THE 24TH INTERNATIONAL EXPERTS SYMPOSIUM

CRITICAL ISSUES

IN AORTIC ENDOGRAFTING

STABILISE, a safe option for every patient?

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Disclosures

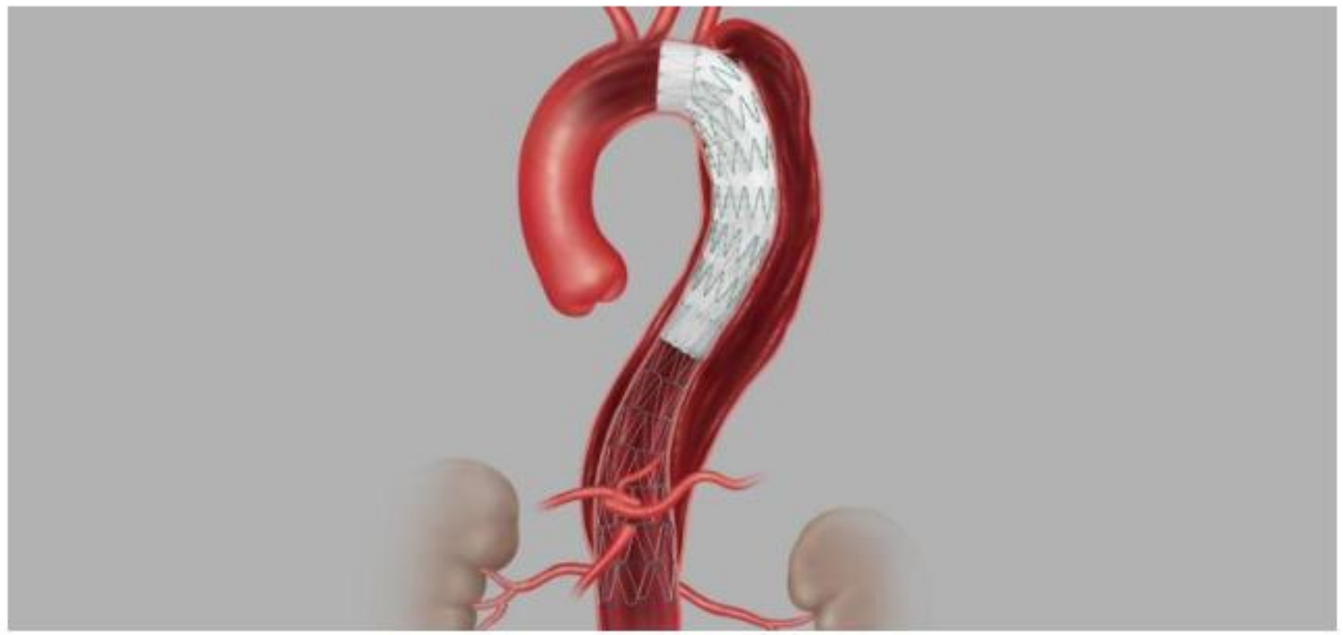
PI/Co-PI for several thoracic and abdominal aortic stent graft trials (Cook, Inc, Cordis® Corporation, Bolton Medical)

Proctor and lecturer at symposia hosted by Cook, Inc., Bolton, W.L. Gore and Associates, Jotec and Medtronic, Inc.

Disclaimer

Cook Medical receives US FDA approval for aortic dissection device

5th February 2019 302



Zenith Endovascular Dissection System (Cook Medical)

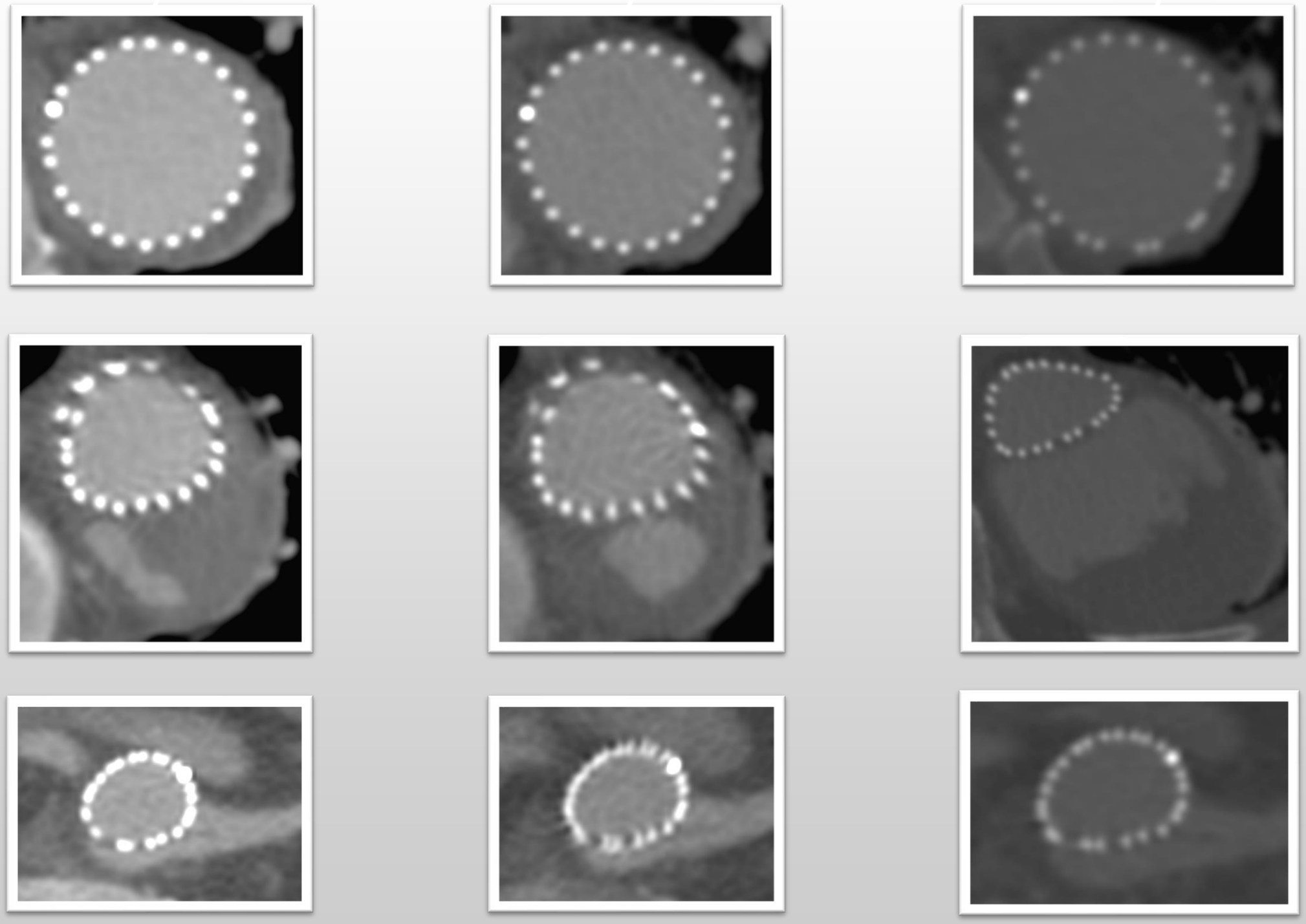
The STABILISE technique is outside the manufacturer's IFU for bare stents

1/3 to ½ ATBAD evolve to aneurysm

1 year

5 years

12 years

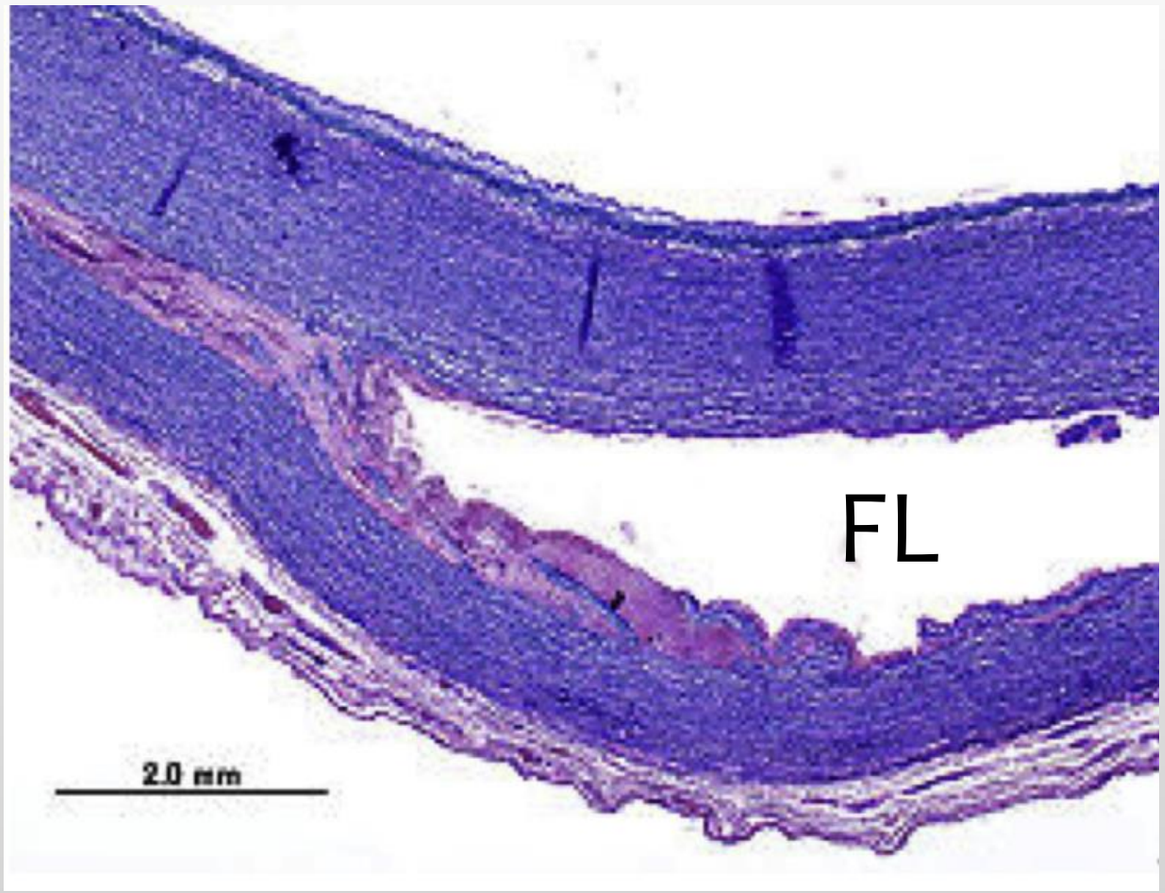


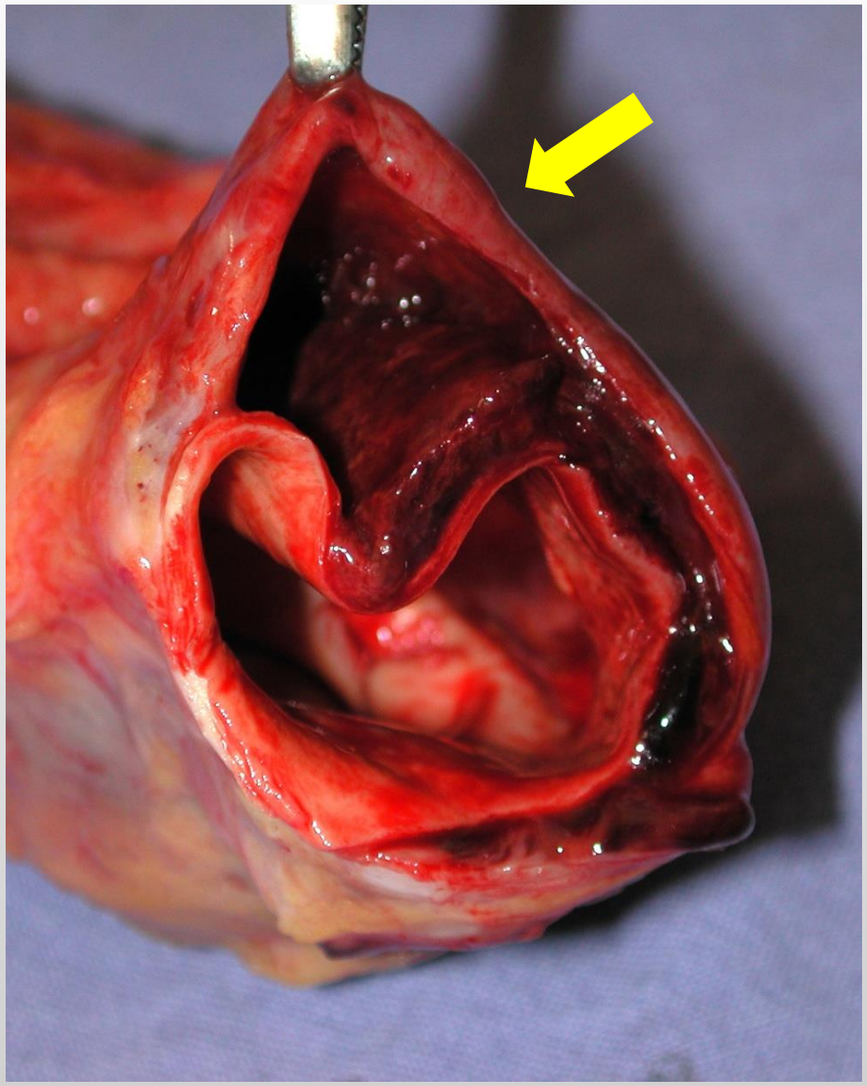
Development of FL dilatation

Potential causes

- Reduced resistance of thinner outer wall of the FL
- FL patency
- FL partial thrombosis
- Persistence of re-entry TEARS

FL outer wall thickness





Resistance of aortic wall after endarterectomy

Review of Direct Anatomical Open Surgical Management of Atherosclerotic Aorto-Iliac Occlusive Disease

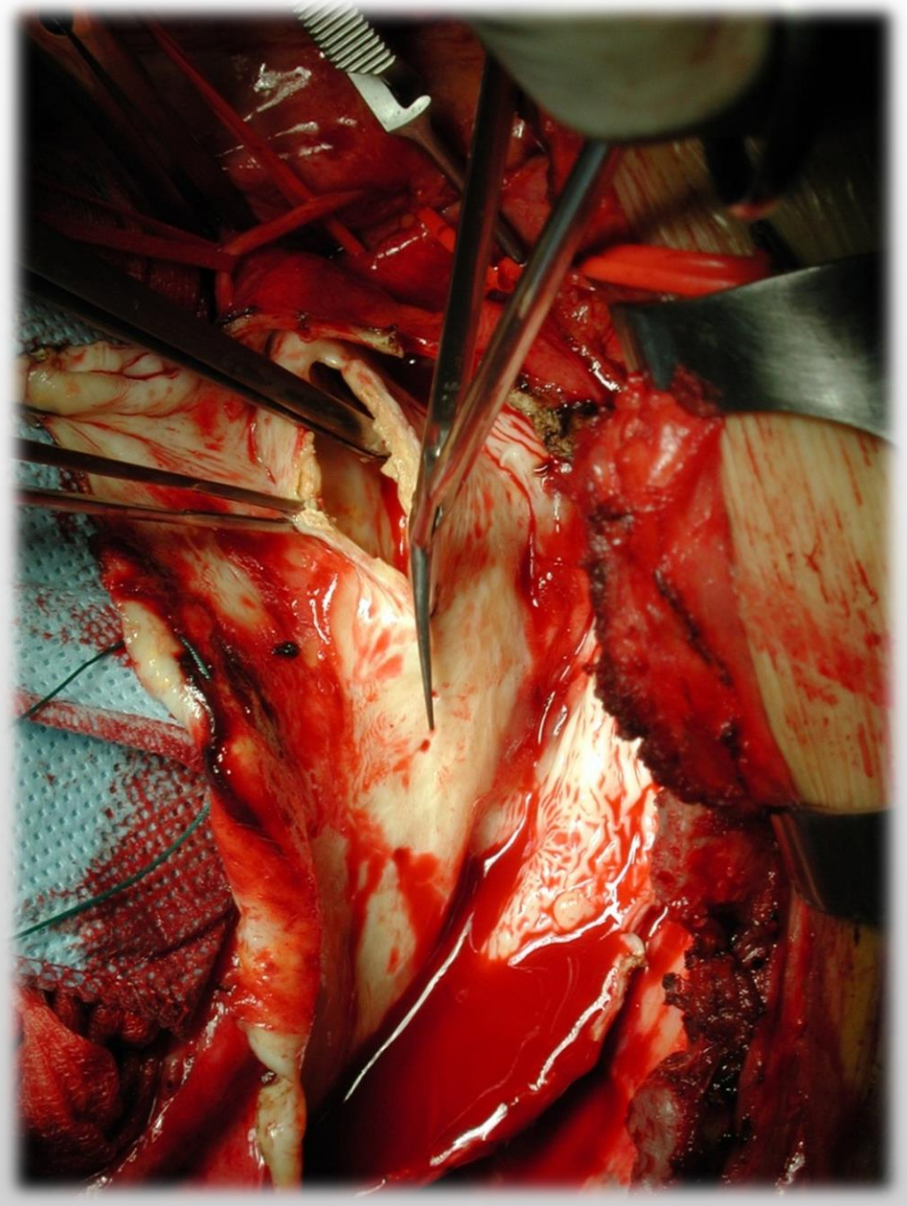
K.W.H. Chiu, R.S.M. Davies, P.G. Nightingale, A.W. Bradbury, D.J. Adam*

- 11 articles analyzed
- 1940 aorto-iliac endartectomy
- 10 years minimum follow up
- NO cases of secondary aneurysm of the endarterectomy site

KWH Chiu, et al., Eur J VascEndovasc Surg 2010

Aortic wall after surgical fenestration

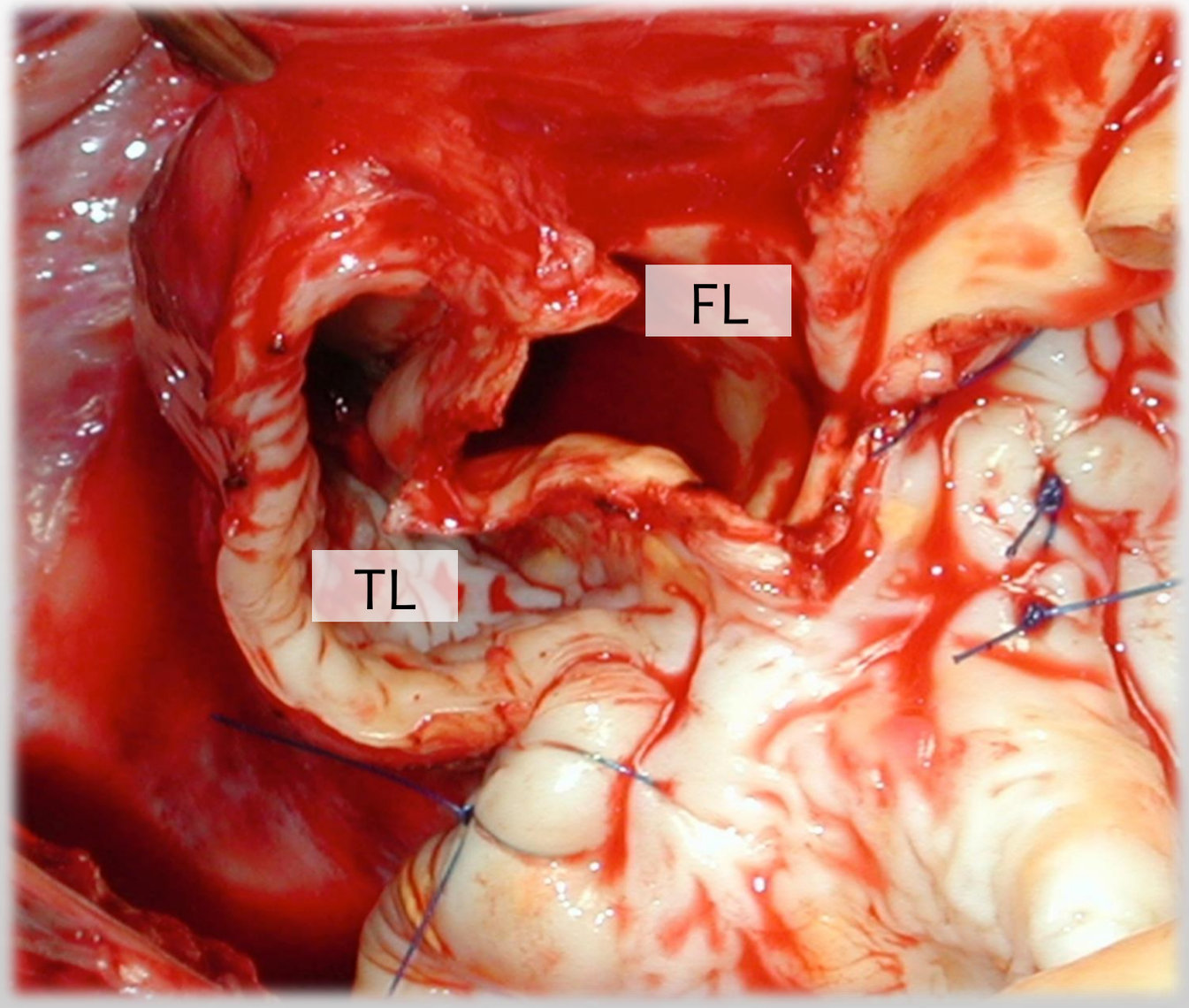
- 32 pts
- Visceral/Limb ischemia in complicated TBD
- Median follow-up 10 years (1-25 years)
- 2 mild dilatations (CTD pts)



Trimarchi S, et al., J Vasc Surg 2010 (18 pts)
Panneton JM et al., J Vasc Surg 2000 (14 pts)

Aortic wall after surgical septectomy

Global OSR experience 25 years: 156 cases



Partial thrombosis

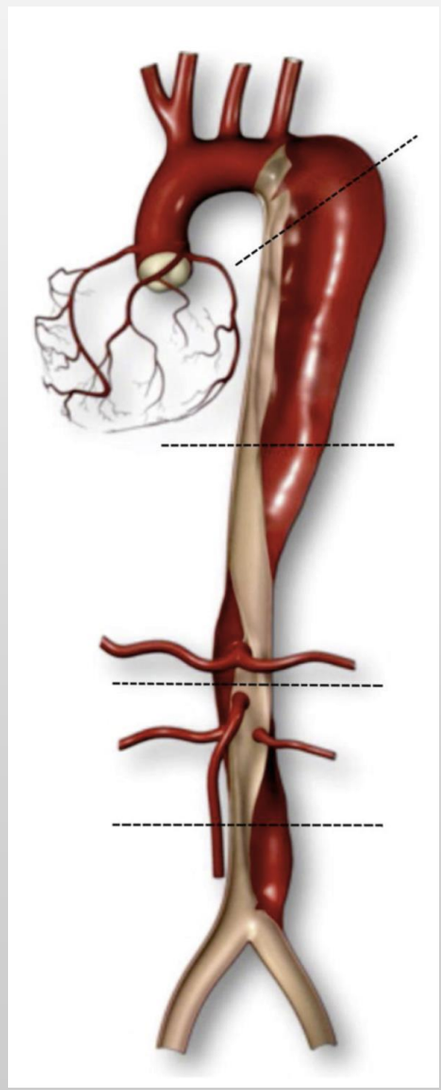
The Journal of THORACIC AND CARDIOVASCULAR SURGERY

Importance of false lumen thrombosis in type B aortic dissection prognosis

Santi Trimarchi, MD, PhD,[a] Jip L. Tolenaar, MD,[a] Frederik H. W. Jonker, MD, PhD,[b] Brian Murray, MD,[c]

Partial thrombosis of the FL is independent predictor of aortic growth

(95%confidence interval, 0.10-4.01;p=.040)



Trimarchi S et al. J Thor Cardiovasc Surg ‘13

Role of distal entry tears

Tear size and location impacts false lumen pressure in an ex vivo model of chronic type B aortic dissection

Thomas T. Tsai, MD,[a] Marty S. Schlicht, MS,[b] Khalil Khanafer, PhD,[b] Joseph L. Bull, PhD,[b,c]

JVS Journal of Vascular Surgery
Official Publication of the Society for Vascular Surgery

Maximum diastolic pressure in FL was found in the presence of a large entry site and a small re-entry site.

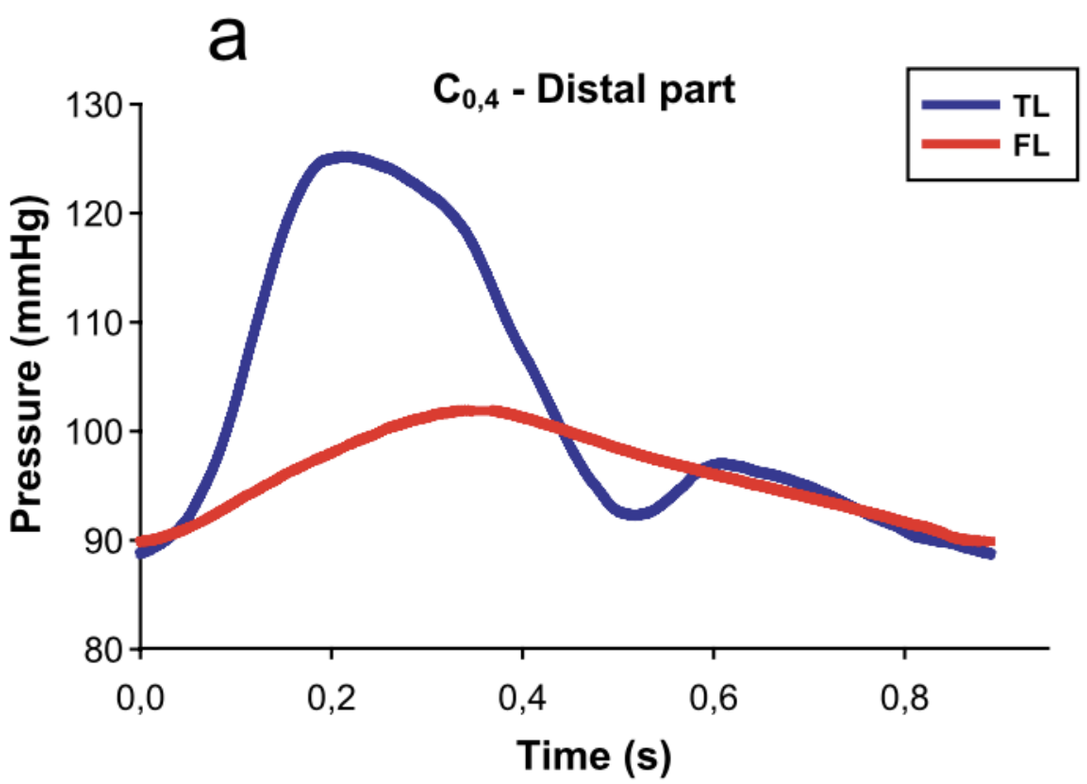
Tsai T et al. J Vasc Surg '08

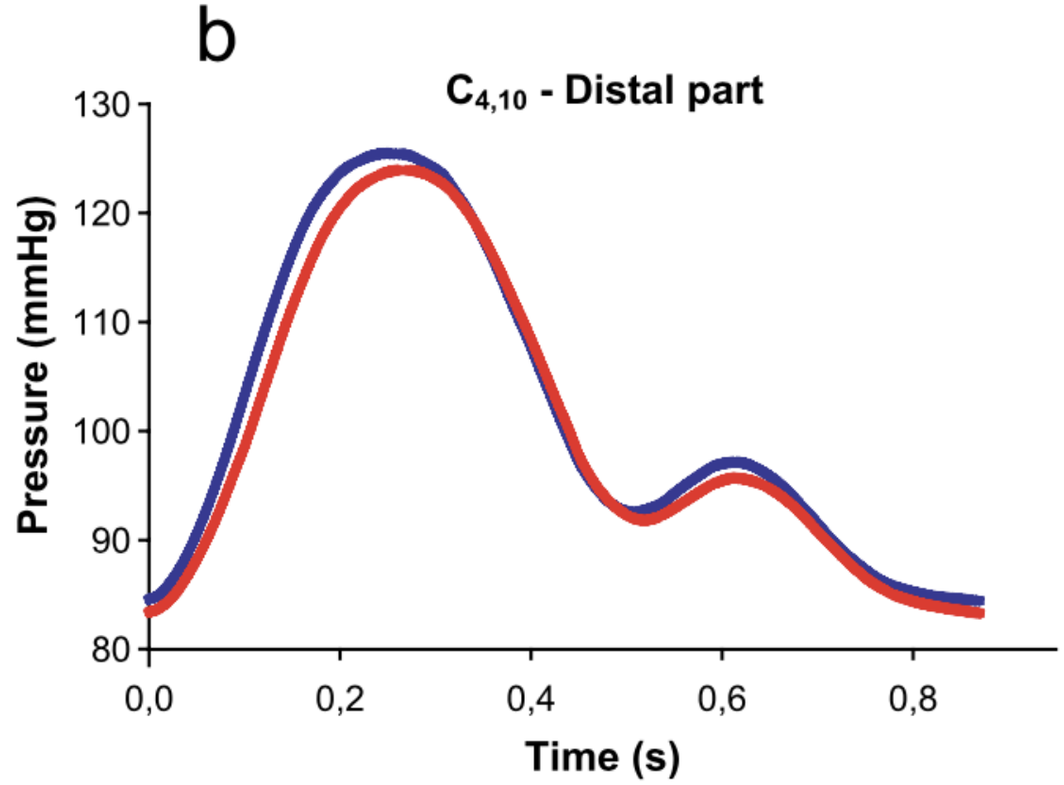
Persistent high pressure in the false lumen

JVS Journal of Vascular Surgery
Official Publication of the Society for Vascular Surgery

An in vitro phantom study on the influence of tear size and configuration on the hemodynamics of the lumina in chronic type B aortic dissections

Paula A. Rudenick, MSc,[a] Bart H. Bijnens, PhD,[b] David García-Dorado, MD, PhD,[a] and **Arturo Evangelista, MD, PhD,[a]** *Barcelona, Spain*





Only small tears

At least one big tear

Evangelista A et al. J Vasc Surg '13

Development of FL dilatation

Potential causes

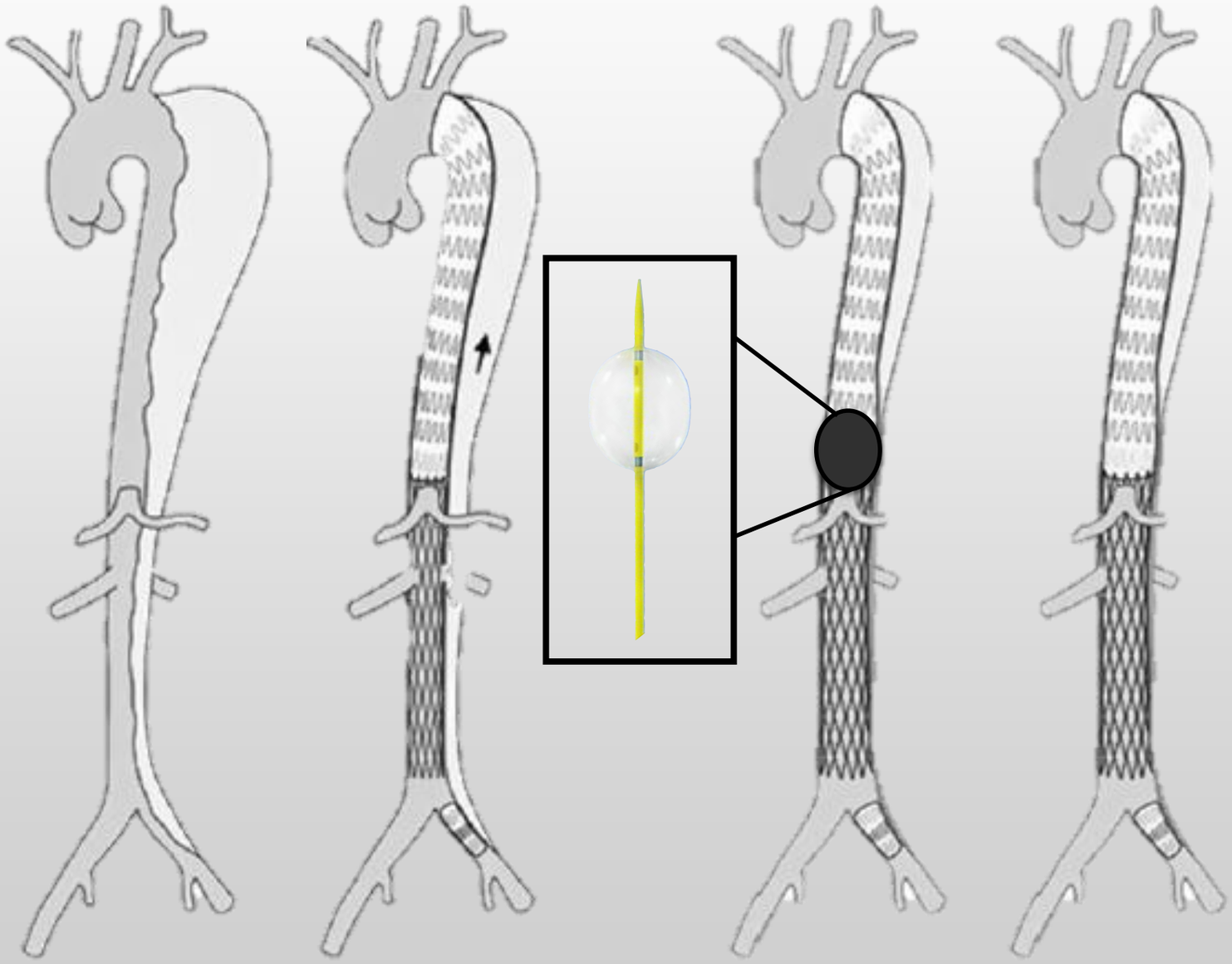
- Reduced resistance of thinner outer wall of the FL

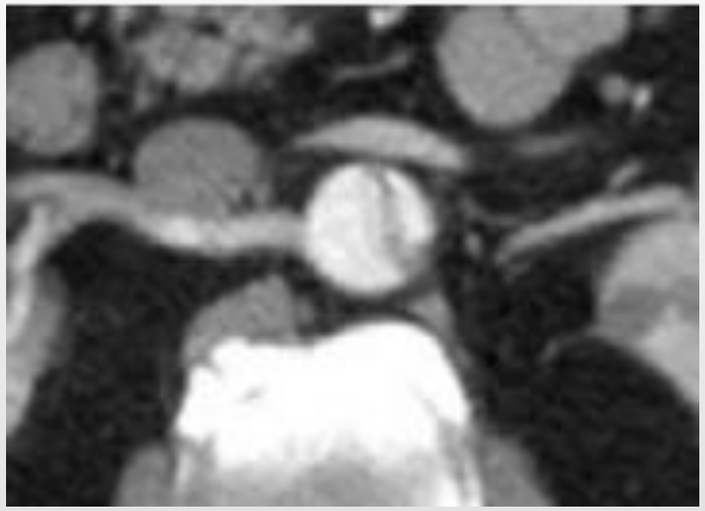
- FL patency

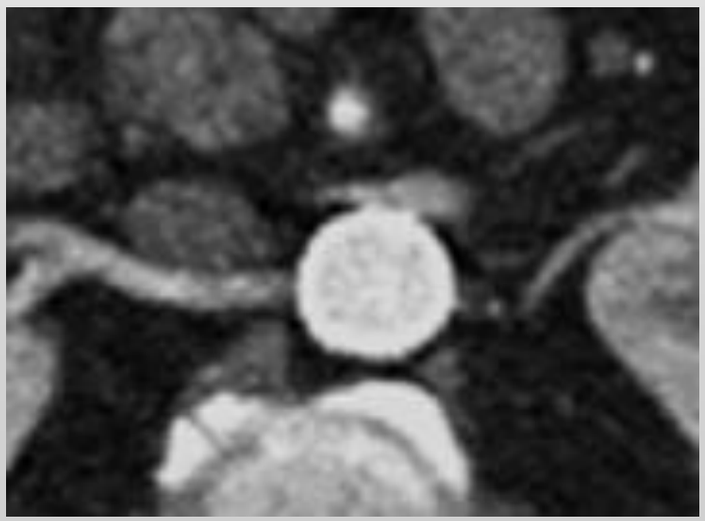
- FL partial thrombosis

Persistent high pressure in FL (mainly diastolic).

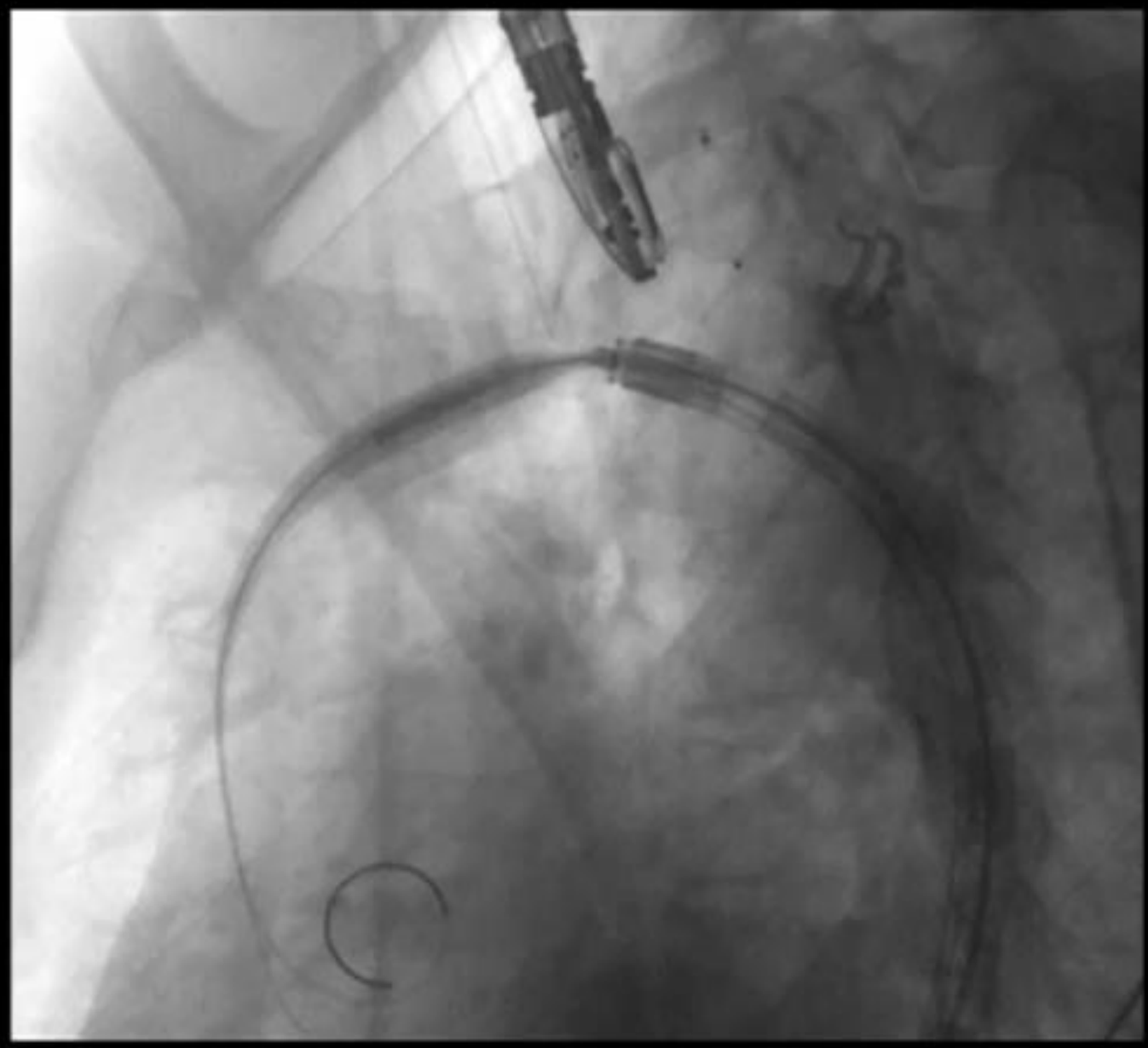
STABILISE concept



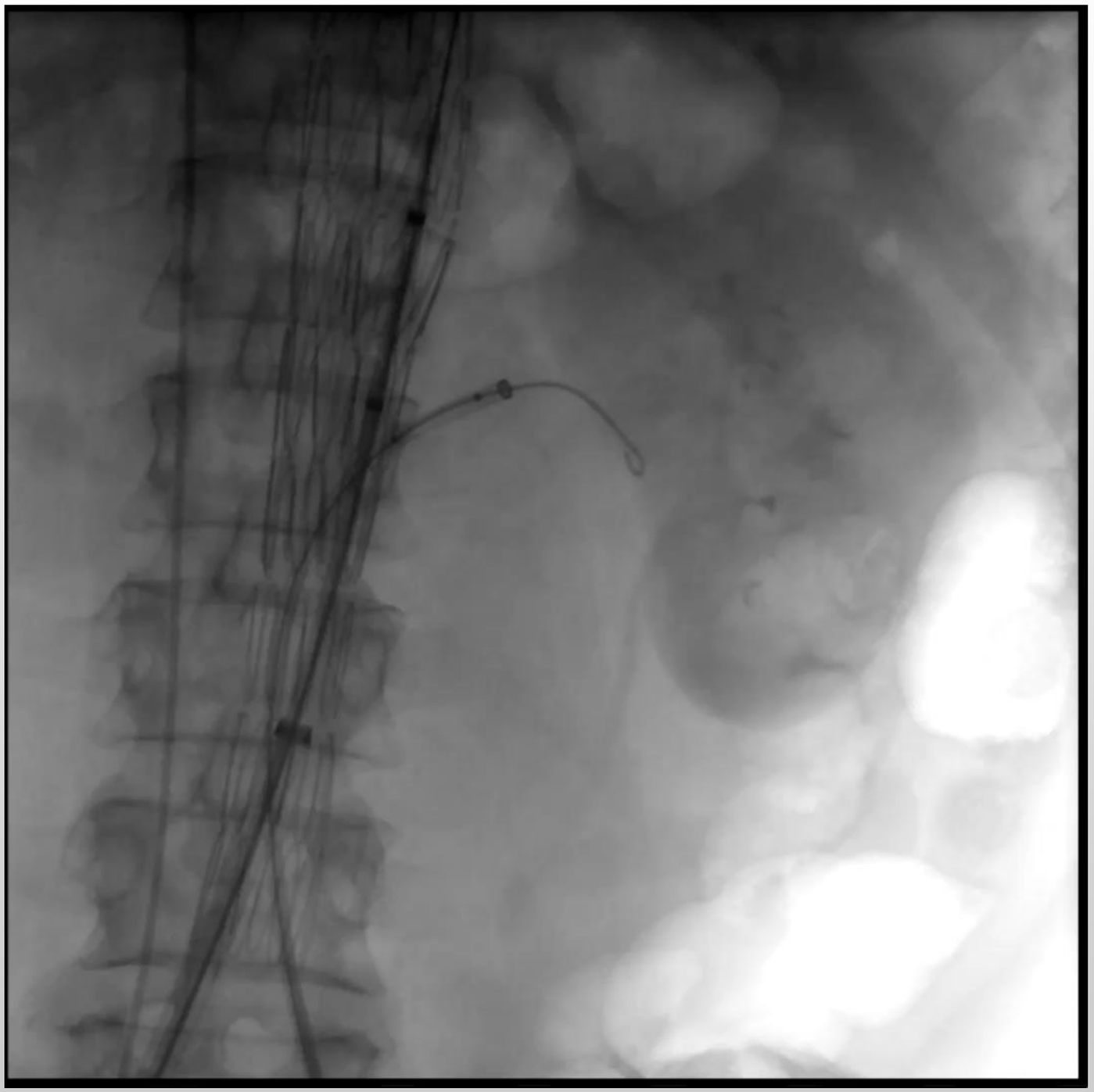




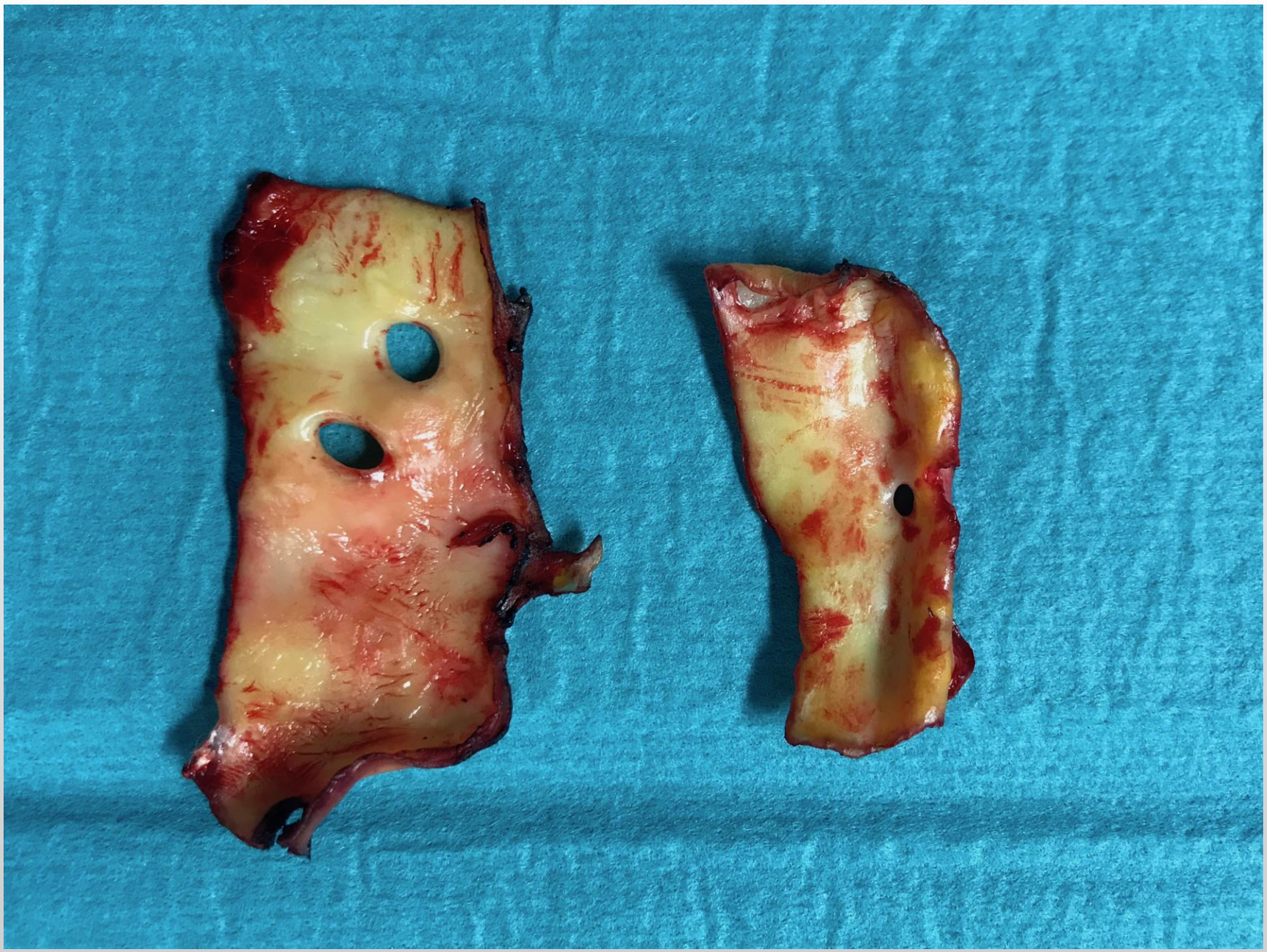
Mossop P. 2012

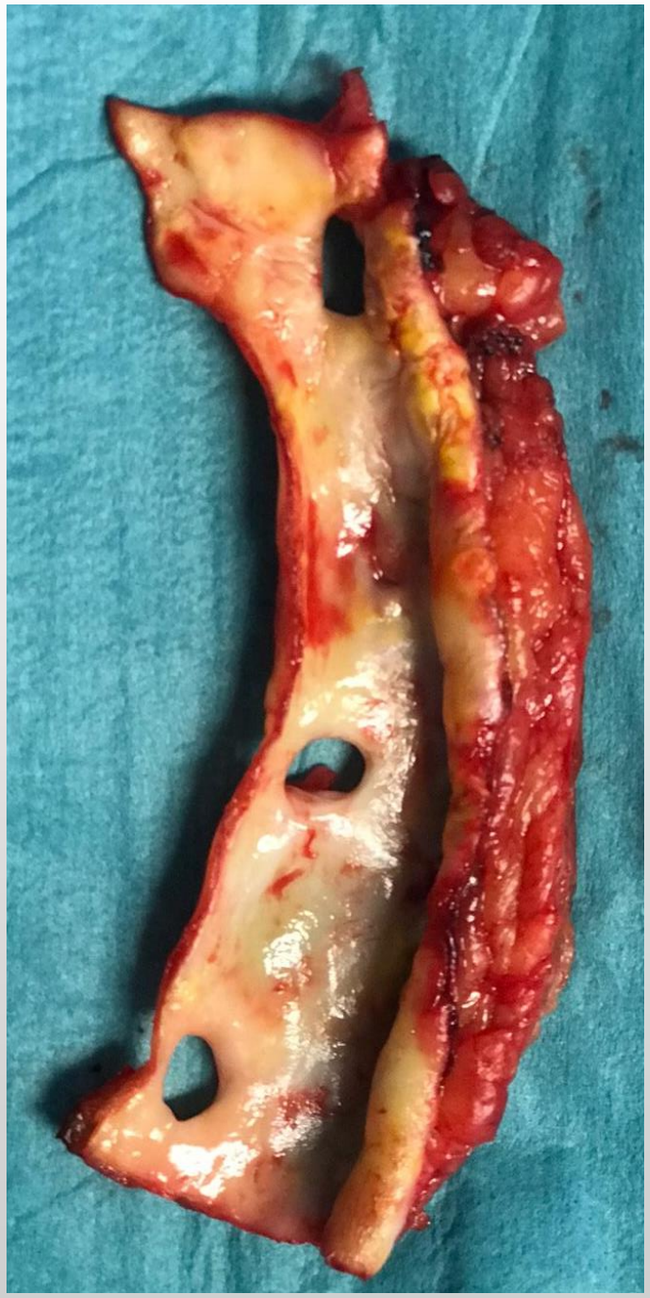


Vessels from FL protection

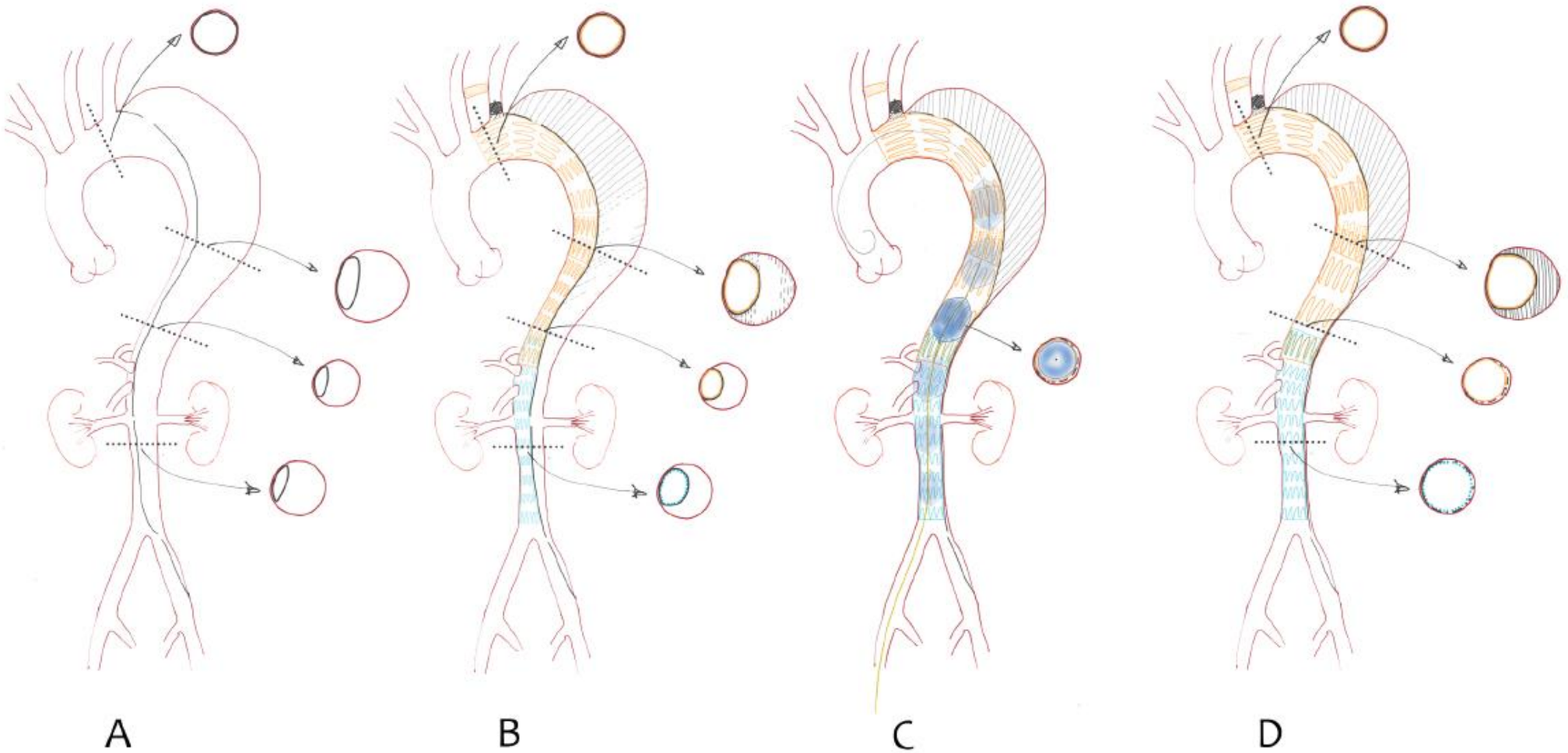


Lamella fenestrations



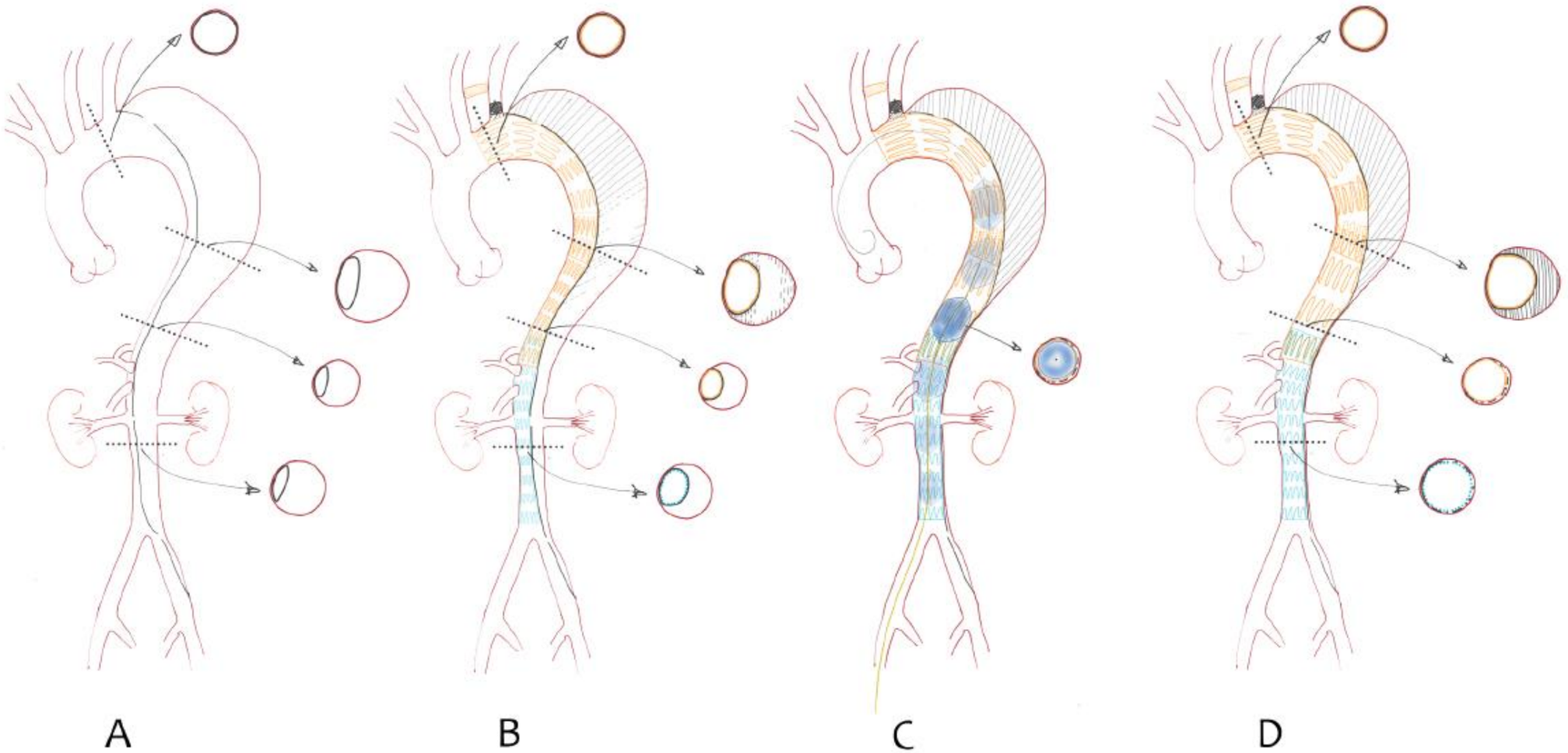


STABILISE DOs and DON'Ts



DO NOT BALLOON PLZ

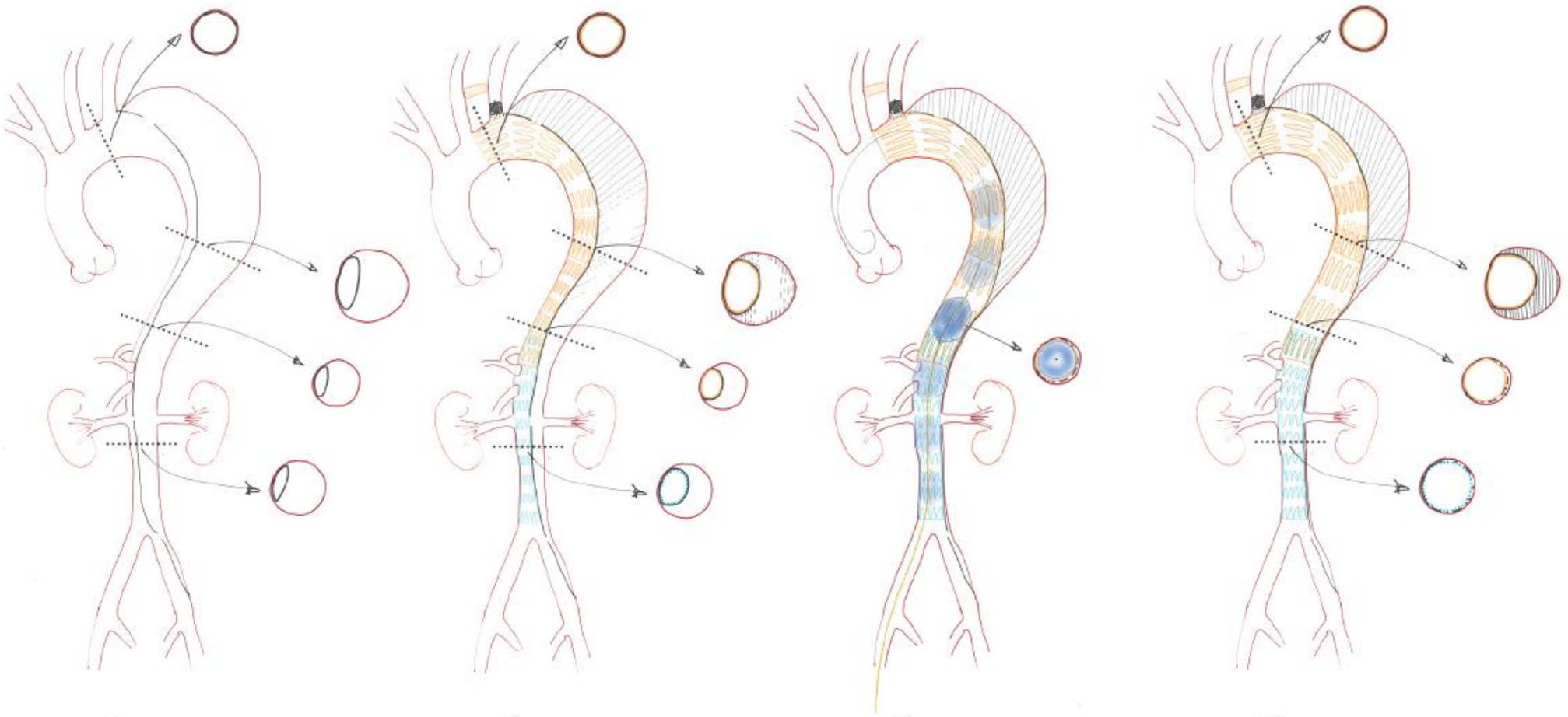
STABILISE DOs and DON'Ts



USE LATEX BALLOON

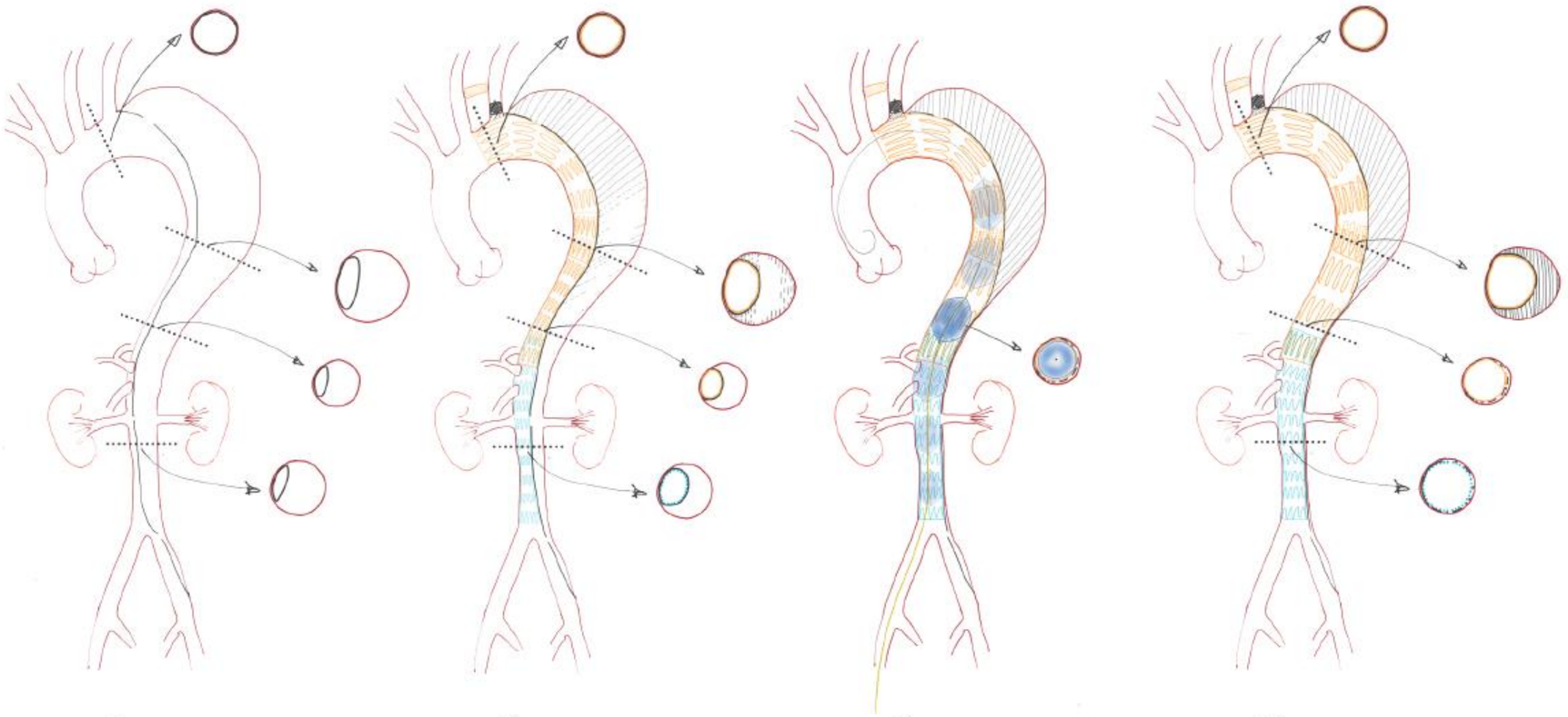
ONLY INSIDE SG

STABILISE DOs and DON'Ts

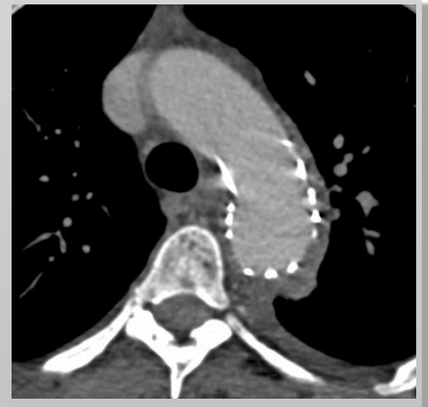
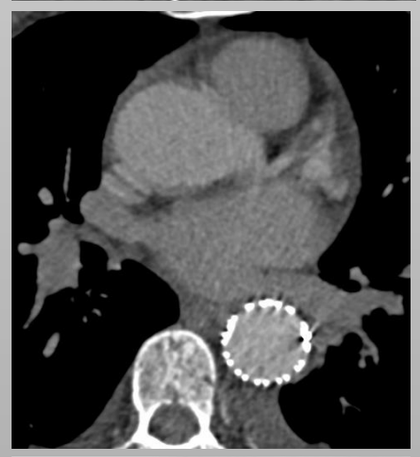
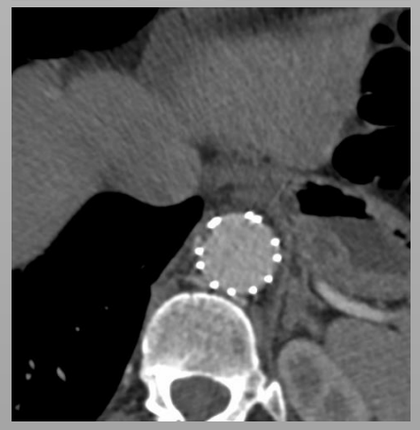
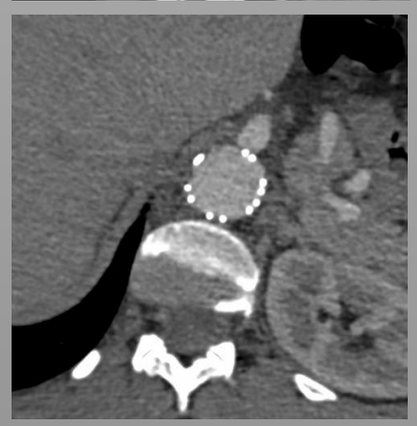
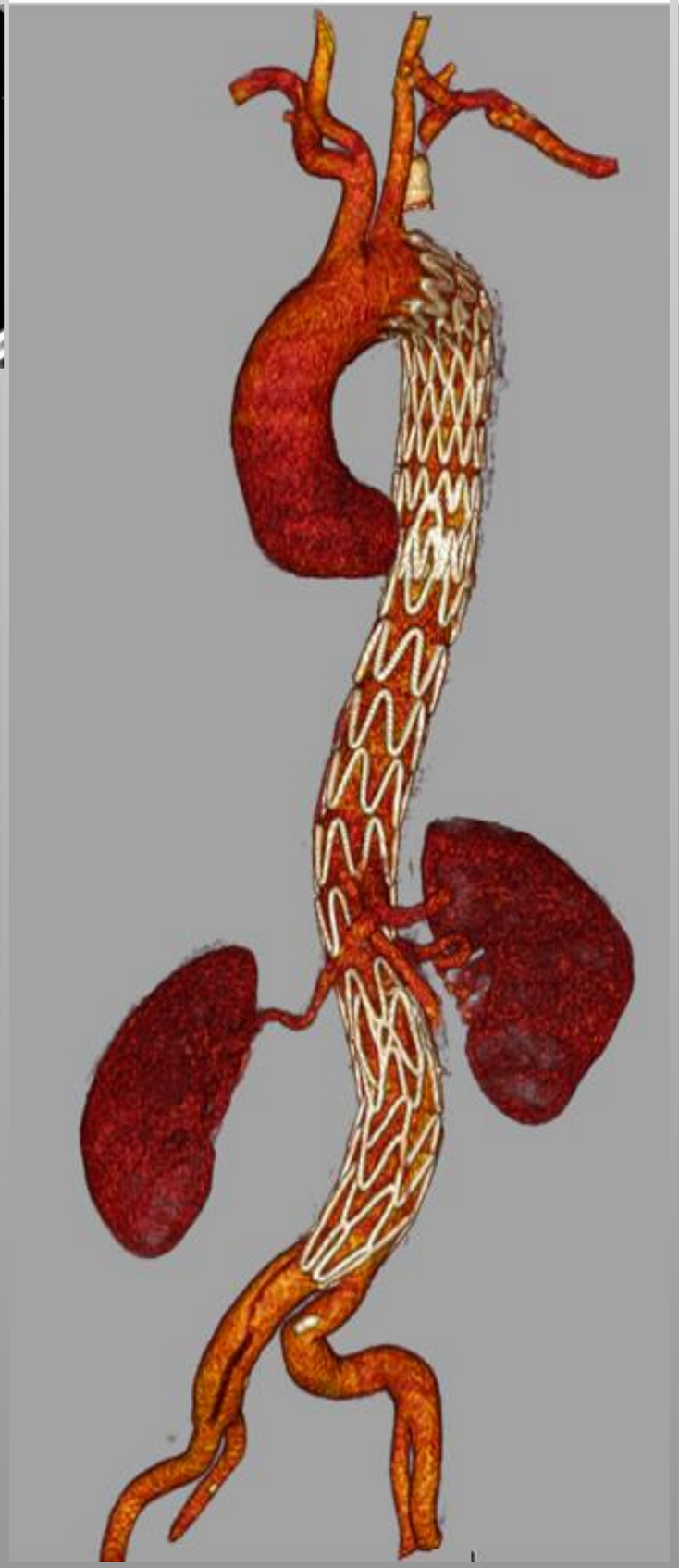
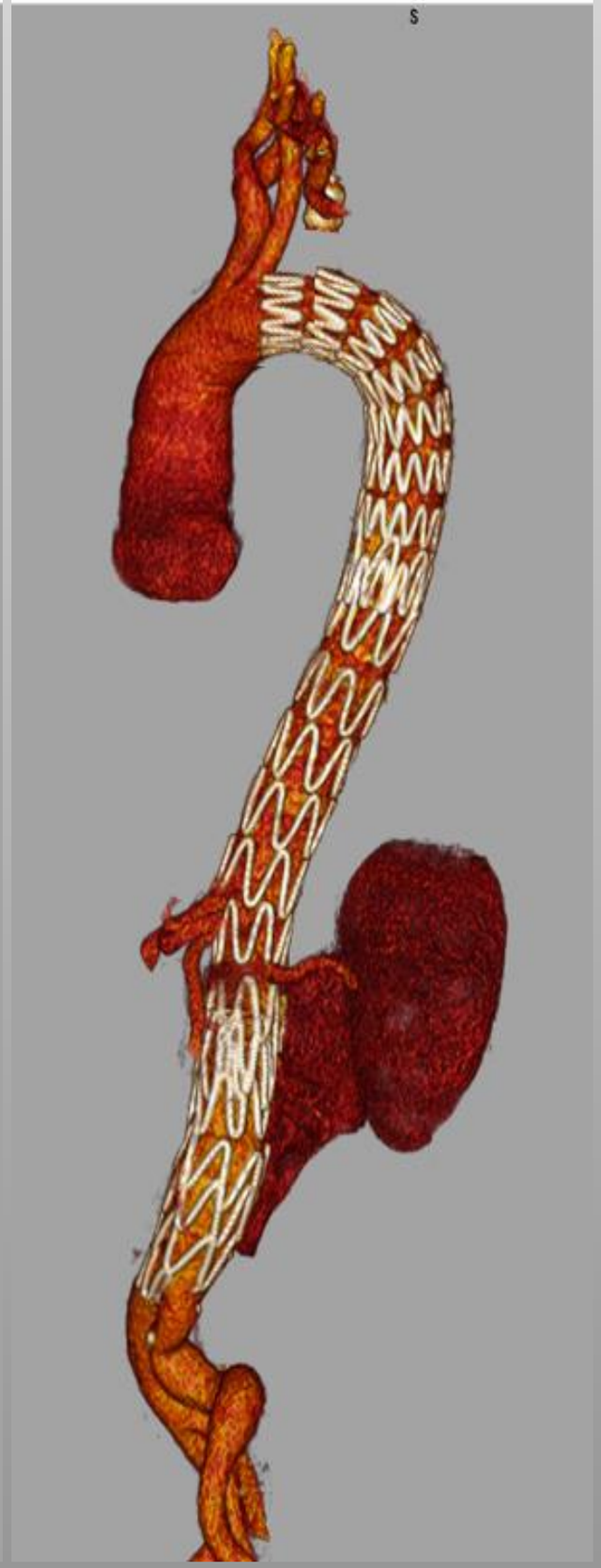


NON-COMPLIANT BALOON SIZED TO WHOLE AORTA INSIDE BARE STENTS

STABILISE DOs and DON'Ts



PROTECT / STENT VESSELS ORIGINATING FROM FL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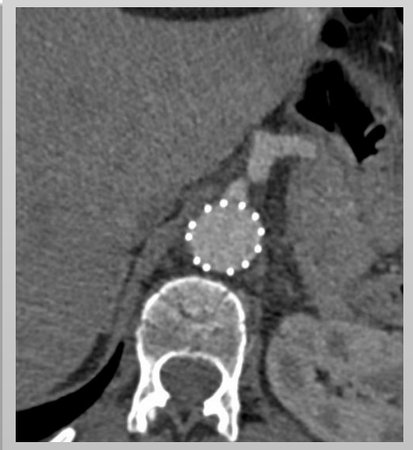
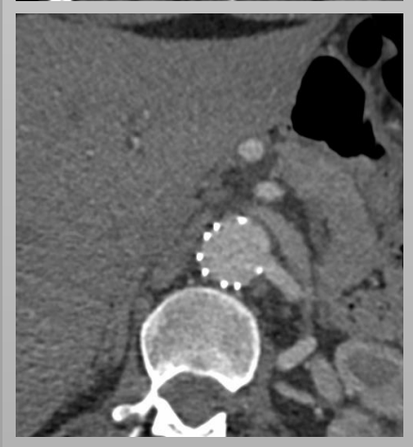
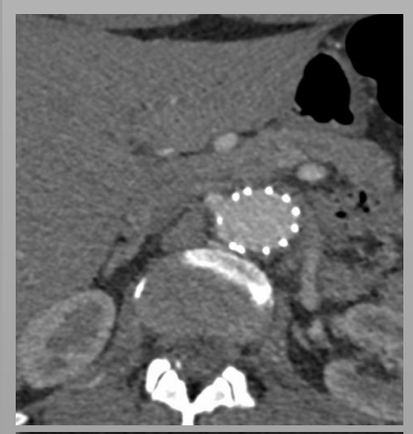
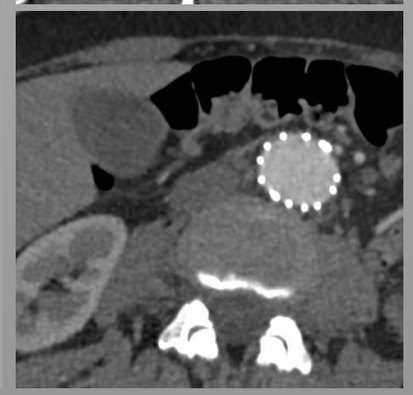





Satisfactory short-term outcomes of the STABILISE technique for type B aortic dissection

By: G. Melissano, L.Bertoglio, E. Rinaldi, D. Mascia, A. Kahlberg, D. Loschi, M. De Luca, F. Monaco, R. Chiesa.

Bad (uncertain) indications

Vs.

Good ones

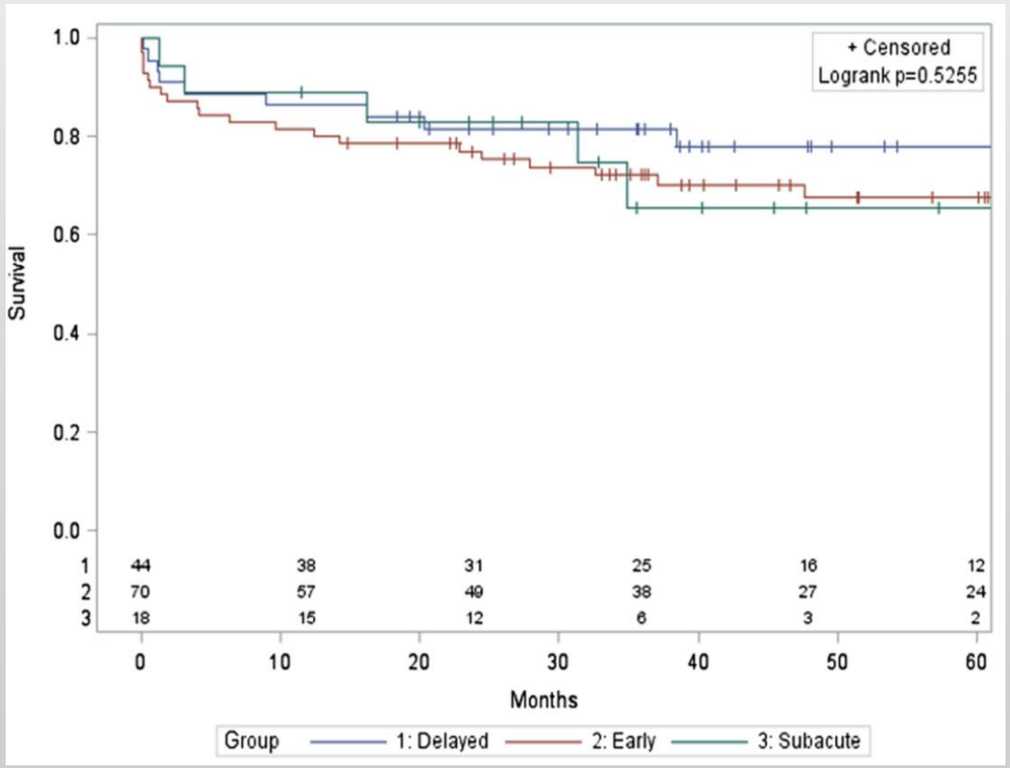
Hyperacute cases

THE JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY

Impact of timing on major complications after thoracic endovascular aortic repair for acute type B aortic dissection

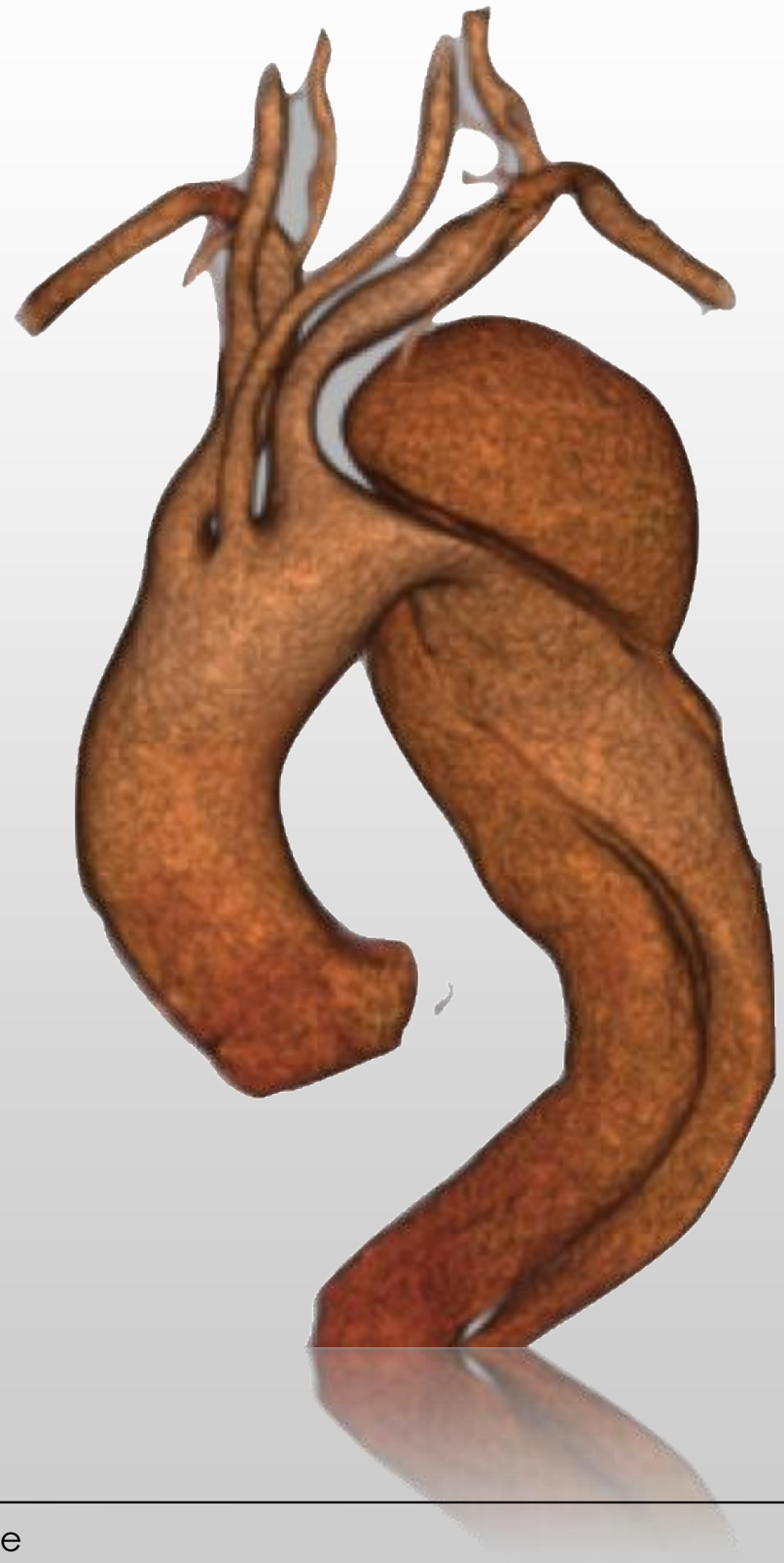
Nimesh D. Desai, MD, PhD,[a,b] Jean-Paul Gottret, MD,[b] Wilson Y. Szeto, MD,[b] Fenton McCarthy, MD,[a,b] Patrick Moeller, BS,[b] Rohan Menon, BS,[b] Benjamin Jackson, MD,[c] Prashanth Vallabhajosyula, MD,[b] Grace J. Wang, MD,[c] Ronald Fairman, MD,[c] and Joseph E. Bavaria, MD[b]

«Delayed intervention appears to lower the risk of complications of TEVAR for aortic dissection in patients who are stable enough to wait».

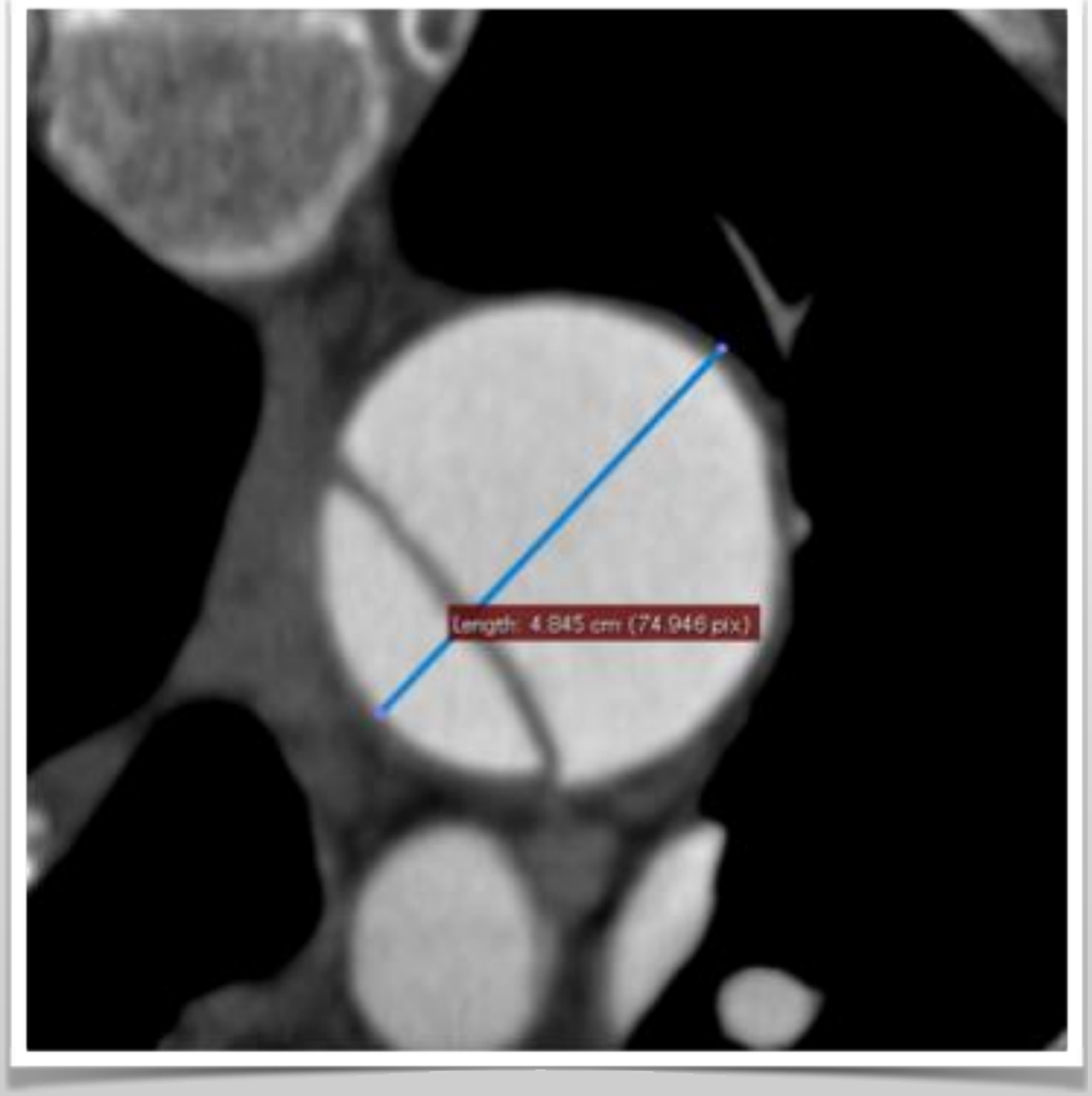


Desai et al., J Thorac Cardiovasc Surg, 2015

Chronic cases

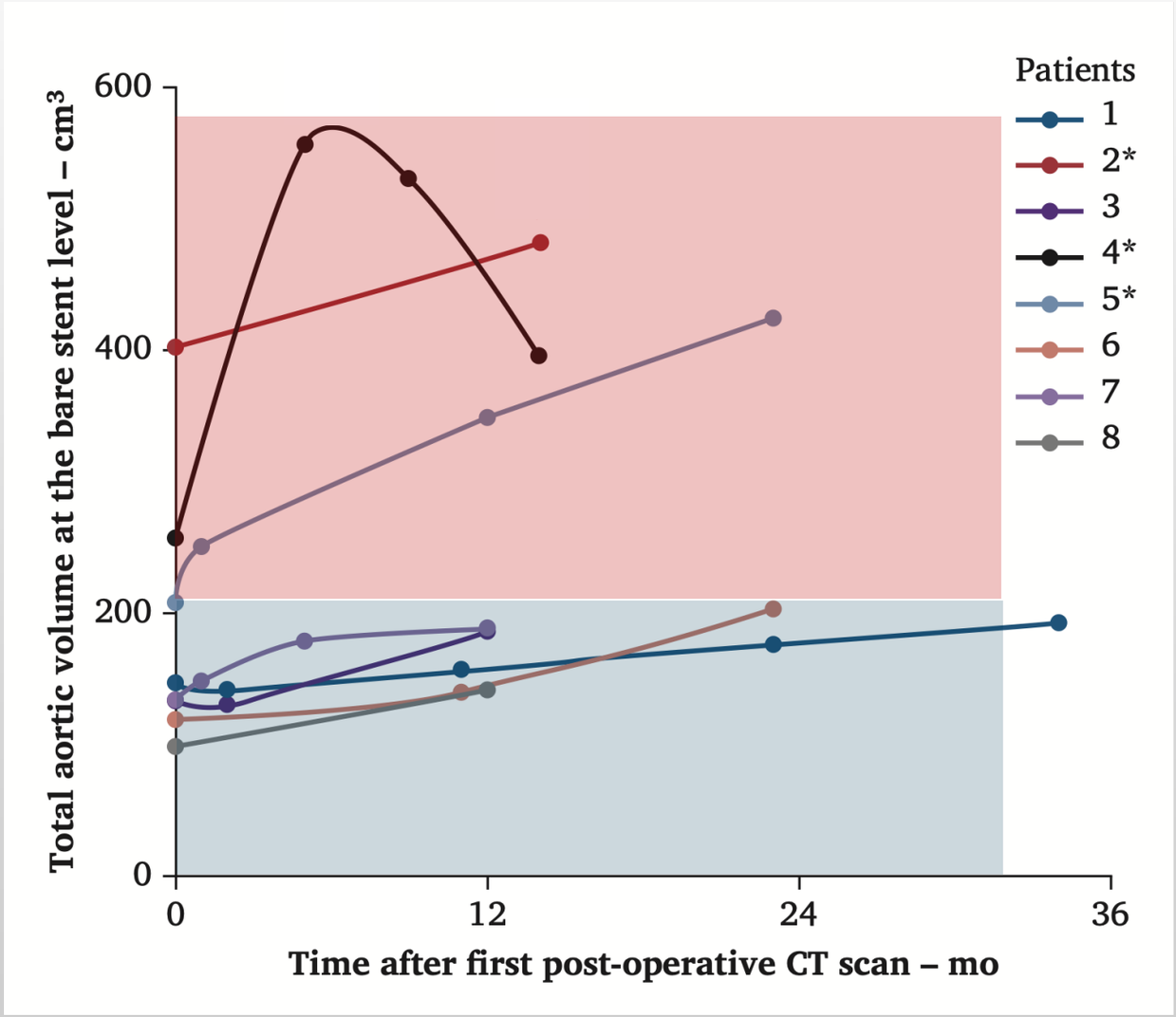


AORTA LARGER THAN 42 mm @ COELIAC



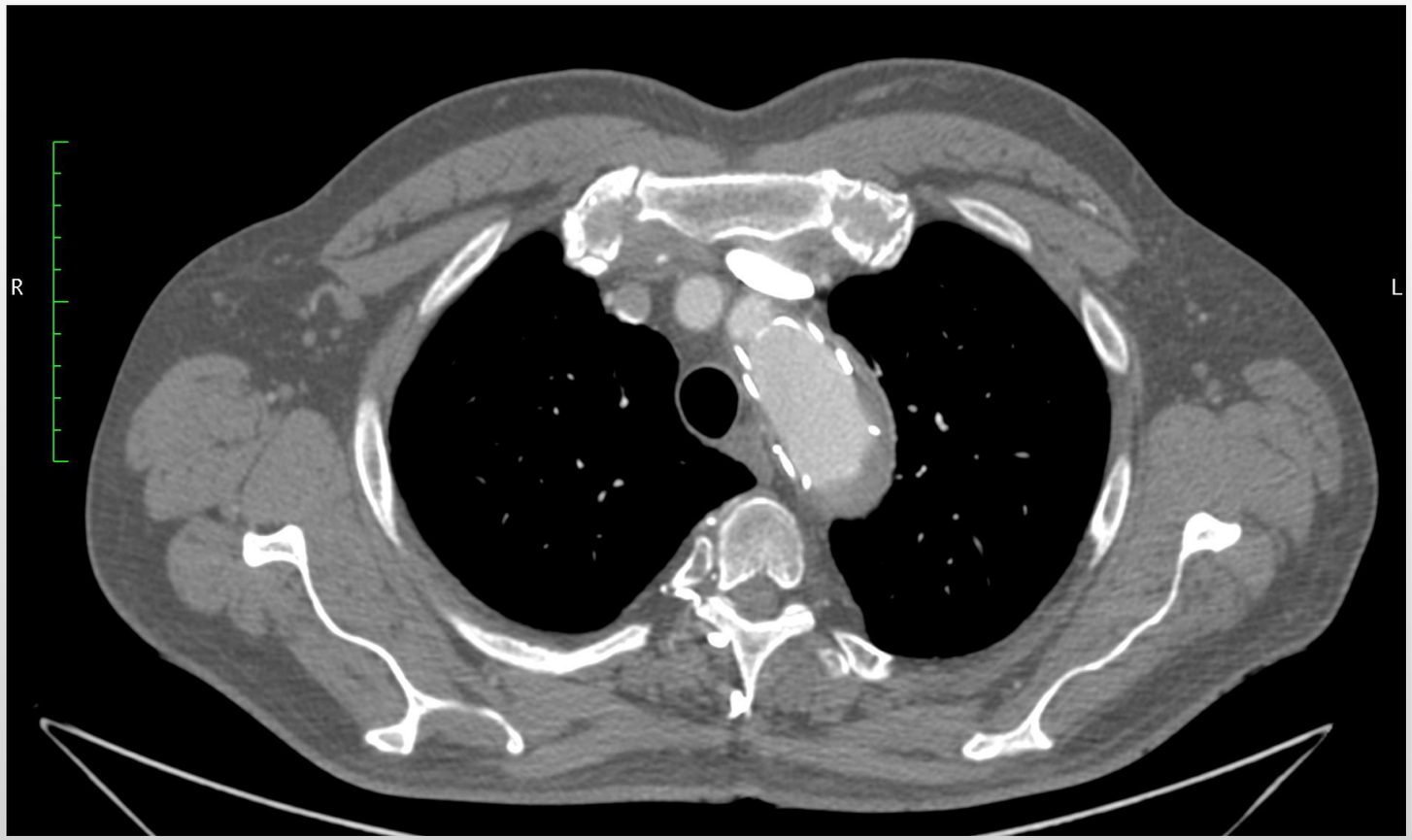
A word of caution…
Connective tissue disorders

Aneurysmal evolution of the aorta at the bare stent level in CTD patients



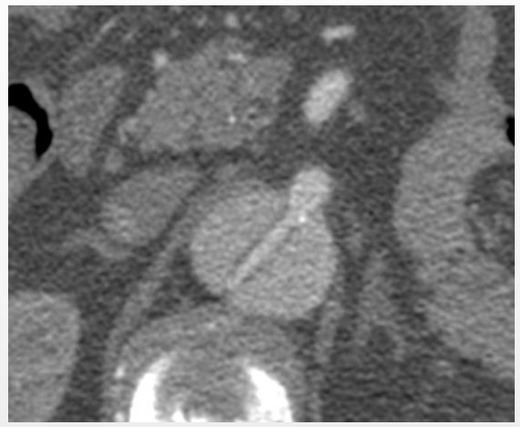
Soler et al., Eur J Vasc Endovasc Surg 2021

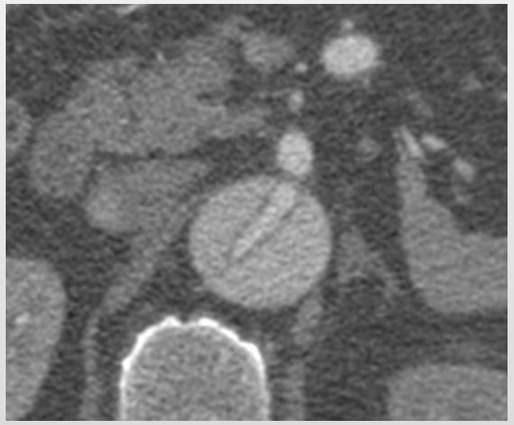
STABILISE: 2 years follow up In CTD

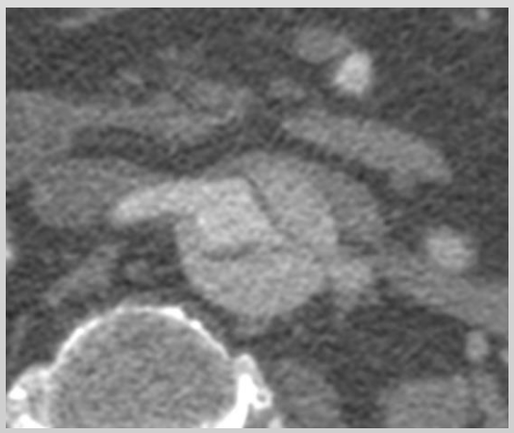


“Good Indications”

- Subacute cases (15-90 days)
- Distal aortic diam. < 40 mm
- “Heathy” landing zones (SAT covering and rerouting)







Final thoughts …

"STABILISE" …. works !!

But we do need to gather more robust data in an <u>International Registry</u>

stabiliseregistry@gmail.com

PLEASE JOIN
Thank you