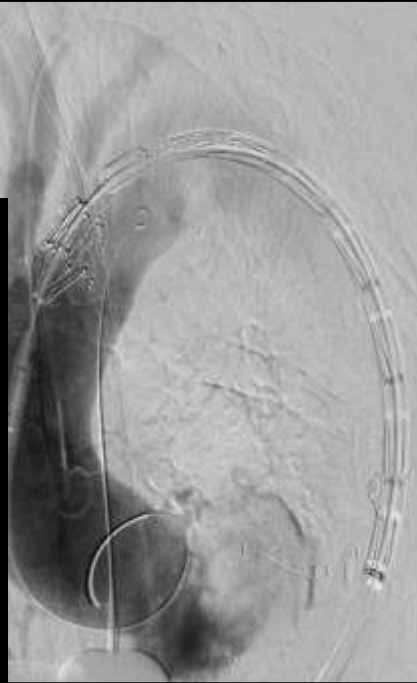
Challenging cases II: Steep Arch angulation

- 76-year-old female with 60mm TAA and steep aortic arch



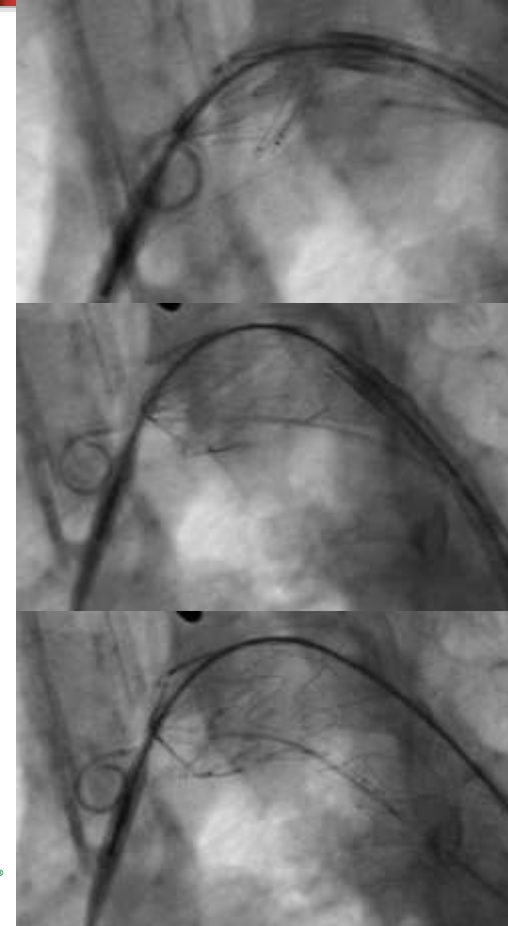
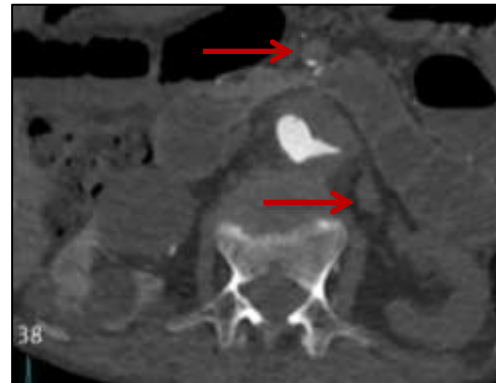
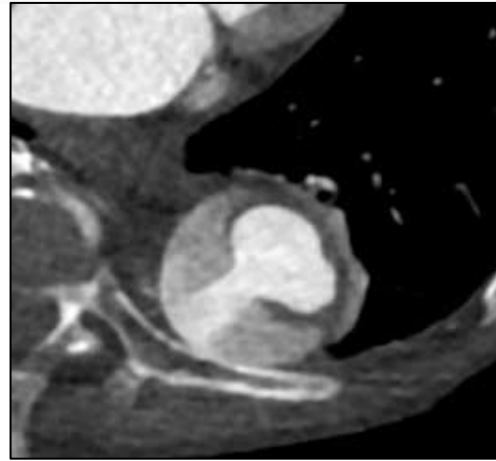
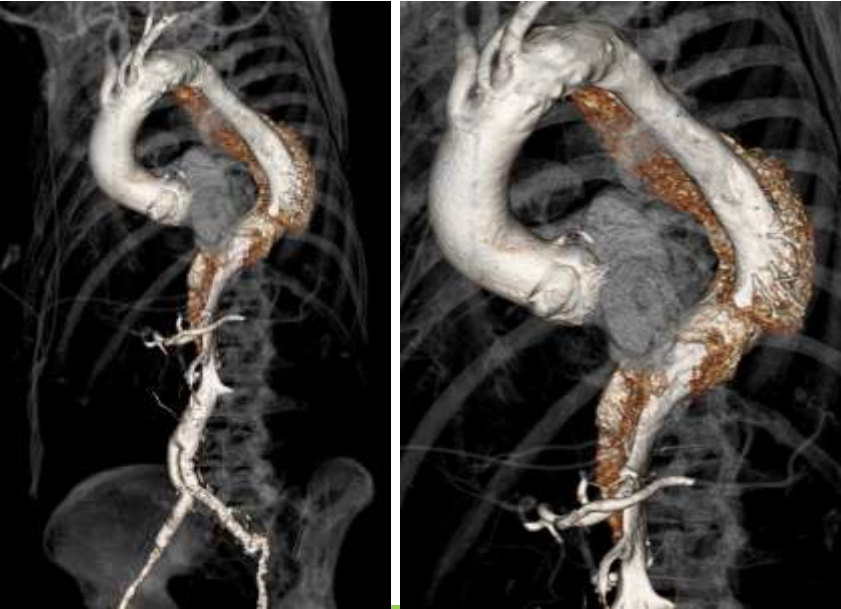
Challenging cases III: Steep Arch angulation

- 72-year-old male with 58mm TAA and steep aortic arch

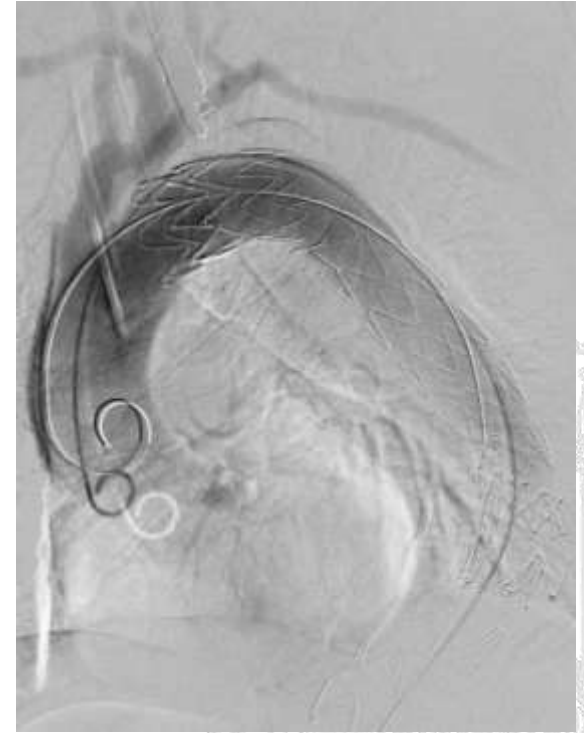


Challenging cases IV: Type B AD with Malperfusion (outside IFU)

- 81-year-old male with acute TBAD and Renal and SMA Malperfusion prior infrarenal repair with Kinking

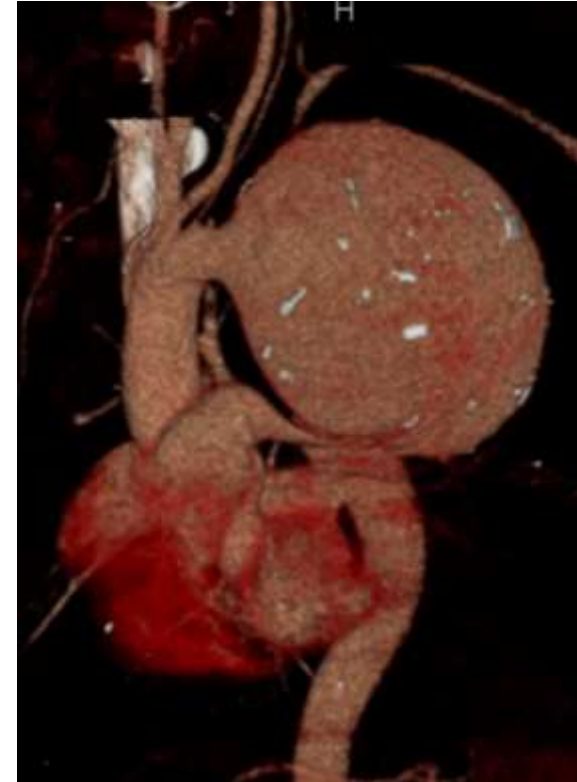
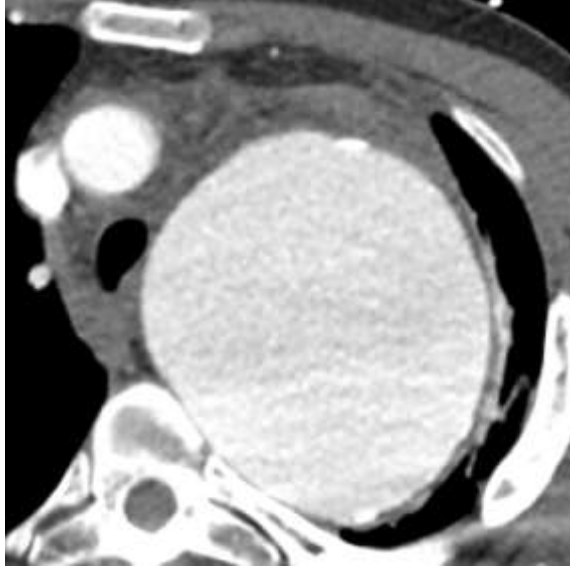


Challenging cases IV: Type B AD with Malperfusion (outside IFU)



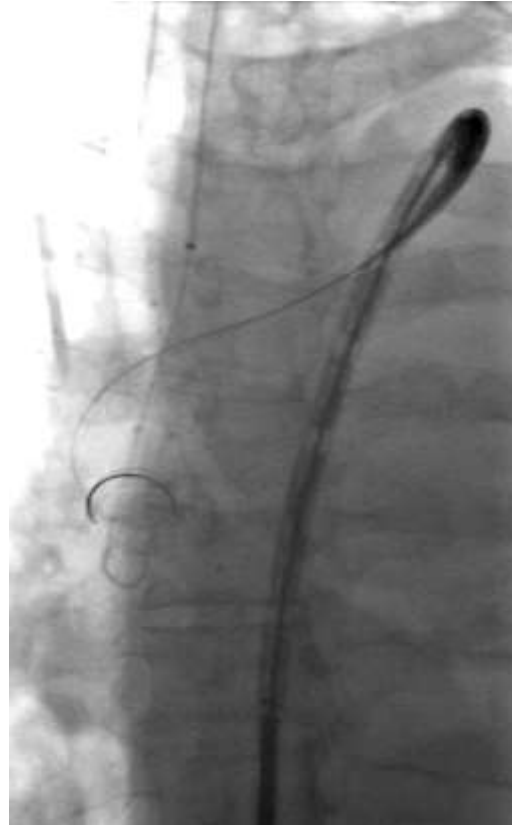
Challenging cases: Huge (13cm) thoracic Aortic Aneurysm

- 32-year-old male with contained ruptured 13 cm aortic aneurysm
- Post open coarctation surgery
- Hoarseness, back pain



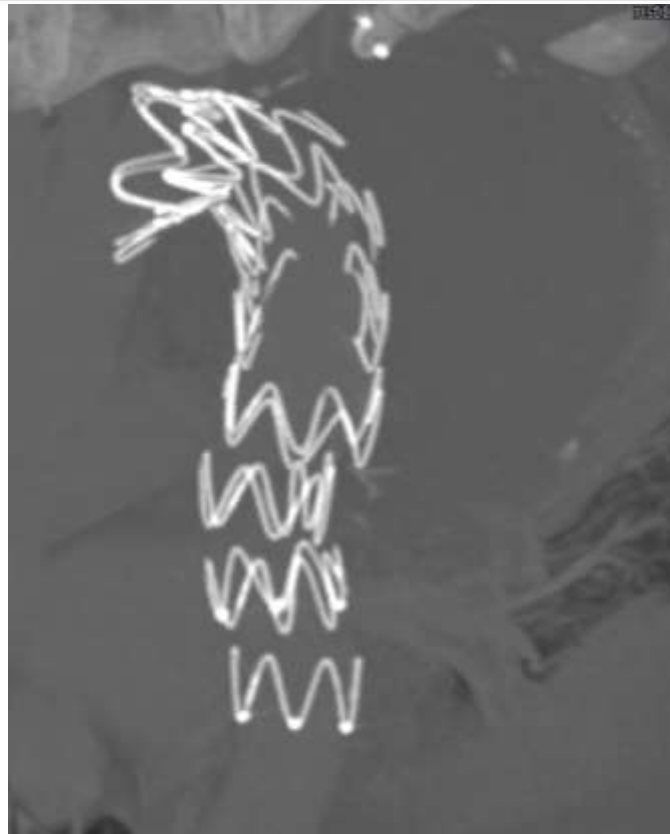
Challenging cases: Huge (13cm) thoracic Aortic Aneurysm

- Carotid-Subclavian bypass
- TEVAR with Cook Alpha
- Through and through wire axillo-brachial
- MuVIT for Cardiac Output reduction
- LSA embolization



Challenging cases: Huge (13cm) thoracic Aortic Aneurysm

- Carotid-Subclavian bypass
- TEVAR with Cook Alpha x2
- Through and through wire axillo-brachial
- MuVIT for Cardiac Output reduction
- LSA embolization



Performance of Alpha Thoracic for Key Technical Goals in TEVAR

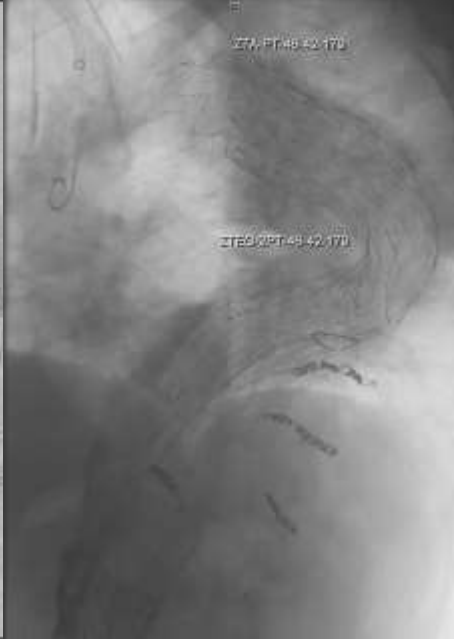
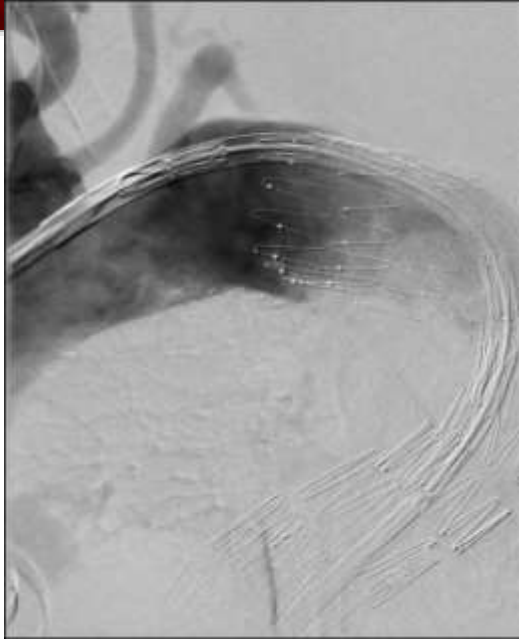
- Deliver the graft safely at the landing zone
- Exact Deployment at the intended position
- Achieve seal
- Retrieve Delivery System easily





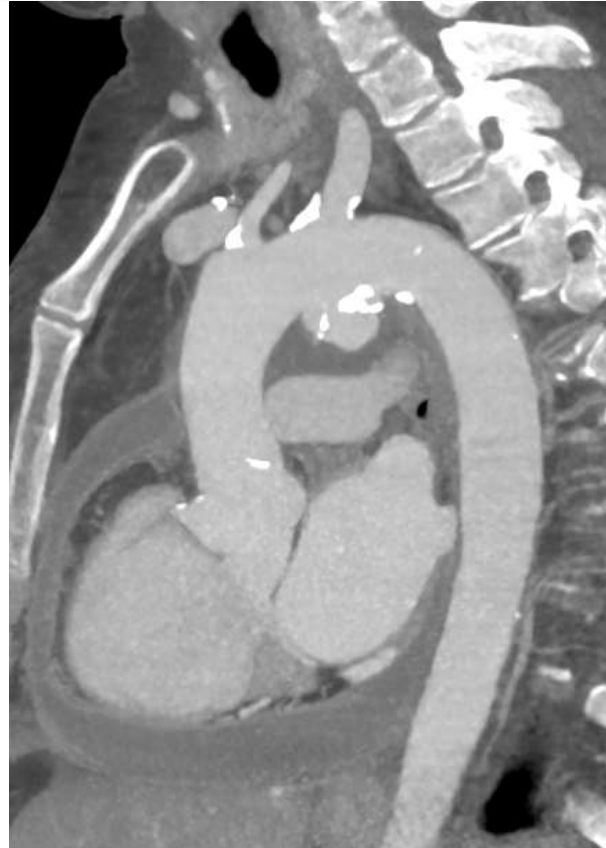
Thank you





Challenging cases: Contained ruptured Aortic arch PAU

- 67-year-old female with contained ruptured Thoracic PAU
- Infectious, post Endocarditis
- Inner curvature localization



Challenging cases: Contained ruptured Aortic arch PAU

- Carotid-Subclavian bypass
- TEVAR with Cook Alpha ZTA 34-161
- Chimney of the LCA (V12+Everflex)
- LSA embolization

