

THE 26TH INTERNATIONAL EXPERTS SYMPOSIUM

CRITICAL ISSUES

IN AORTIC ENDOGRAFTING

MARCH 21 & 22 2024

COPENHAGEN/MALMÖ

Techniques to manage the False Lumen in Aortic Dissection

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Disclosures

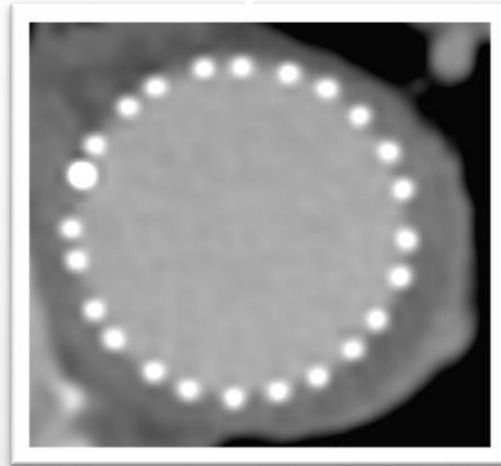
PI/Co-PI for several thoracic and abdominal aortic stent graft trials (Cook, Inc, Cordis® Corporation, Bolton Medical)

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

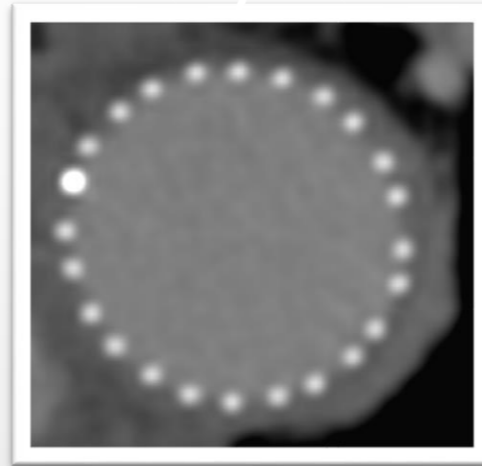


1/3 to 1/2 ATBAD evolve to aneurysm

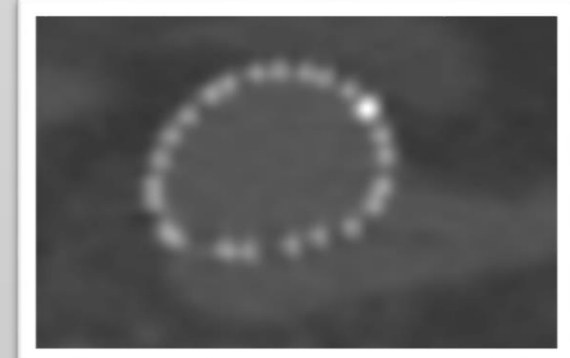
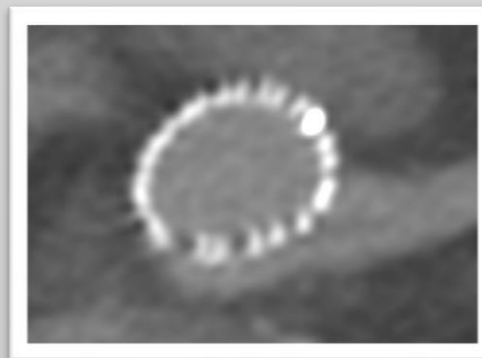
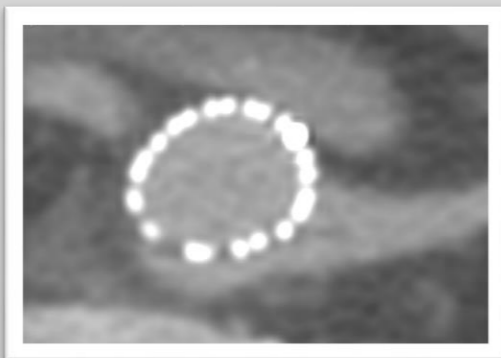
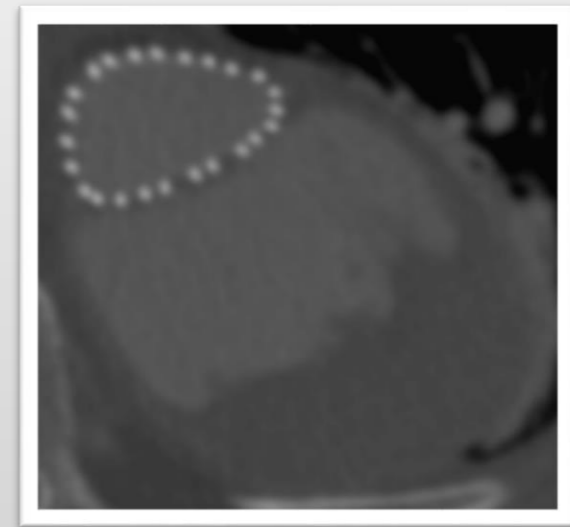
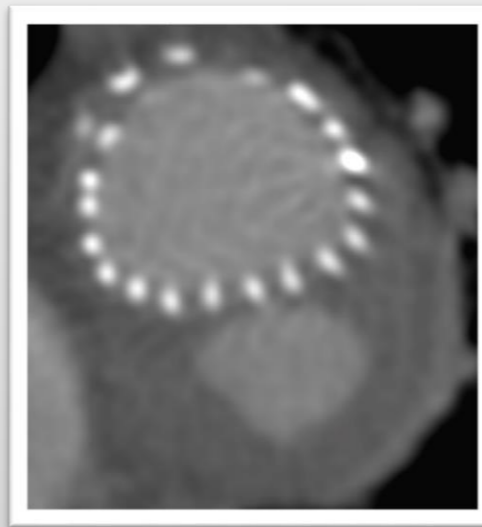
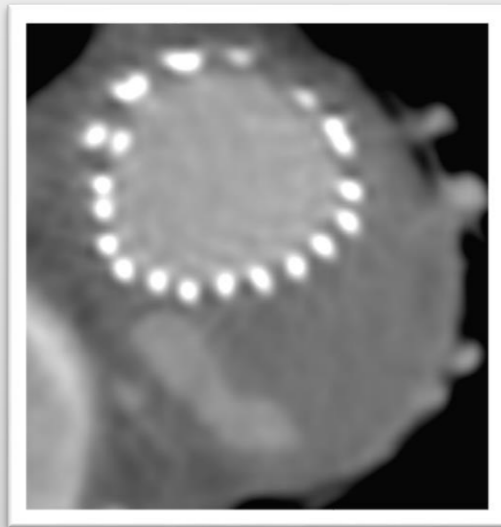
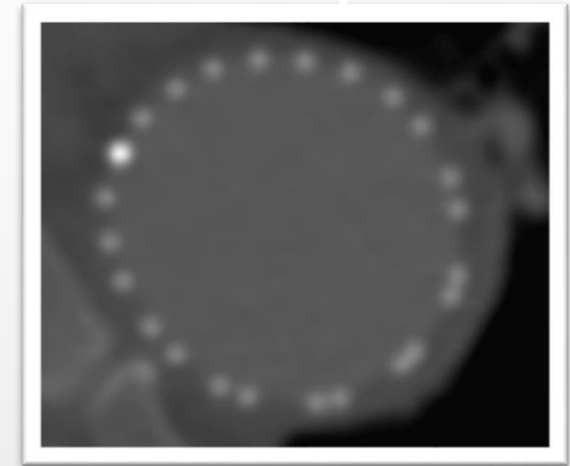
1 year



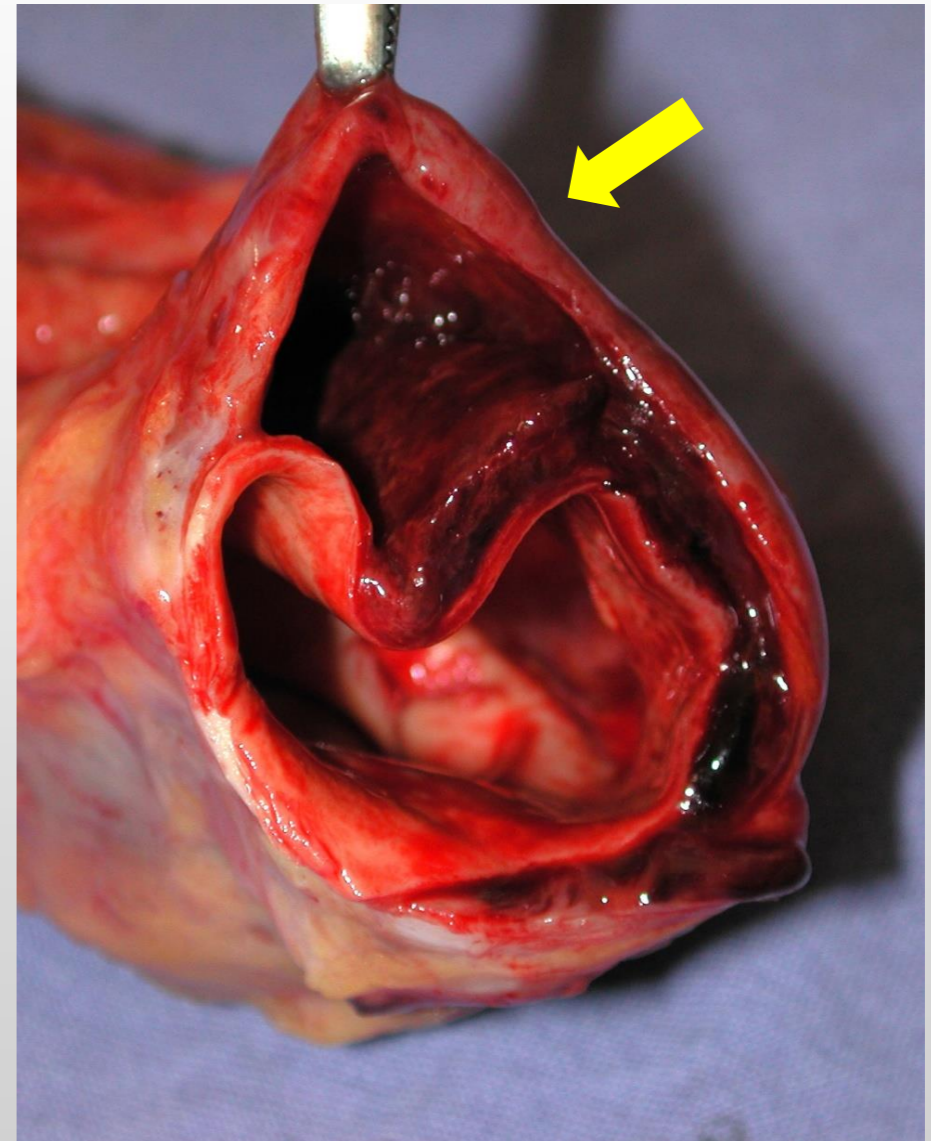
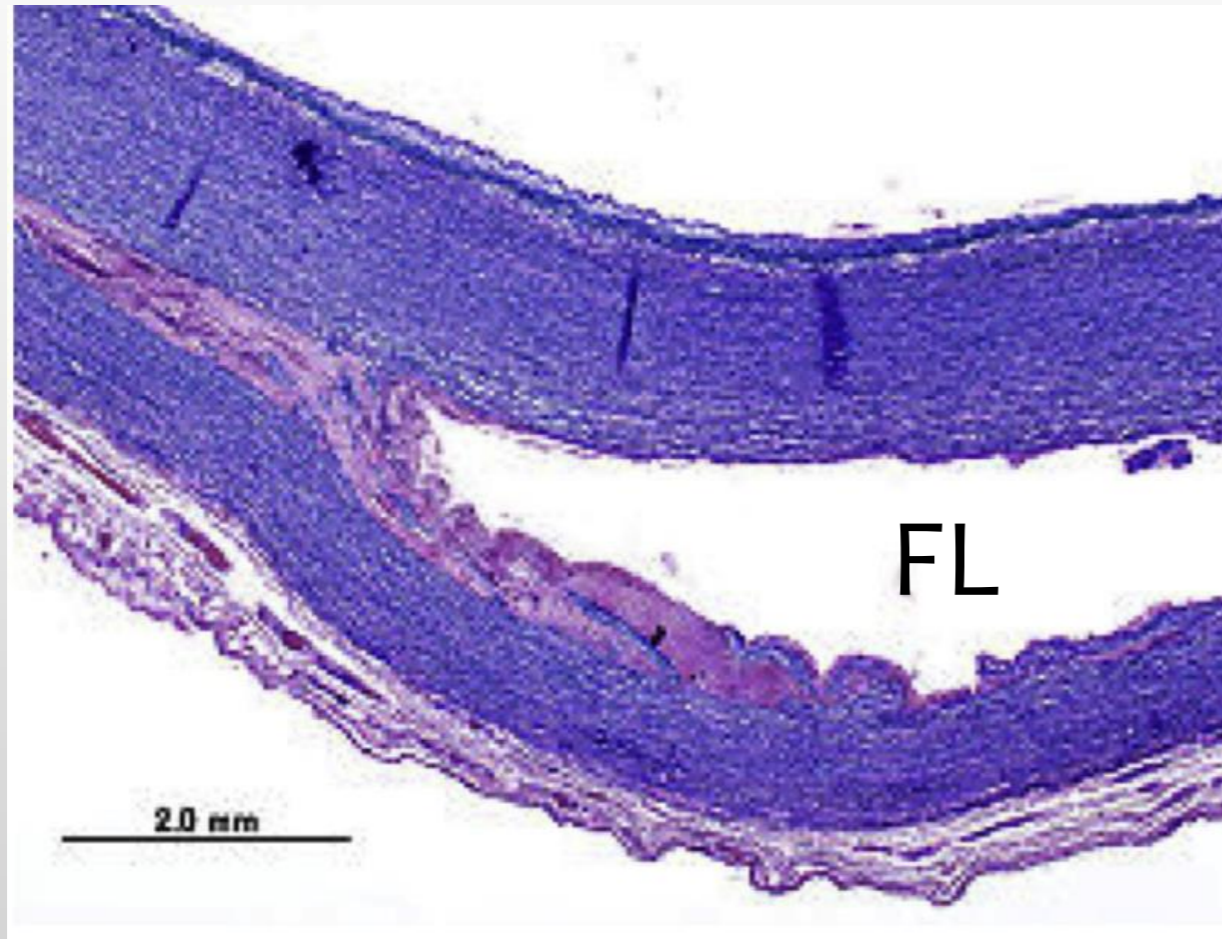
5 years



12 years

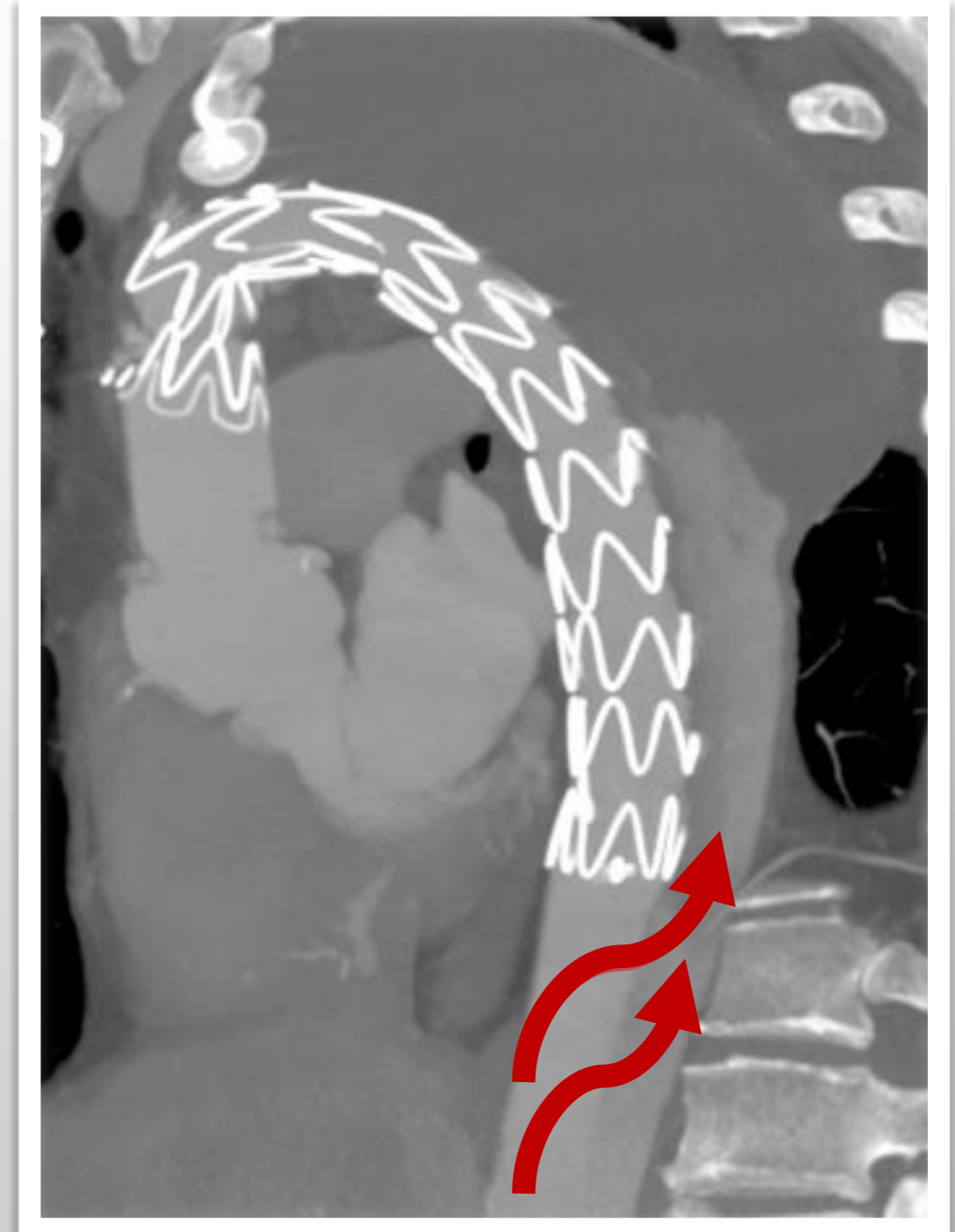


FL outer wall thickness

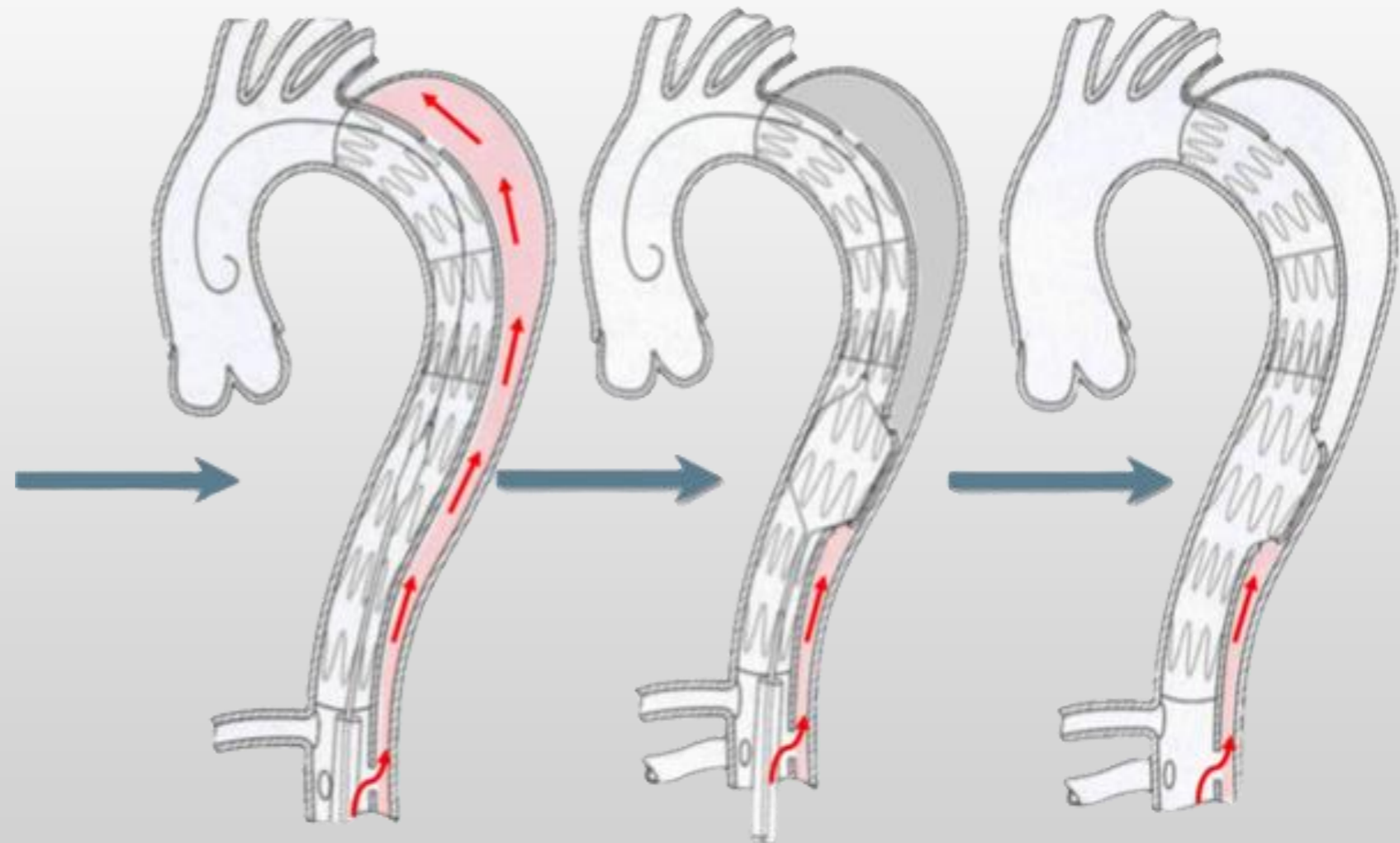
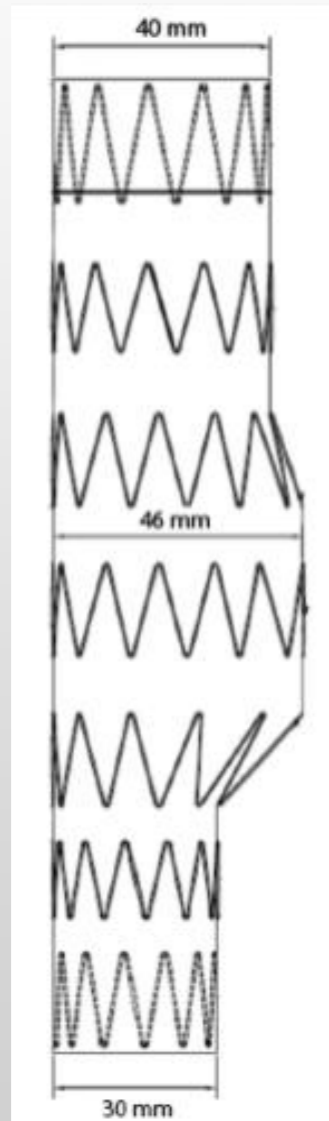


How to promote aortic remodelling

**Induce FL
complete
thrombosis**



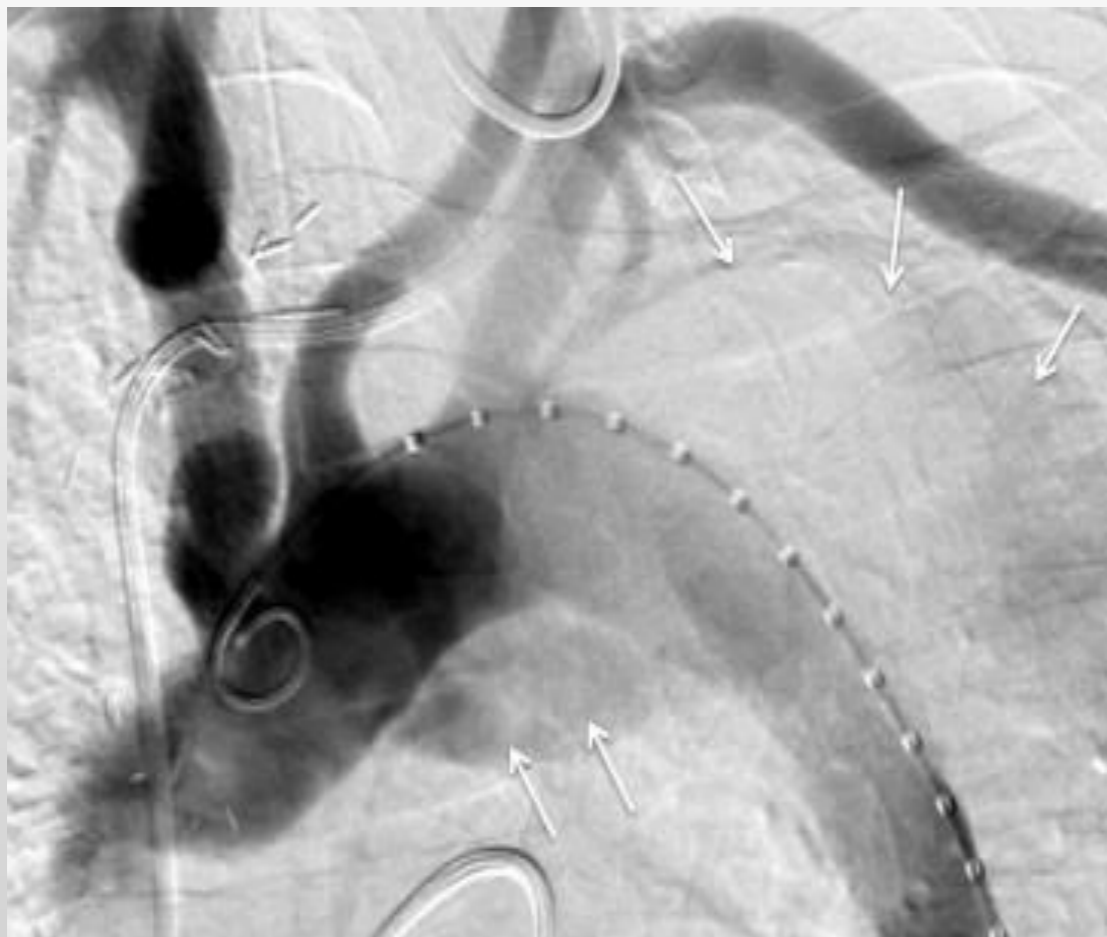
Knickerbocker technique



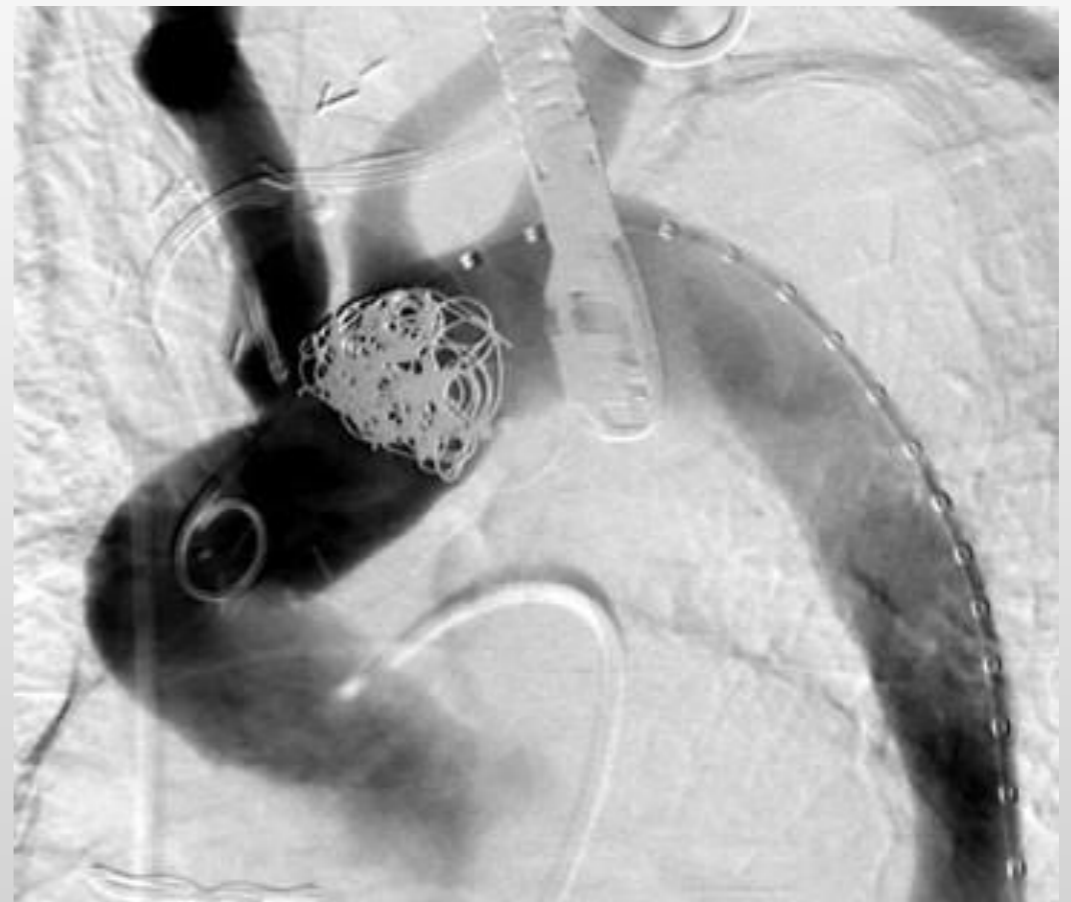
Rohlfs, J Endovasc Ther, 2022



Coils embolizations



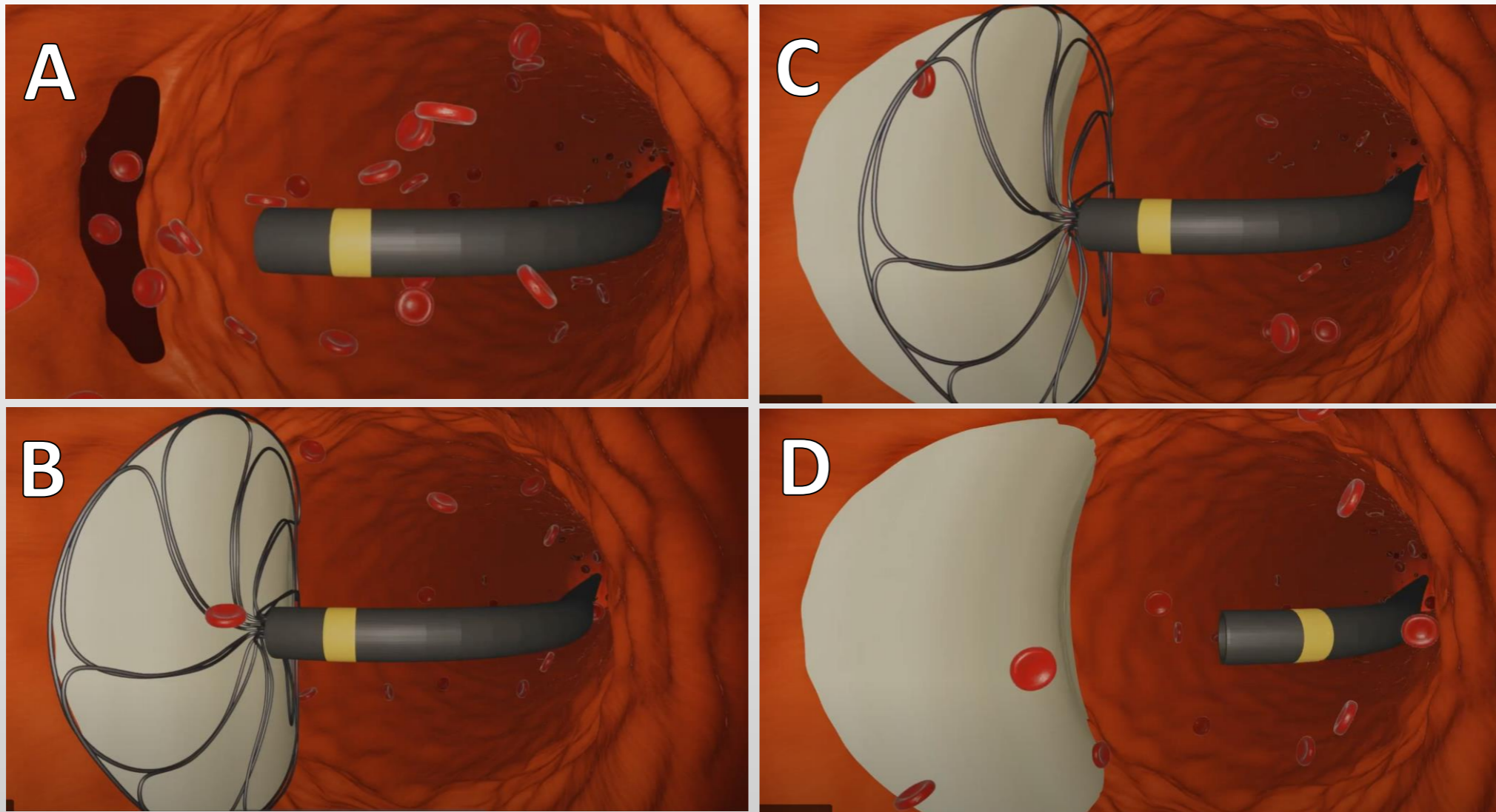
Arrows showing false lumen reperfusion



after embolization



Aortyx[®] Endopatch

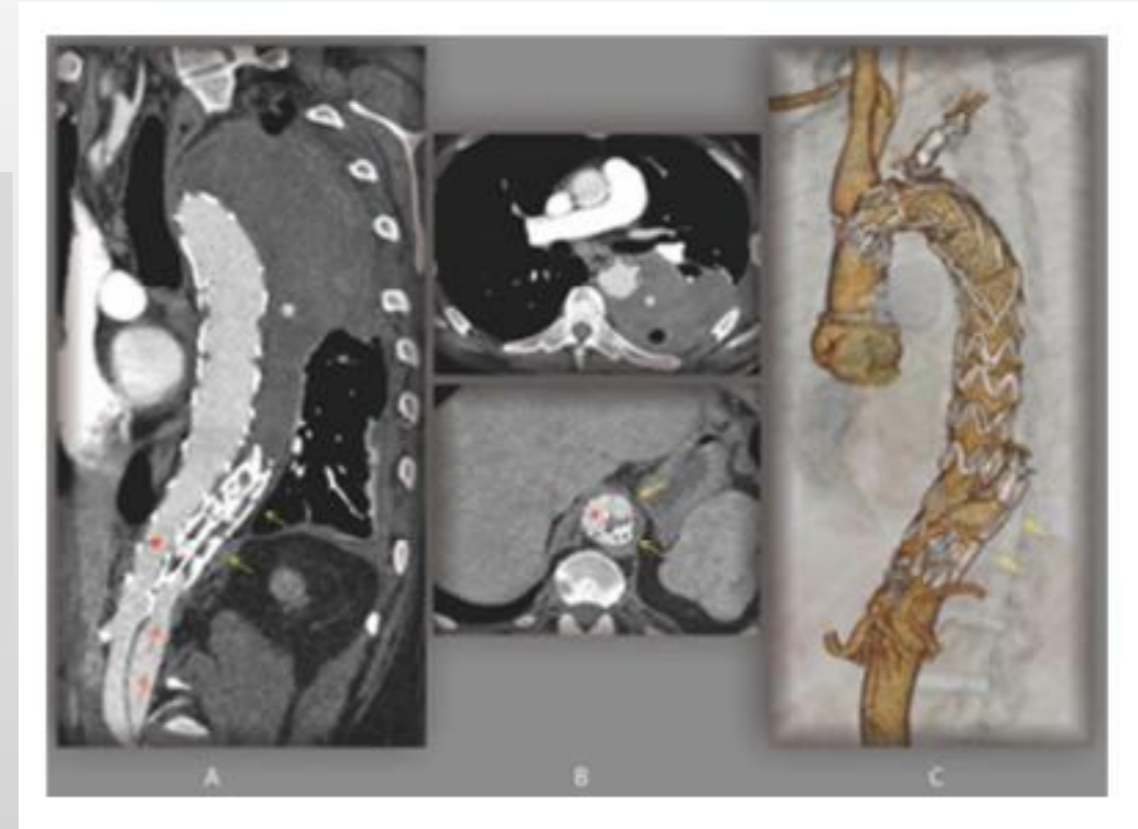
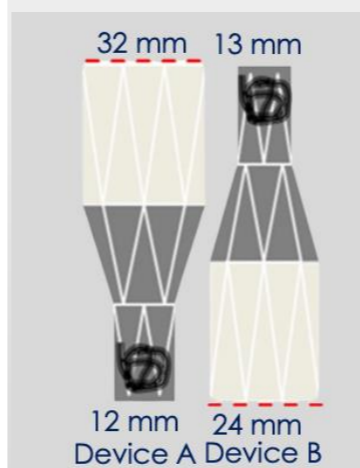
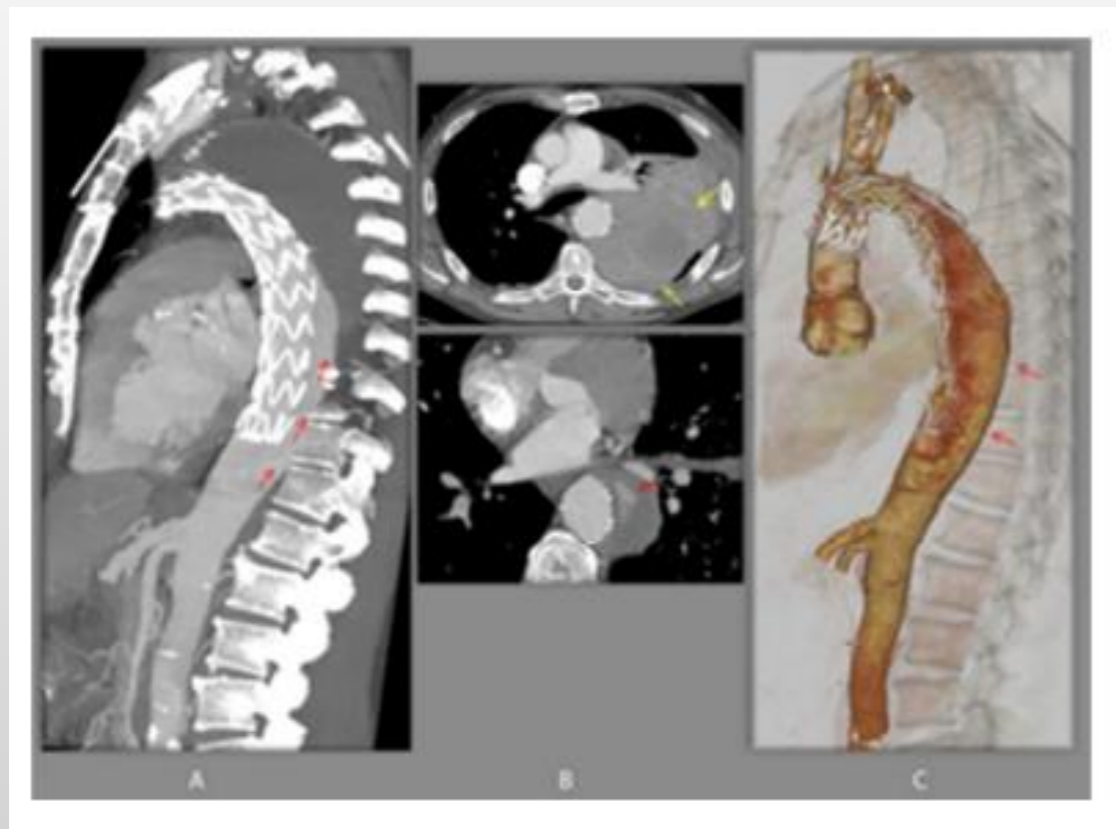


Courtesy of Prof. Riambau



False Lumen Occlusion

Home-made Plugs



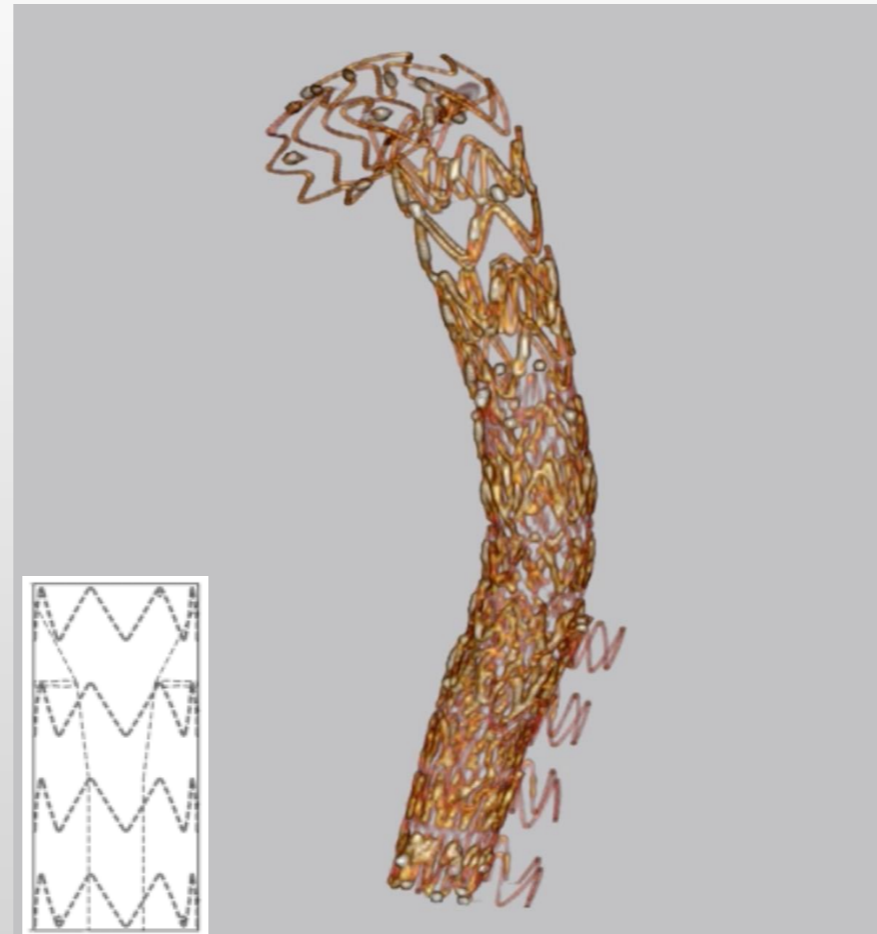
Candy-Plug (Cook Medical)

CP



CMD Candyplug I - 2013

FLOP



CMD Candyplug II - 2017



CMD Candyplug III - 2019

Self-occluding



Custom Made Candy Plug for Distal False Lumen Occlusion in Aortic Dissection: International Experience

Multicentre registry, 155 patients, 2013-2020, 18 centers

Early results

| Technical success | Clinical success | 30-day mort. | Stroke | SCI | Complete FL occlusion | CP related reint. | Stent-graft related reint. |
|-------------------|------------------|--------------|--------|-----|-----------------------|-------------------|----------------------------|
| 100 % | 89 % | 3% | 3% | 2% | 77 % | 3% | 8% |

Midterm results (142 pt available)

| Diameter decrease | Diameter stability | Diameter increase | Follow-up |
|-------------------|--------------------|-------------------|-----------|
| 47 % | 49% | 4% | 23 (6-87) |



HSR Consecutive patients (2016-2022)

- 33 patients, mean age of 60 ± 9
(28 men)
- 11 (33.3%) patients TEVAR + CP
(single procedure)
- 22 (66.7%) patients TEVAR first, followed
by CP implantation (staged procedure)



Results of the primary procedure

- No in-hospital deaths
- 2 cases of SCI: one permanent and one transitory
- 23/33 patients: FL stability (5) and aortic remodeling (17) FL diameter decrease



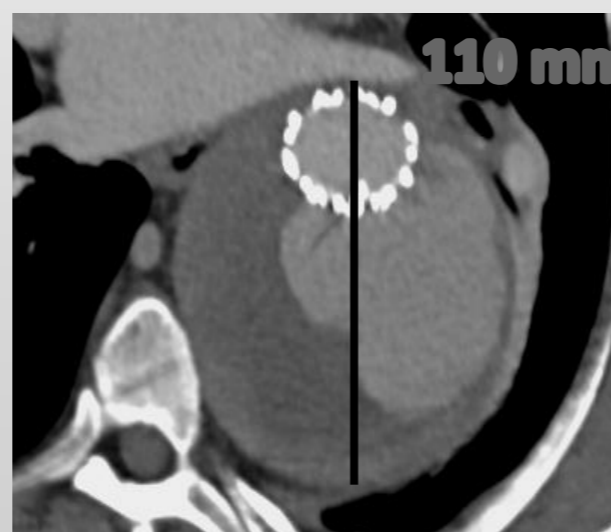
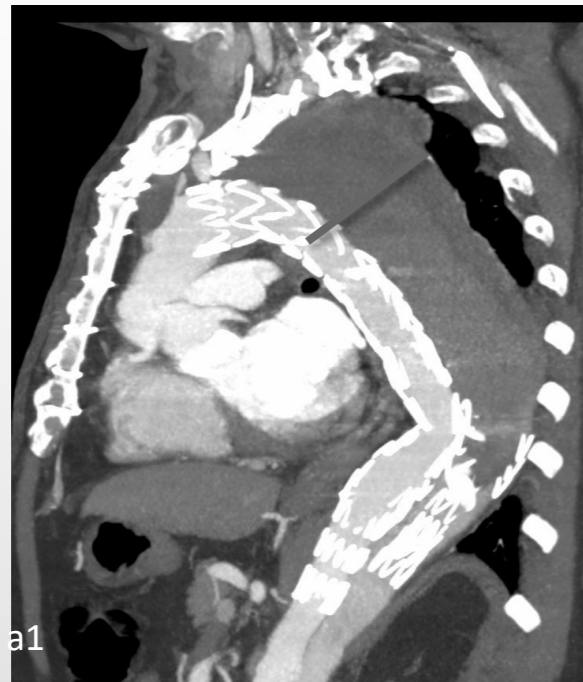
PRE



POST



Primary Failure



1 month

1 year

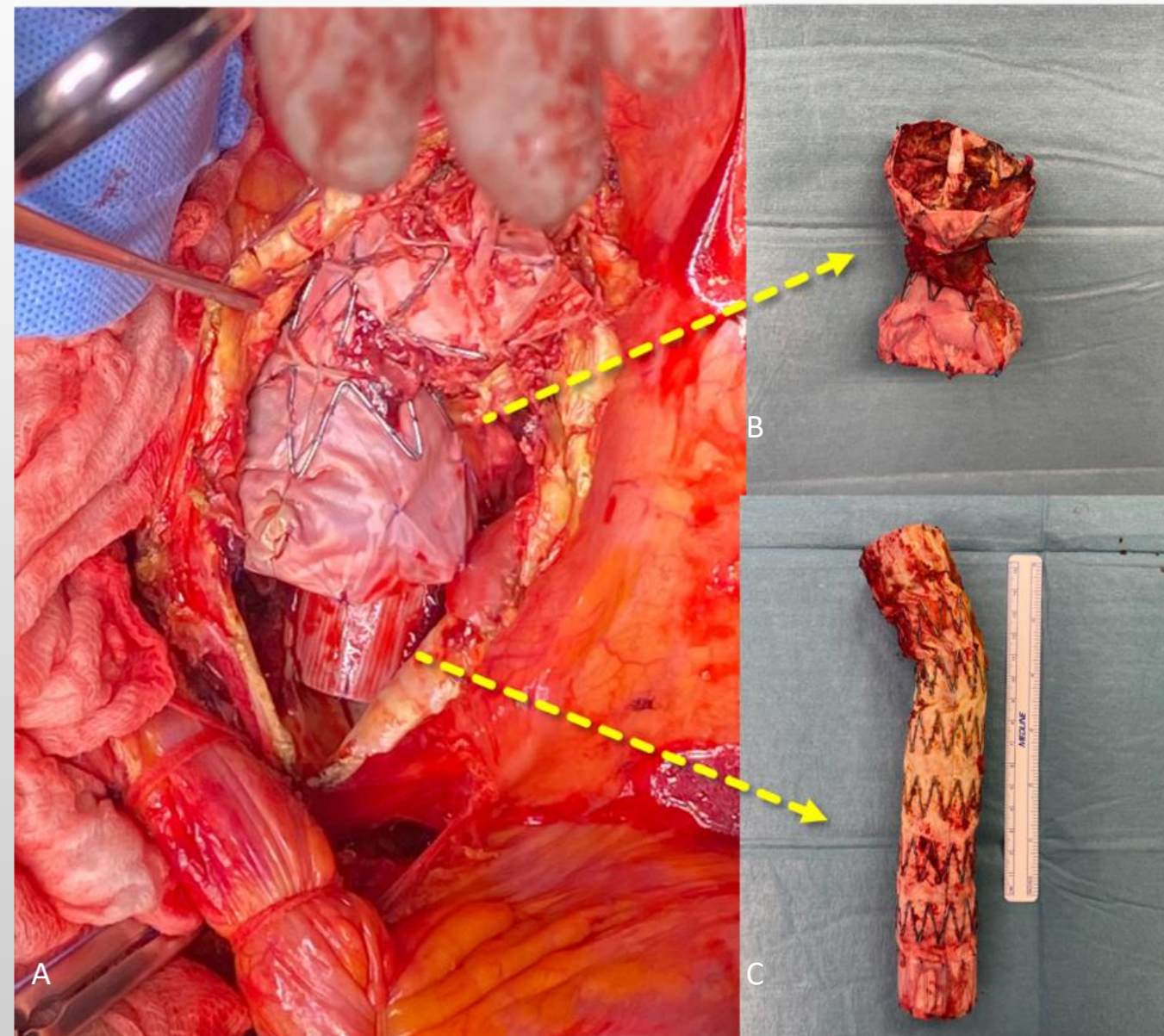


Distal aneurysmal degeneration



Reinterventions

- 10/33 patients
- 9 male, mean age 60.5 ± 7.6 years
- Mean last aortic diameter before reintervention: 77.4 ± 15.4 mm
- 1 in-hospital death, 2 SCI



CP Conclusions

- CP technique relatively safe and effective
- Significant rate of aortic-related reinterventions, especially in large aortic diameters
- Better definition of the timing and modality of CP implantation
- Lifelong and closer surveillance may be necessary



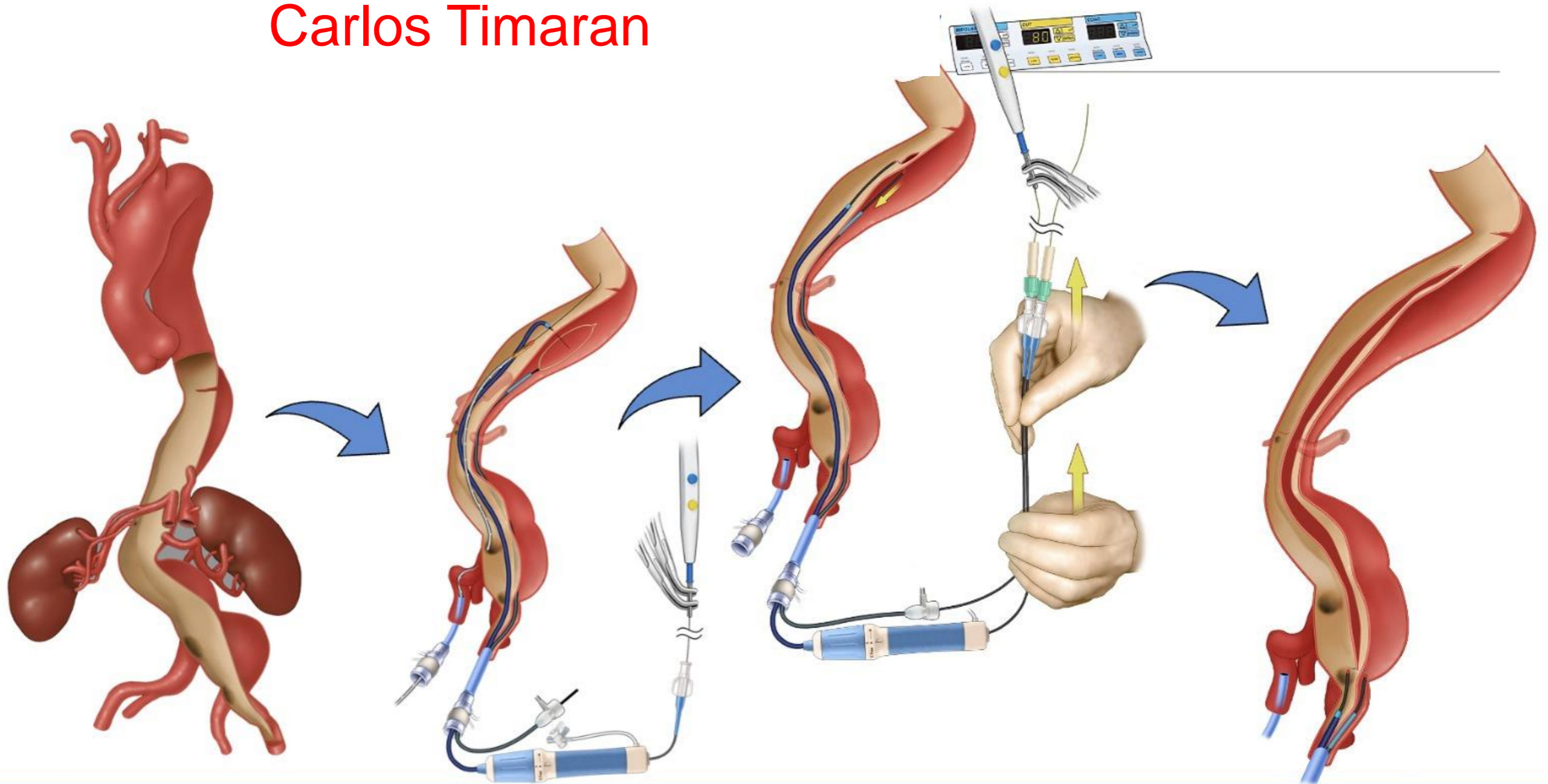
How to promote aortic remodelling

**Induce the formation of
a «single-channeled»
aorta**



Endovascular Electrosurgical Septotomy

Carlos Timaran



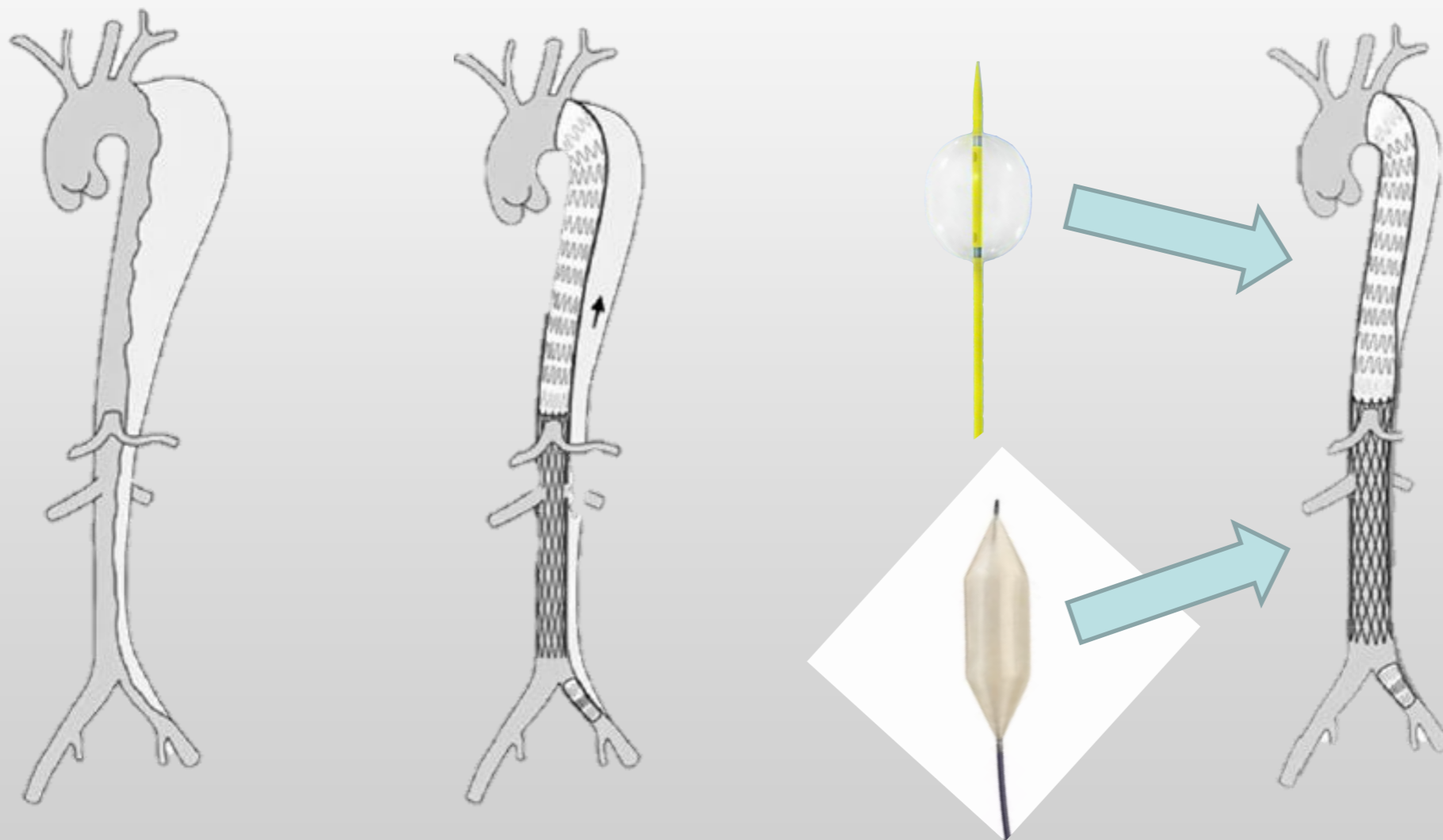
Courtesy: Gustavo Oderich, MD

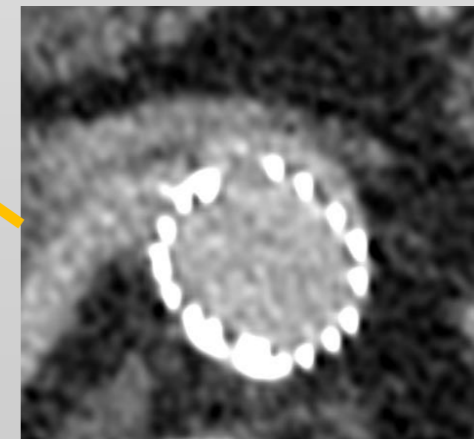
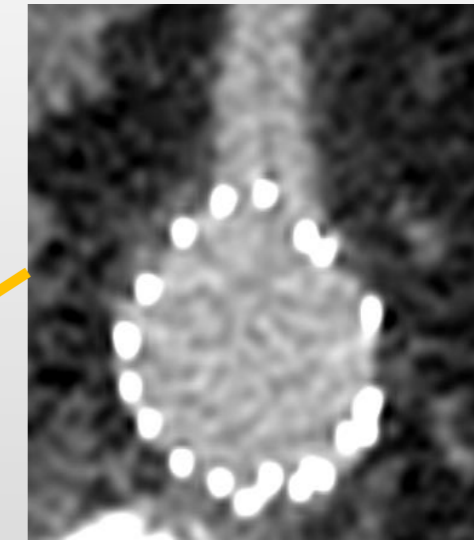
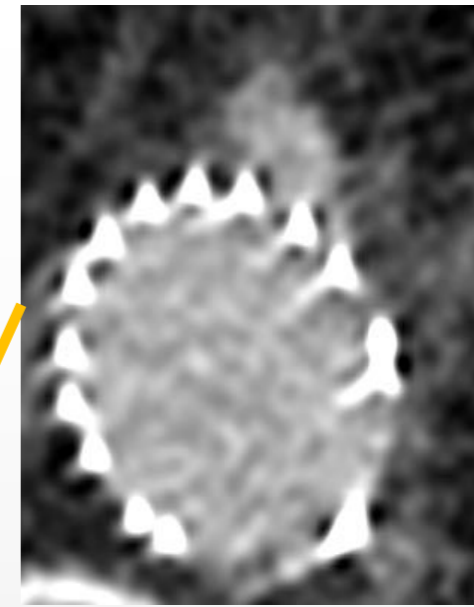
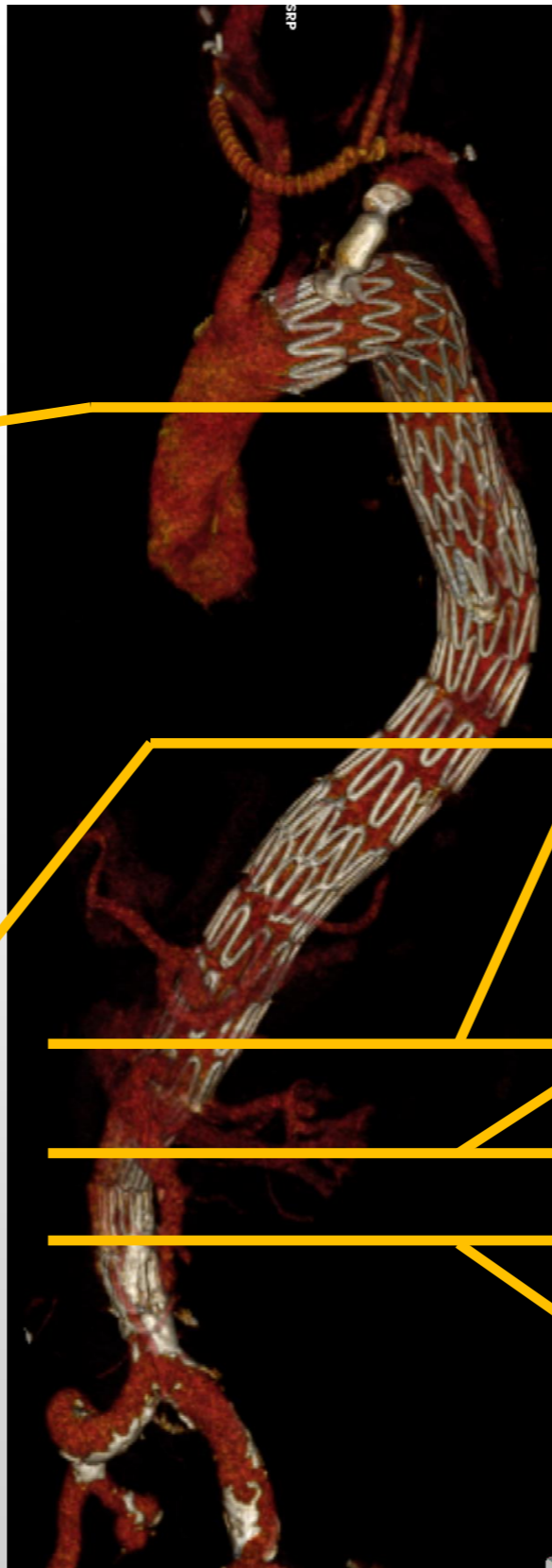
UTSouthwestern
Medical Center



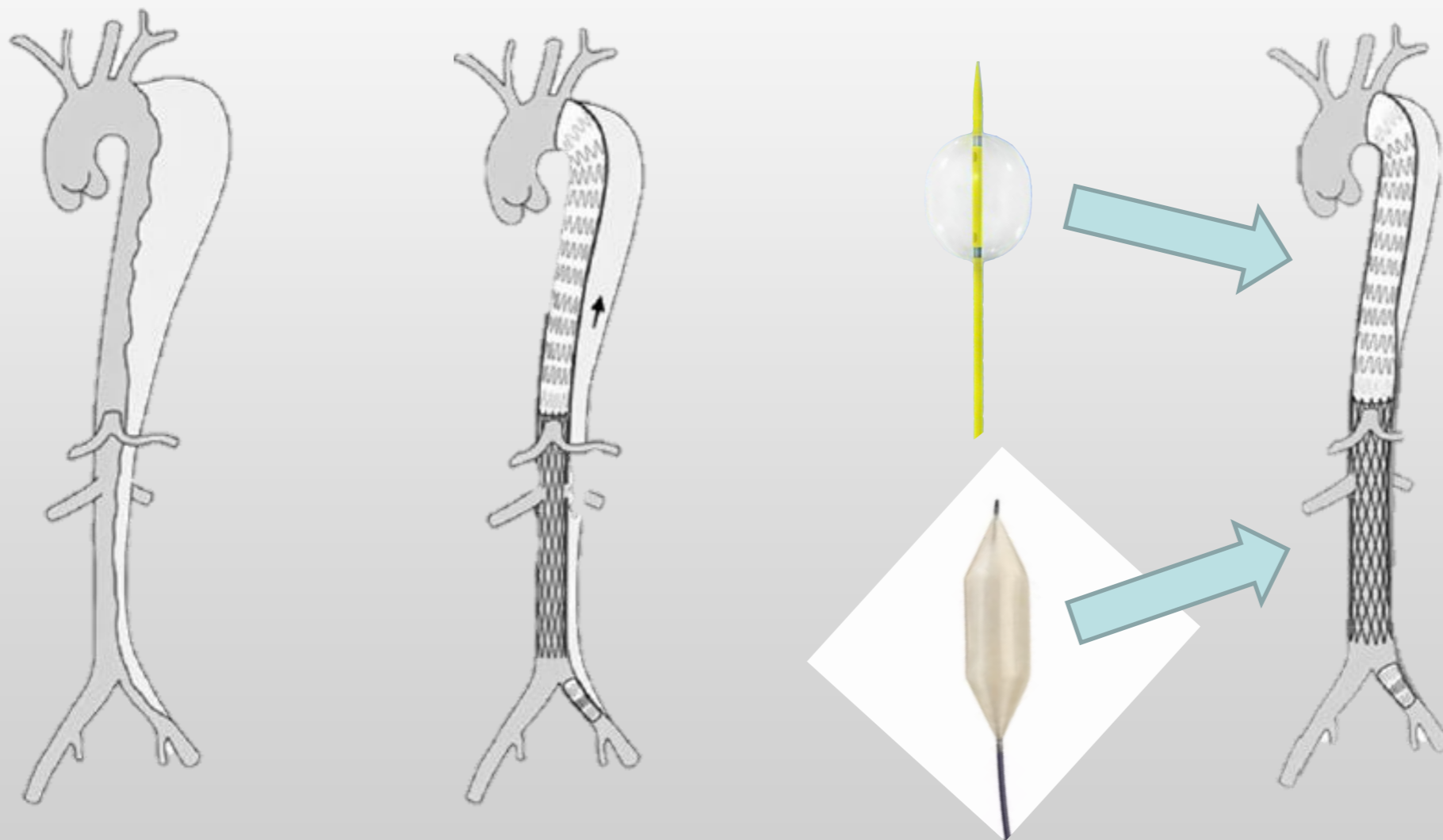
The STABILISE concept

An evolution of PETTICOAT

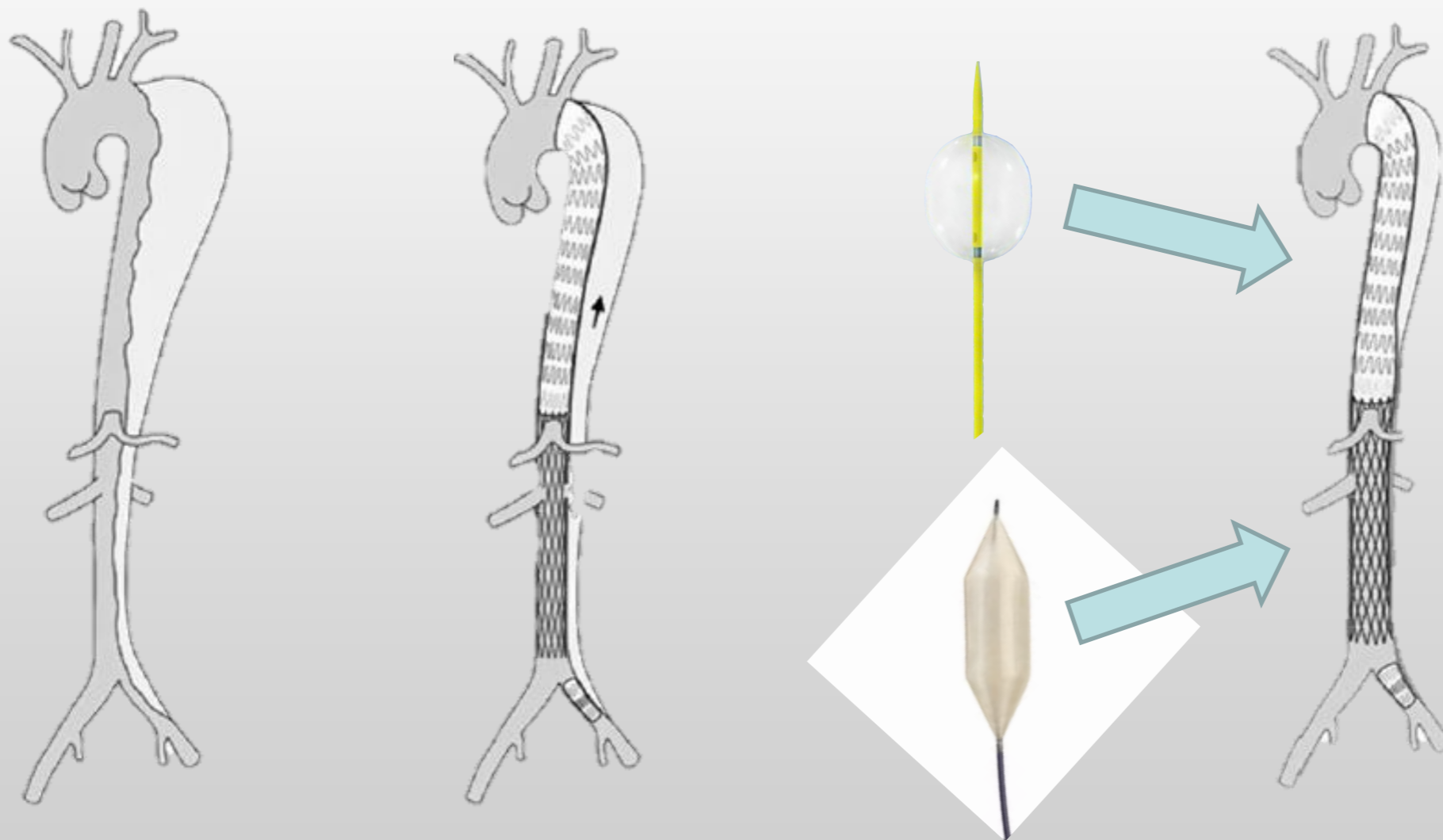




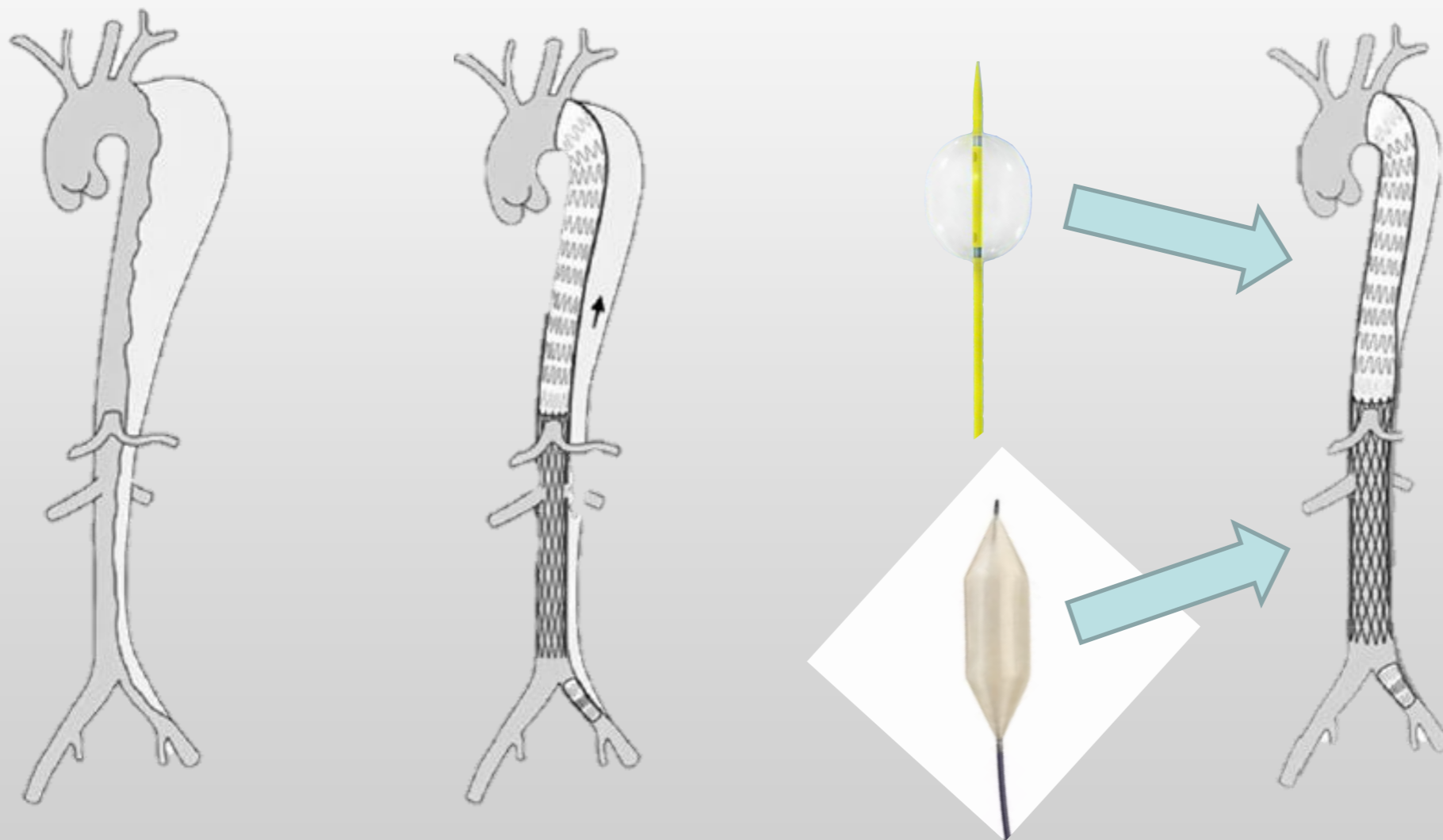
DO NOT BALLOON PLZ



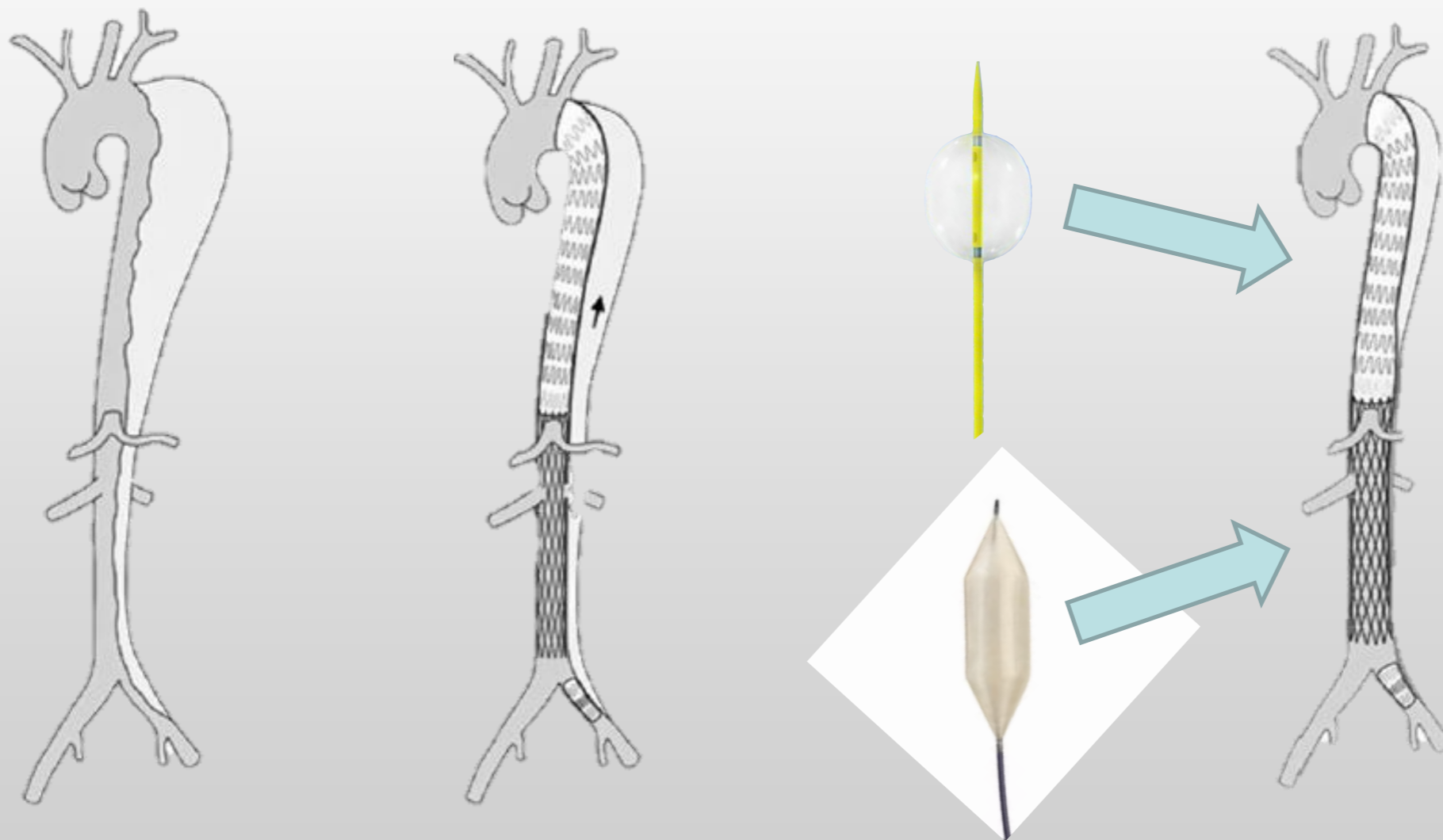
USE LATEX BALLOON **ONLY** INSIDE SG



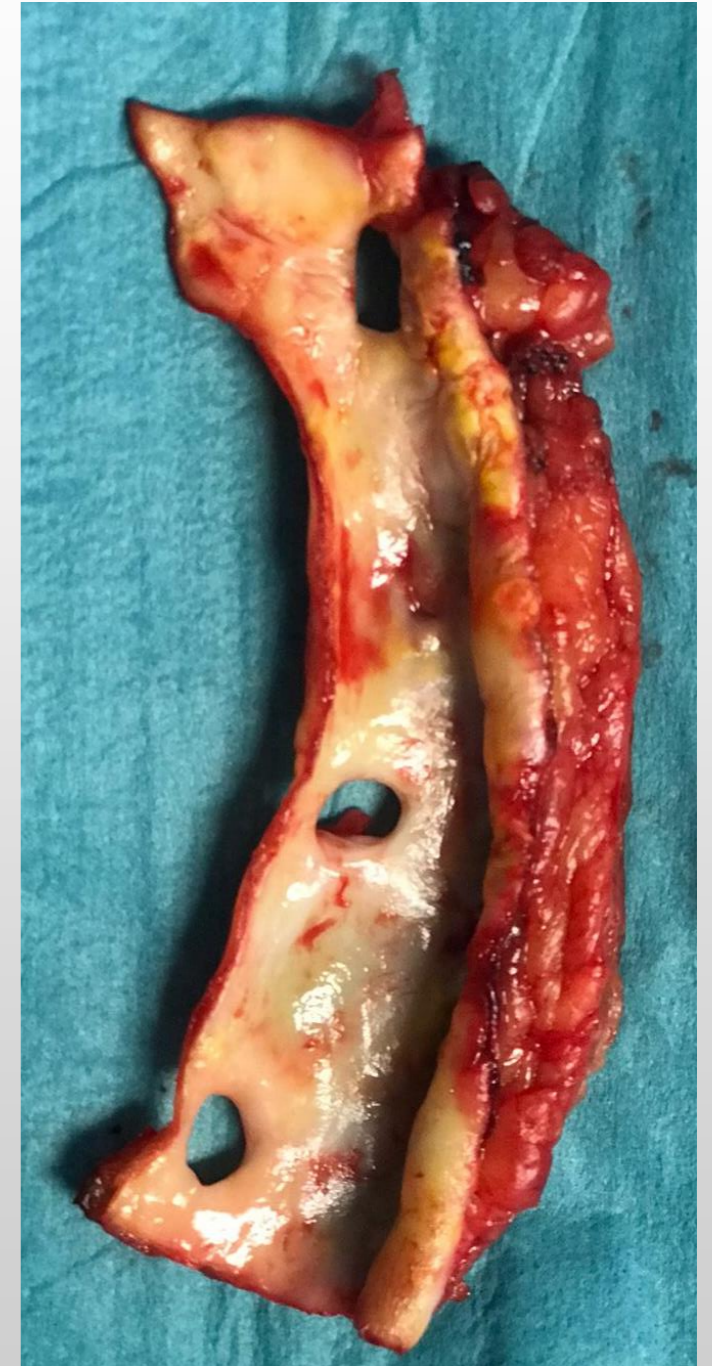
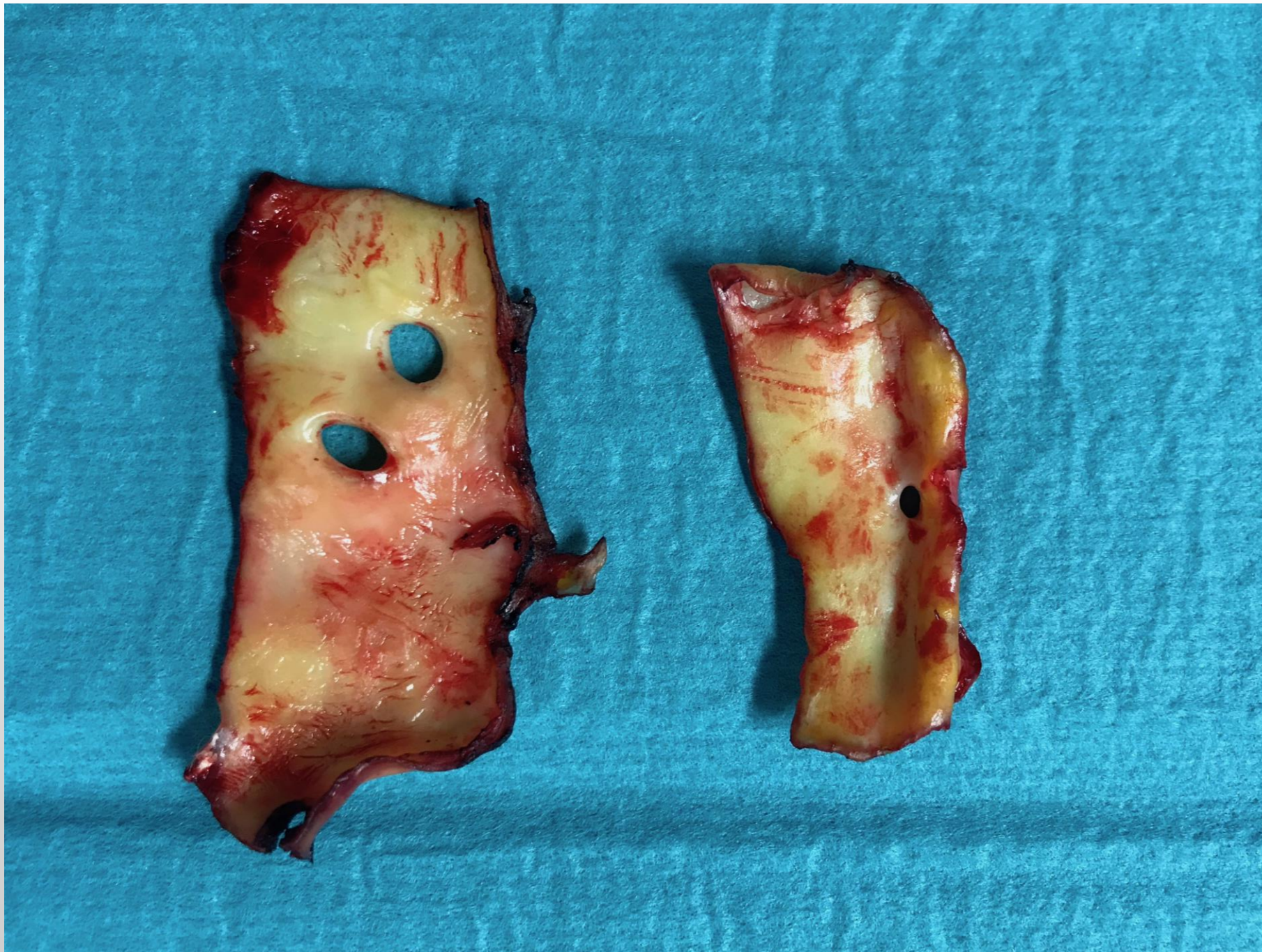
NON-COMPLIANT BALLOON SIZED TO WHOLE AORTA INSIDE BARE STENTS



PROTECT / STENT VESSELS ORIGINATING FROM FL

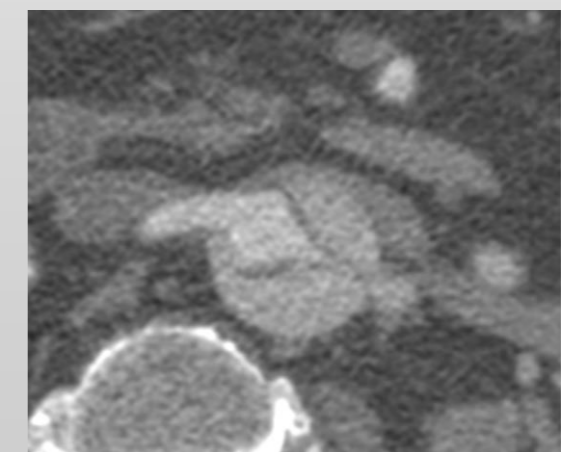
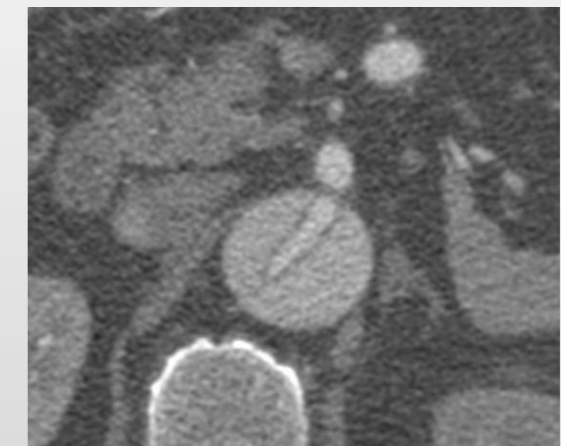
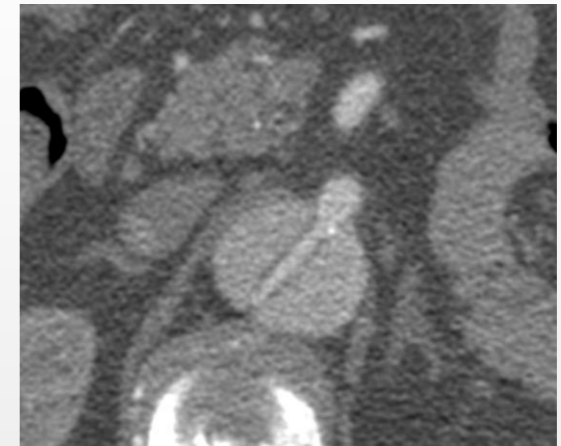


Lamella fenestrations



“Good Indications”

- Subacute cases (15-90 days)
- Distal aortic diam. < 40 mm
- “Healthy” landing zones (SAT covering and rerouting)
- NO genetic aortopathies (?)



Literature review: 2014-2024

5 Case reports

9 Case series (> 4 pt)

14 papers
published

264 cases



Overall Results

| | |
|------------------|-------|
| ACUTE/SUBACUTE | 76 % |
| Rupture | 7 % |
| Malperfusion | 48 % |
| 30-day mortality | 3,5 % |
| Stroke | 1,3 % |
| Any SCI | 5 % |



STABILISE Registry

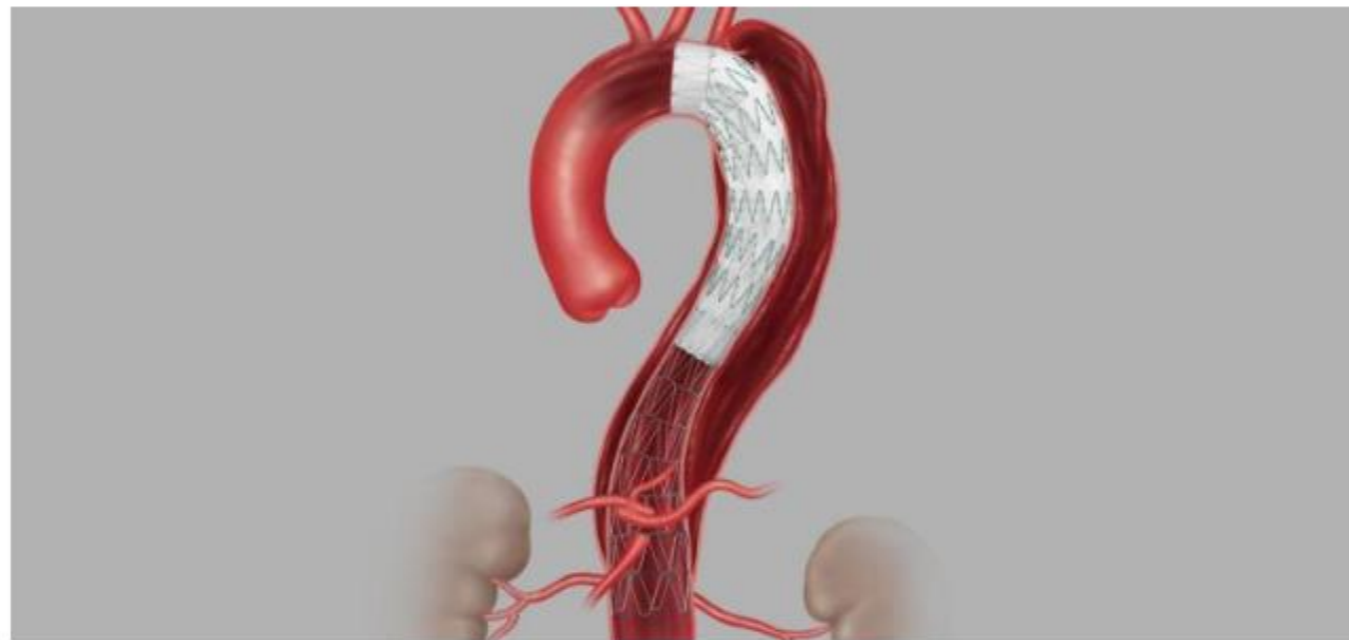
- **Physician-initiated**
- **No corporate sponsor**
- Voluntary and open to everybody
- Retrospective + prospective
- NCT registered, local ECs approved



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

Cook Medical receives US FDA approval for aortic dissection device

5th February 2019  302



Zenith Endovascular Dissection System (Cook Medical)

Is it time to change IFUs ?



EACTS/STS Guidelines

The PETTICOAT technique should be considered in acute aortic dissections as a distal adjunct to TEVAR in case adequate true lumen decompression cannot be established by TEVAR alone.

IIa

B

The STABILISE technique may be considered in particular scenarios but preferably under controlled study conditions.

IIb

C



DECEMBER 11th - 13th, 2024: SAVE THE DATE



AORTIC SURGERY

PERIPHERAL & VENOUS

H T D I

HOW TO DO IT

2024

MILANO - ITALY
DECEMBER 11th - 13th, 2024

Chairmen
Roberto Chiesa, Germano Melissano

Ospedale San Raffaele, Milano
Università Vita-Salute San Raffaele, Milano

11th INTERNATIONAL CONGRESS

www.aorticsurgery.it



Causes for reinterventions

- 4 patients complete FL thrombosis never achieved (“primary failure”)
- 6 patients, initial FL thrombosis achieved:
 - 2 patients: distal aneurysmal degeneration
 - 1 patient: proximal aneurysmal degeneration
 - 2 patients: type II TAAA -> CP as “staging” procedure
 - 1 patient: recurrent back pain

