

Proximal Seal with LSA Fenestrated Devices



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Disclosures:

- Proctor, Consultant Cook Medical

What is the **GREATEST THREAD** in endovascular repairs?

➤ Loss of proximal seal

What is the **GREATEST THREAD** to successful TEVAR?

Loss of proximal seal



“...2-cm centerline length is paramount ...”

Outcome comparison of thoracic endovascular aortic repair performed outside versus inside proximal landing zone length recommendation

William J. Yoon, MD, and Matthew W. Mell, MD, MS, *Sacramento, Calif*

Conclusions: Achieving recommended sealing zone of 2-cm centerline length is paramount to avoid device-related adverse outcomes. We recommend careful surveillance in patients undergoing urgent TEVAR with <2-cm PLZ. (J Vasc Surg 2020;72:1883-90.)

Inadequate Proximal Seal Length Predicts Complications After Endovascular Repair of Acute Type B Aortic Dissection

Joseph V. Lombardi,¹ Marissa Famularo,¹ Mary Margaret Seale,² Jarin A. Kratzberg,² Blayne A. Roeder.² ¹Cooper University Hospital, Camden, NJ; ²Cook Medical, West Lafayette, Ind



Conclusions: These results demonstrated a clear inverse relationship between the proximal seal length achieved and associated adverse outcomes. This underscores the importance of landing the stent graft in healthy, nondissected aorta during endovascular repair to minimize the risk of complications and provide a durable repair in patients with aTBAD.

“Inadequate proximal seal length predicts complications ...”

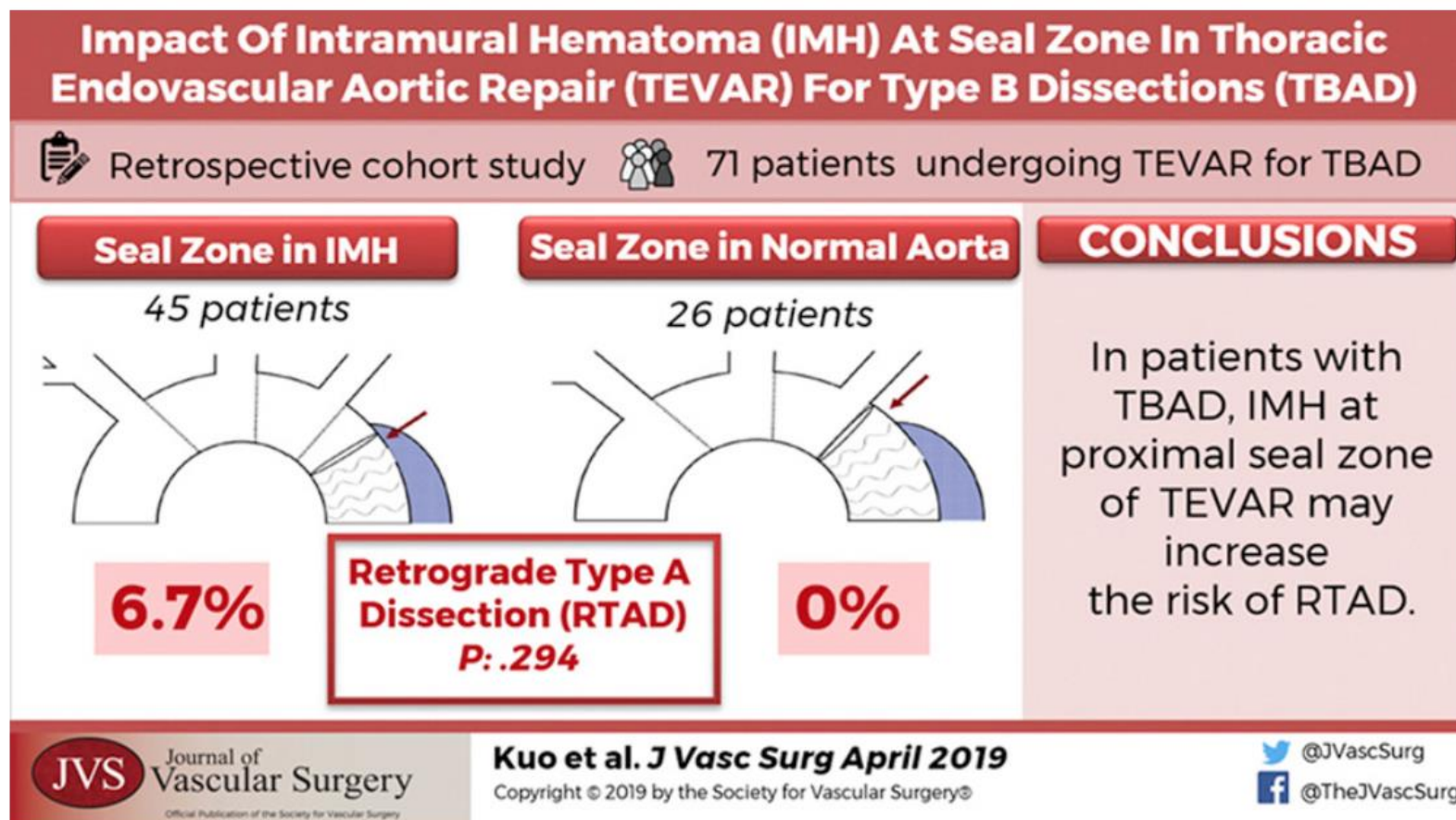
acTBAD; B3,10

Bild-Größe: 755 x 395
WL: 170 WW: 567

1702402 (46 y , 44 y)
Gefäße 04_Baa_Praeop_Safire (Erwachsener)
04_BAA_praeOP_SAFIRE



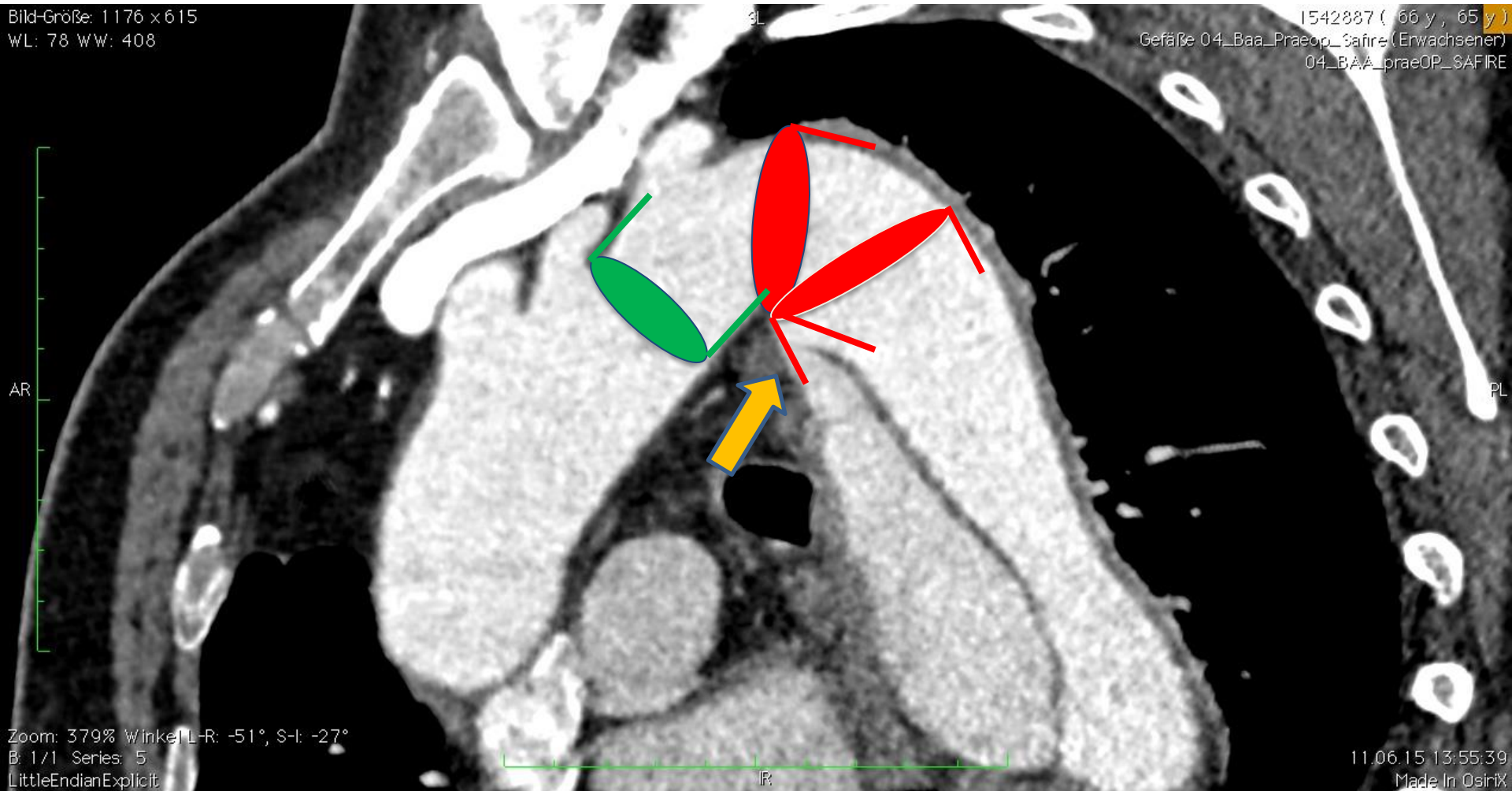
IMH @seal zone increases risk of RTAD



aTBAD; B3,11; “high-risk”, Malan III/2

Bild-Größe: 1176 x 615
WL: 78 WW: 408

1542887 (66 y, 65 y)
Gefäße 04_Baa_Praeop_Safire (Erwachsener)
04_BAA_praeOP_SAFIRE



> J Vasc Surg. 2021 Jun 28;S0741-5214(21)01031-4. doi: 10.1016/j.jvs.2021.06.036.

Online ahead of print.

A more proximal landing zone is preferred for thoracic endovascular repair of acute type B aortic dissections

90% <2cm healthy Zone 3

Tomaz Mesar¹, Fanny S Alie-Cusson¹, Animesh Rathore¹, David J Dexter¹, Gordon K Stokes¹,
Jean M Panneton²

acTBAD, N=83

AE

RTAD

Aortic

Reintervention @ 36m

➤ 48 L-Zone 2

12.5%

3.8%

10.4%

➤ 35 L-Zone 3

31.4%

5.7%

31.4%

Conclusions

Most patients with aTBAD have less than 2 cm of proximal healthy descending thoracic aorta. In patients treated for complicated aTBAD, Z2T is associated with a lower need for aortic reintervention and aortic-related adverse events than Z3T. Patients may benefit from a more aggressive proximal landing zone with similar perioperative morbidity when Z2T is done with LSA revascularization.

Preservation of LSA

Recommendation 11	Class	Level of evidence	References
In elective thoracic endografting cases when it is planned to intentionally cover the left subclavian artery, in patients at risk of neurological complications, preventive left subclavian artery revascularisation should be considered	Ila	C	44

Eur J Vasc Endovasc Surg (2017) 53, 4—52

Editor's Choice — Management of Descending Thoracic Aorta Diseases

Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS)

V. Riambau ^a, D. Böckler ^a, J. Brunkwall ^a, P. Cao ^a, R. Chiesa ^a, G. Coppi ^a, M. Czerny ^a, G. Fraedrich ^a, S. Haulon ^a, M.J. Jacobs ^a, M.L. Lachat ^a, F.L. Moll ^a, C. Setacci ^a, P.R. Taylor ^a, M. Thompson ^a, S. Trimarchi ^a, H.J. Verhagen ^a, E.L. Verhoeven ^a, ESVS Guidelines Committee ^b P. Kolh, G.J. de Borst, N. Chakfé, E.S. Debus, R.J. Hinchliffe, S. Kakkos, I. Koncar, J.S. Lindholt, M. Vega de Ceniga, F. Vermassen, F. Verzini, Document Reviewers ^c P. Kolh, J.H. Black III, R. Busund, M. Björck, M. Dake, F. Dick, H. Eggebrecht, A. Evangelista, M. Grabenwöger, R. Milner, A.R. Naylor, J.-B. Ricco, H. Rousseau, J. Schmidli

Pre-Loaded Fenestrated Thoracic Endografts for Distal Aortic Arch Pathologies: Multicentre Retrospective Analysis of Short and Mid Term Outcomes

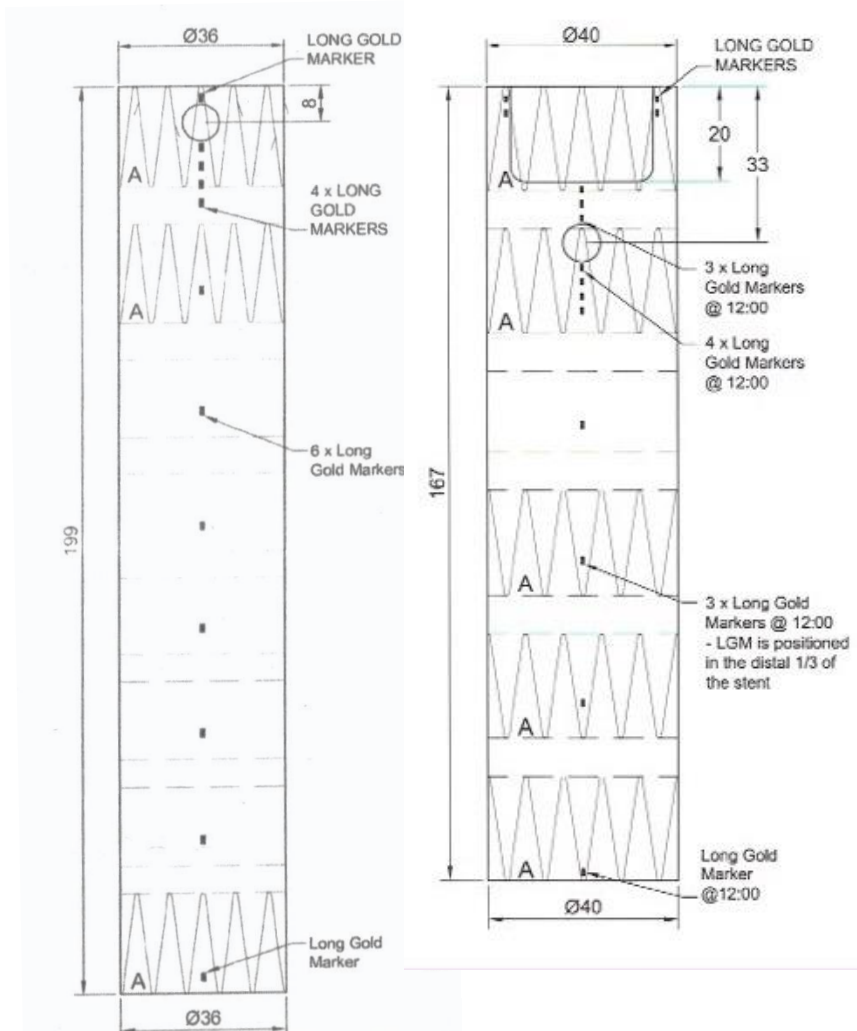
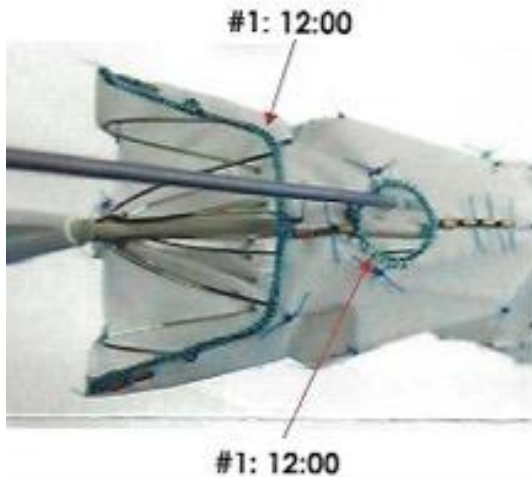
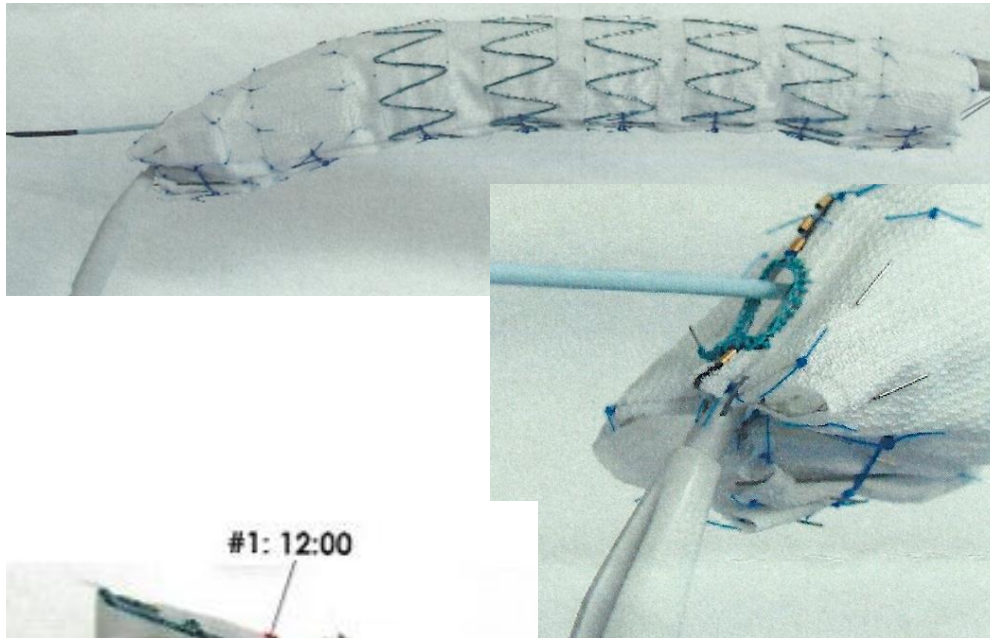
Largest published series of FTEVAR, N=108

Nikolaos Tsilimparis    • Carlota F. Prendes  • Guido Rouhani • ... Kevin Mani • Anders Wanhainen
Tilo Kölbel • [Show all authors](#) • [Show footnotes](#)

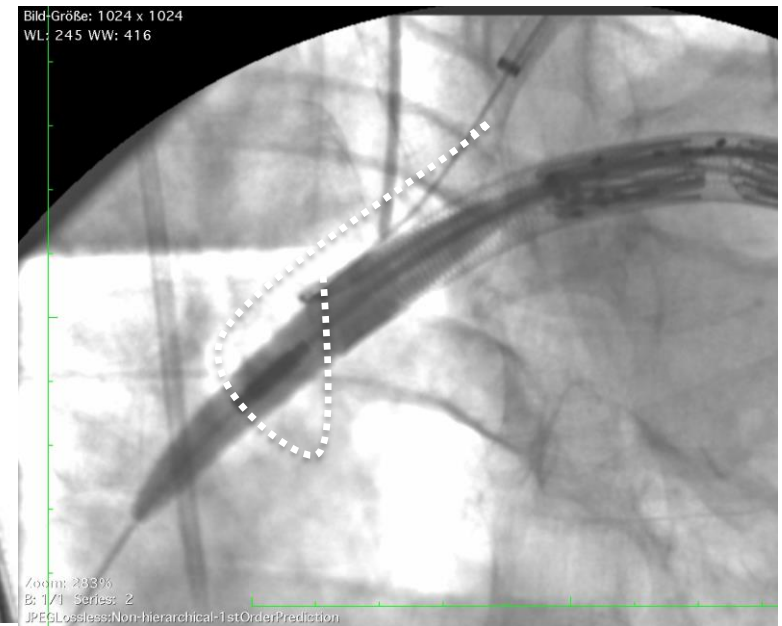
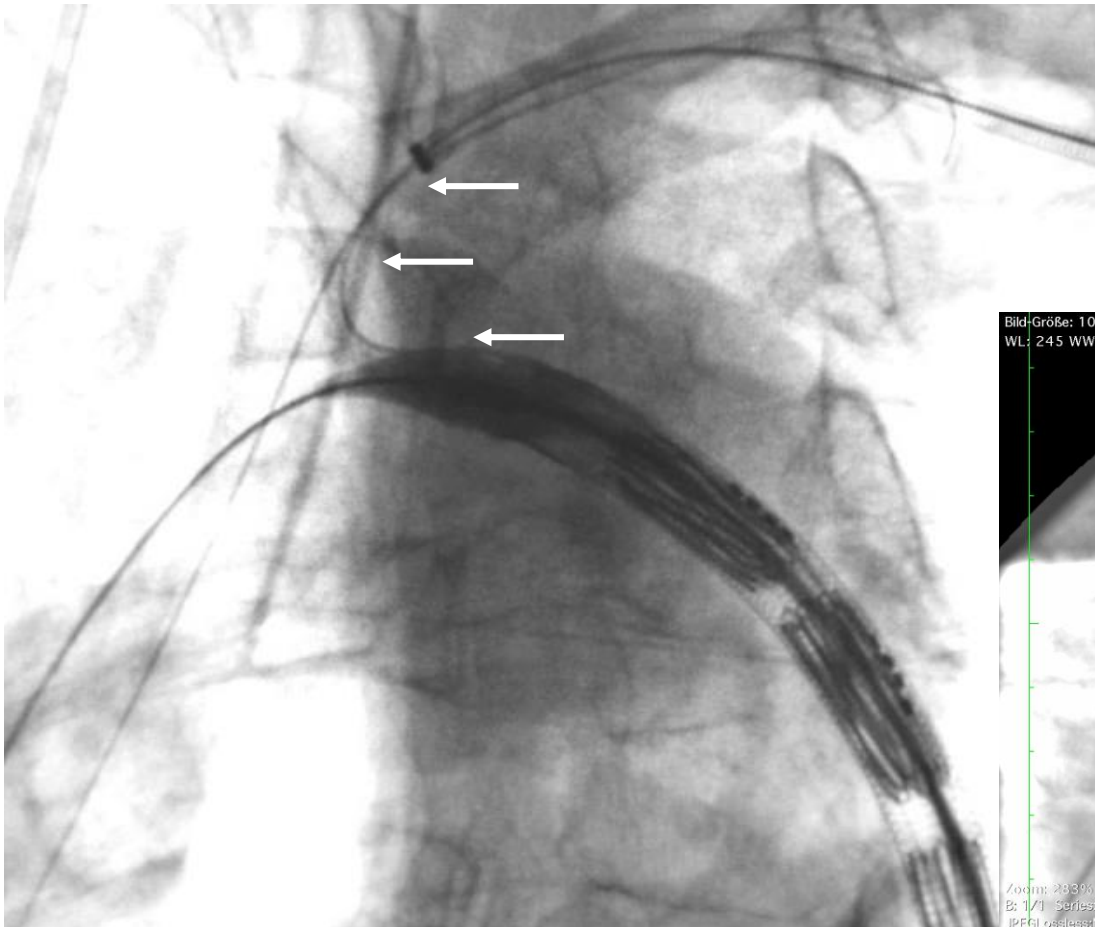
Published: October 07, 2021 • DOI: <https://doi.org/10.1016/j.ejvs.2021.08.018>

- 42 / 38% pts. with history of AD
- 29 cases from Frankfurt
 - 11 / 38% pts with AD

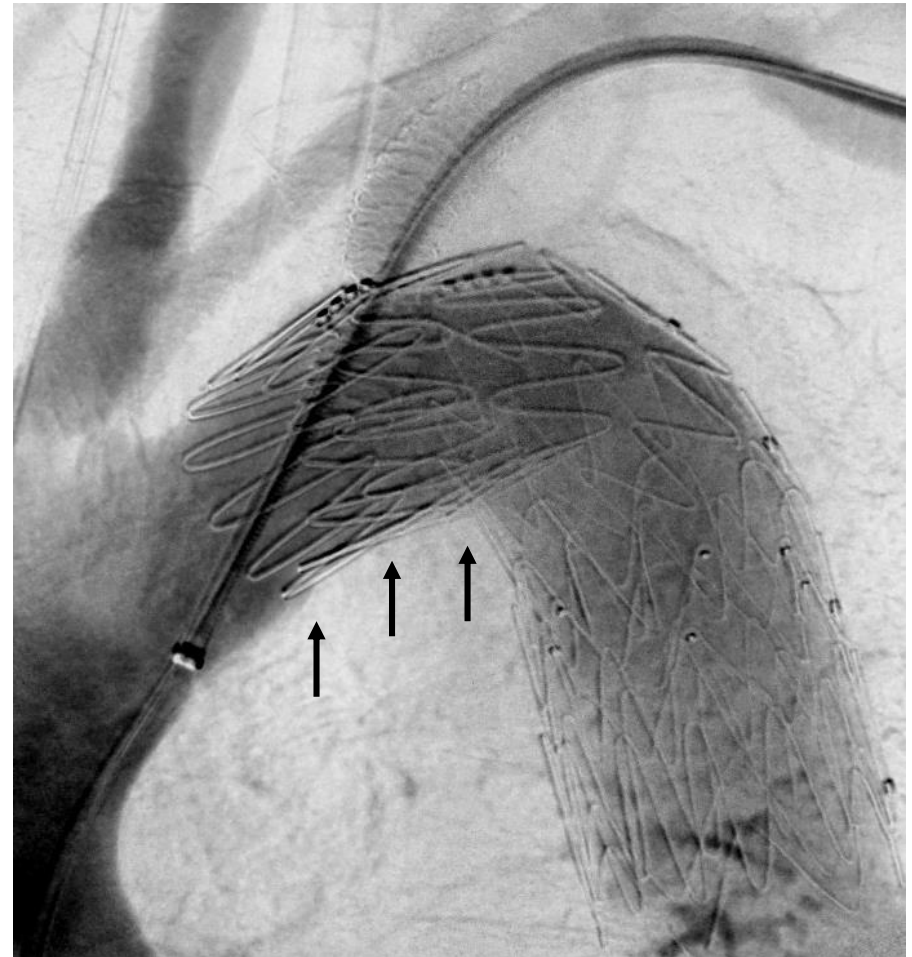
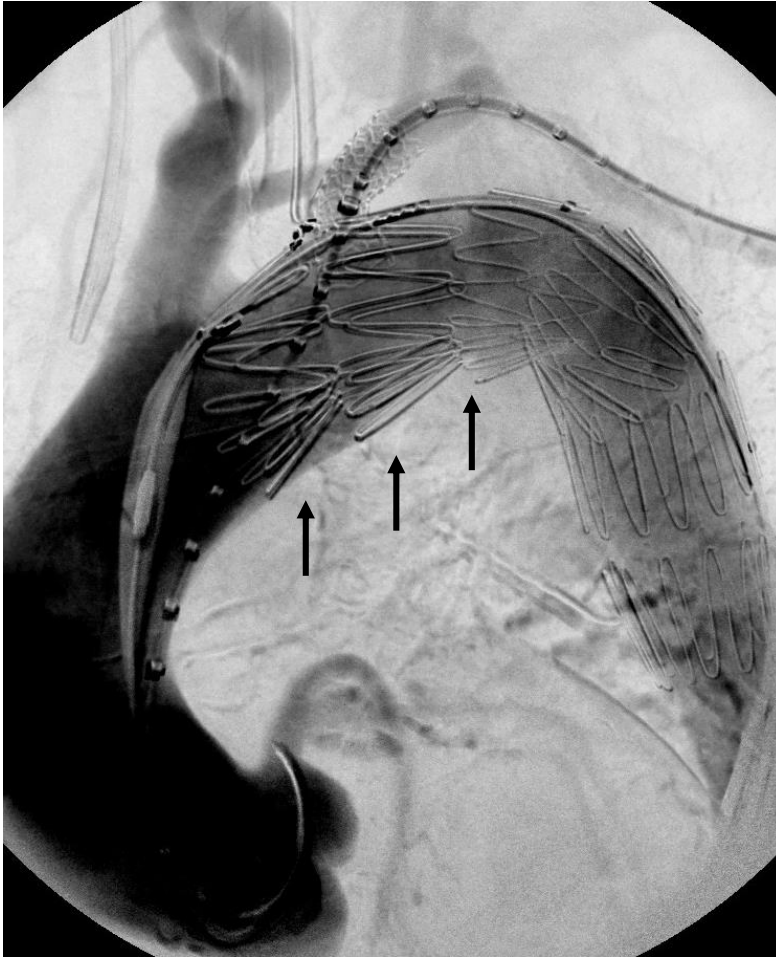
Cook Medical CMD Fenestrated Thoracic-Arch Stent Graft



Direct cannulation of LSA / target vessel



Graft Apposition in Zone 2



Subgroup Klinikum Frankfurt FTEVAR for AD, N=11 2012-2019

MC Study Preloaded Fenestrated Thoracic Endografts N= 108

AD Type	Acute/ Subacute	Chronic	Location	Indication
B	5		B 2/3, 5-11	cpl, high-risk
B		5	B 3, 9-10	Ø 62mm
A	1		A 10	cpl

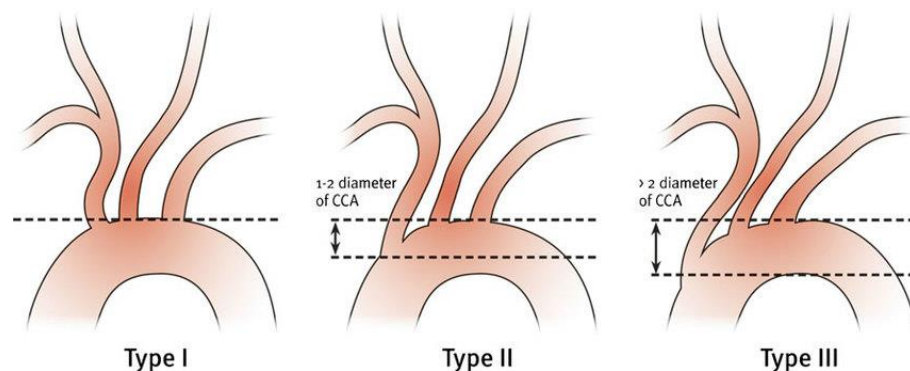
Subgroup Klinikum Frankfurt FTEVAR for AD, N=11 2012-2019

MC Study Preloaded Fenestrated Thoracic Endografts N= 108

Graft design	Fenestration for LSA	Fenestration for LSA/LCCA and Scallop for LCCA/IA
Frankfurt - AD	11	0
MC-Study	87 LSA	43 LCCA
Distal Arch Pathologies	21 LCCA	18 IA

Anatomy Klinikum Frankfurt FTEVAR for AD, N=11

Arch Type	1	2	3
No	4	5	2



Dominant vertebral artery	Left	Right	Equal
	6	1	4

FTEVAR	Frankfurt – AD N=11	MC-Study - Arch N=108
Procedure time	132 min.	140 min.
Technical success	11 / 100%	107 / 99%
Neurologic complications	9% Stroke 0% SCI	7.5% Stroke 3.7% SCI
30-day mortality	0%	3.7%
RTAD	0%	2.8%

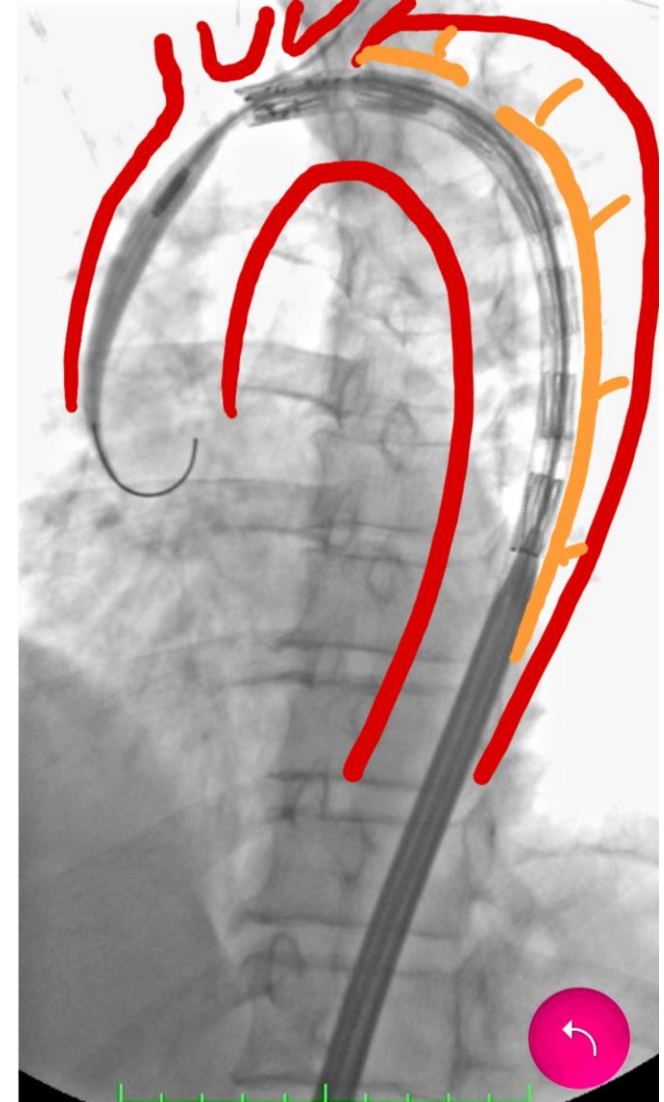
FTEVAR	Frankfurt – AD N=11	MC-Study – Arch N=108
FU	26 months 1 - 82	12 months 1 - 96
Patency LSA	11 / 100%	101 / 93.8%
Patency LCCA	11/100%	108/100%
Type 1a endoleak	0	3.5%
Freedom from reinterventions	9 / 82%	94/ 87%

Take Home Message

- FTEVAR for TBAD is feasible
- LZ 2 in TBAD often necessary
- Reduces type Ia EL and RTAD
- Reduces aortic reinterventions



Guido Rouhani, Frankfurt



Proximal Seal with LSA Fenestrated Devices