

TREATMENT OPTIONS FOR POST DISSECTION AORTIC ANEURYSMS

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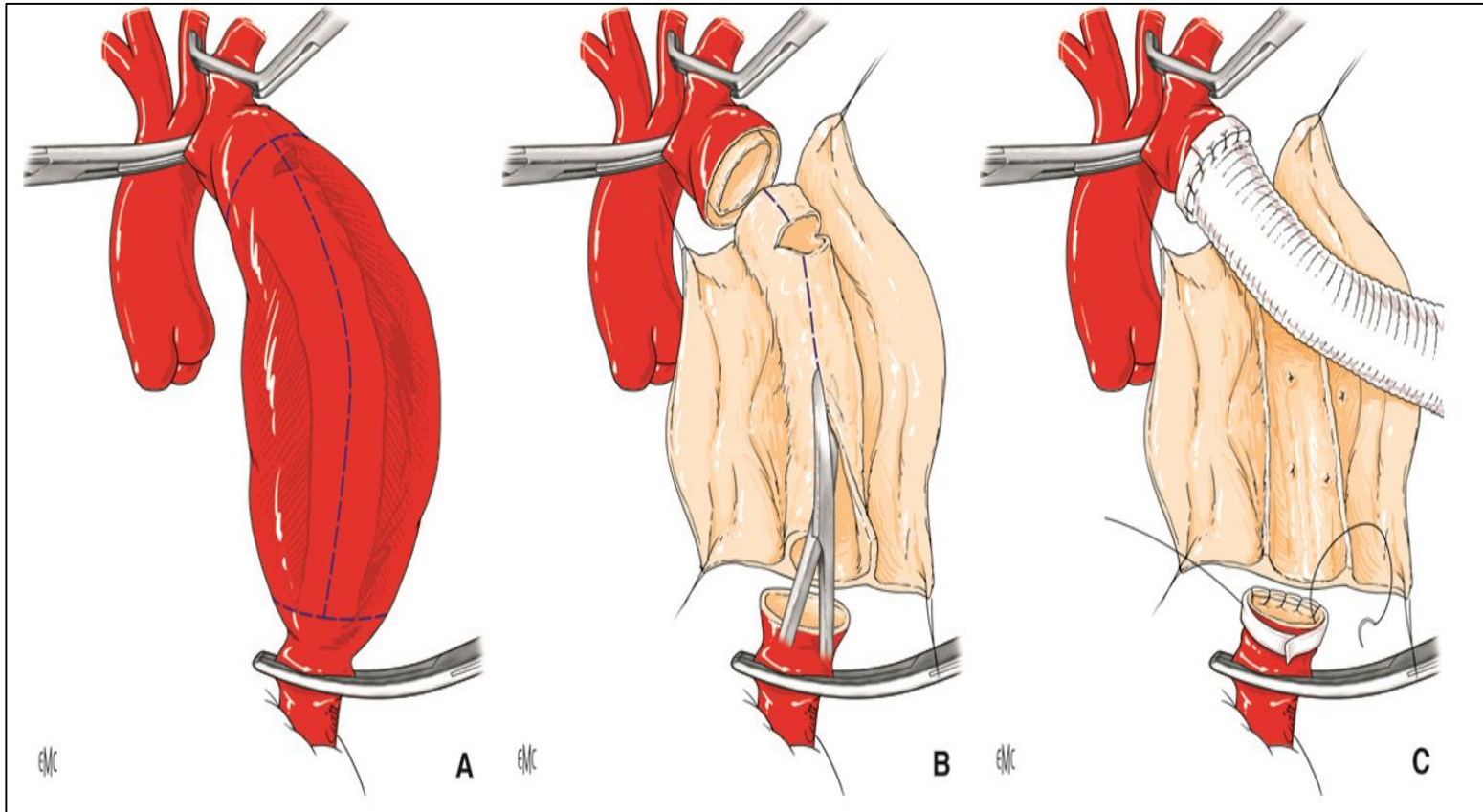


Disclosures

- Research support, Consulting, IP
 - Cook Medical, GE Healthcare



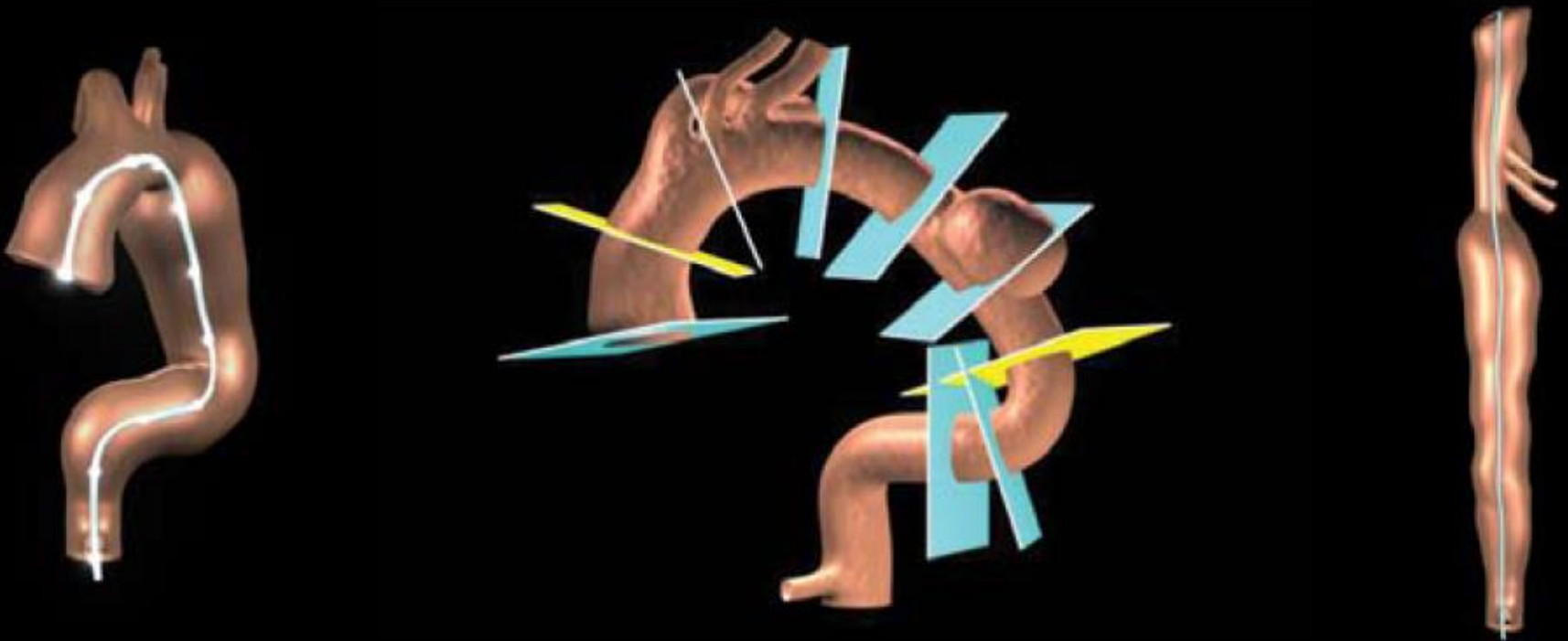
Surgical Options OPEN



EMC

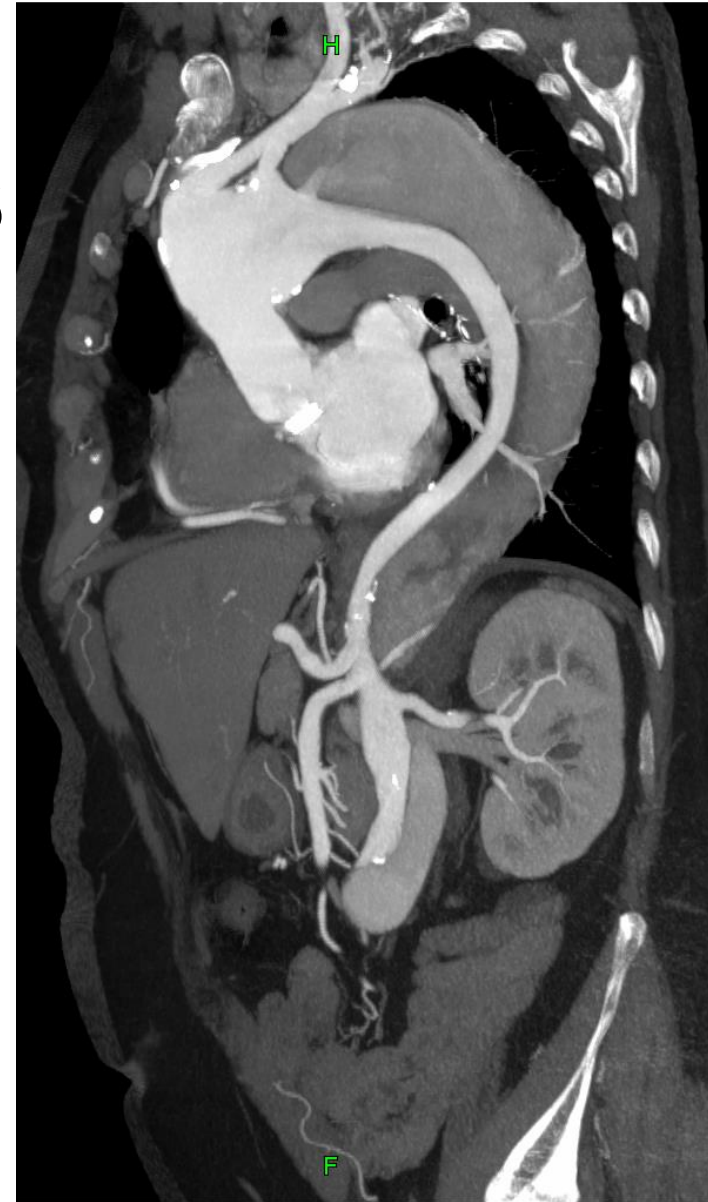


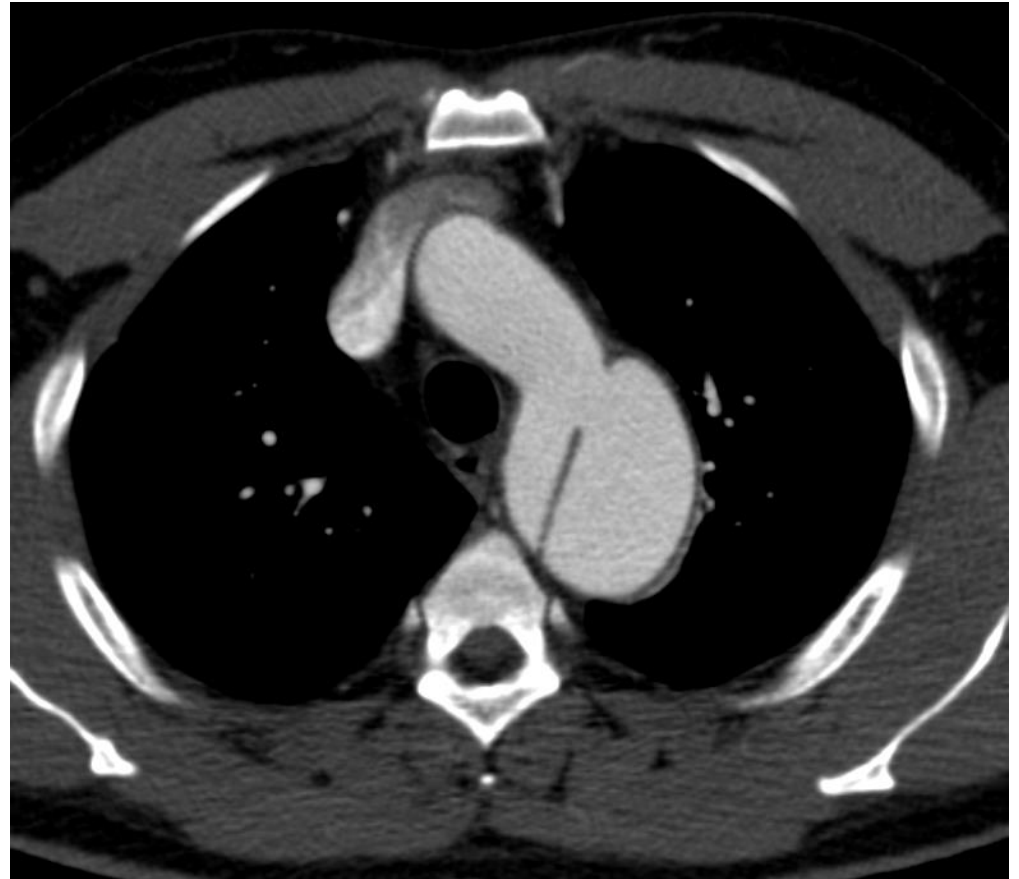
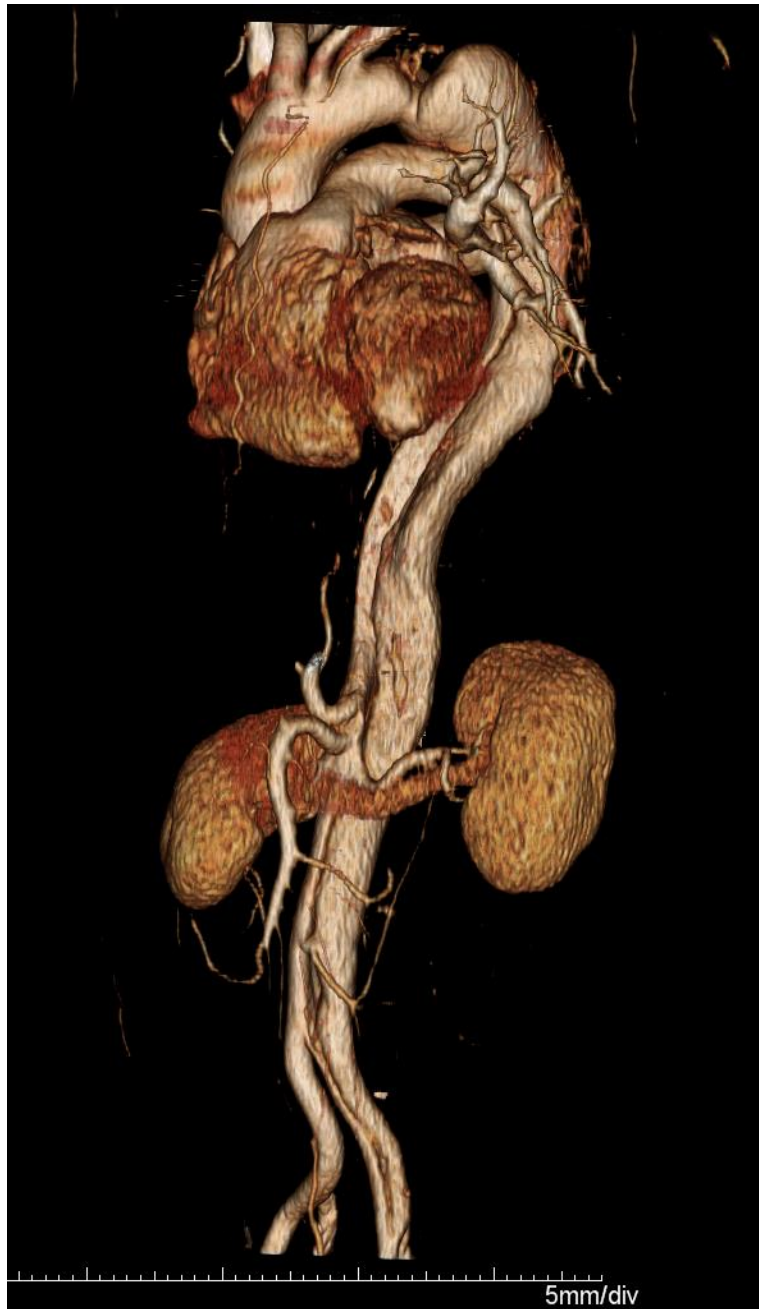
Surgical Options TEVAR



Chronic Dissections

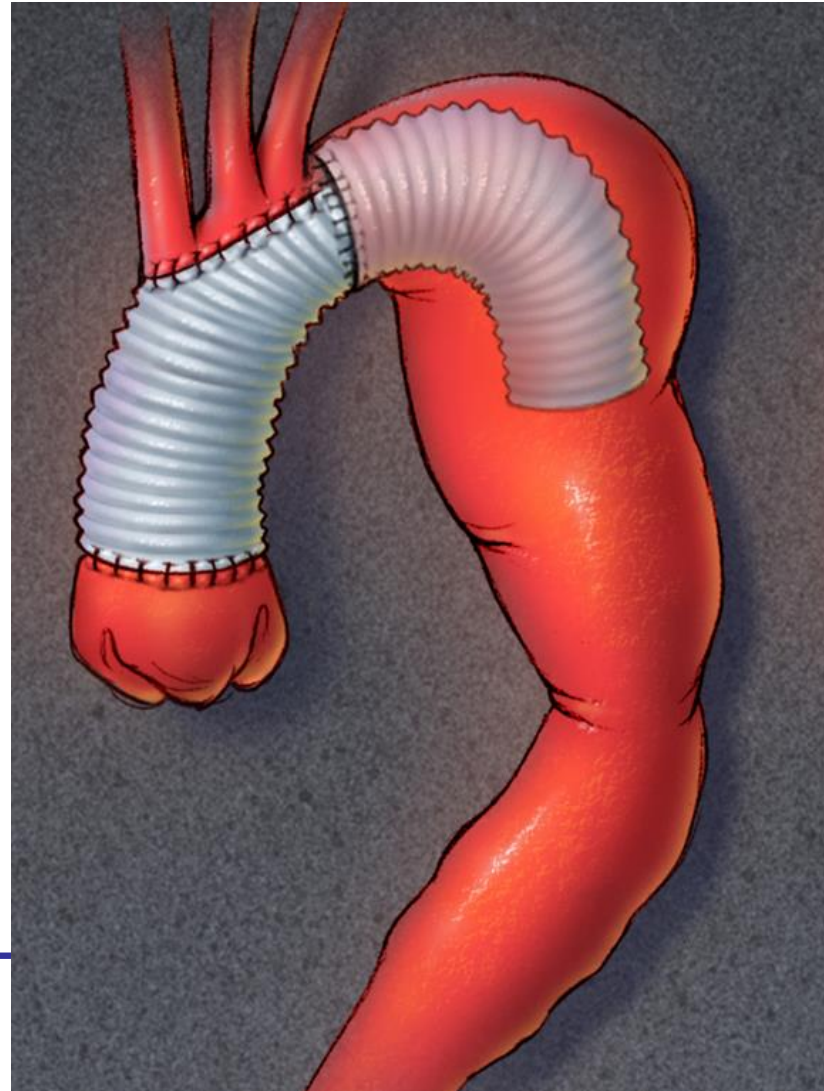
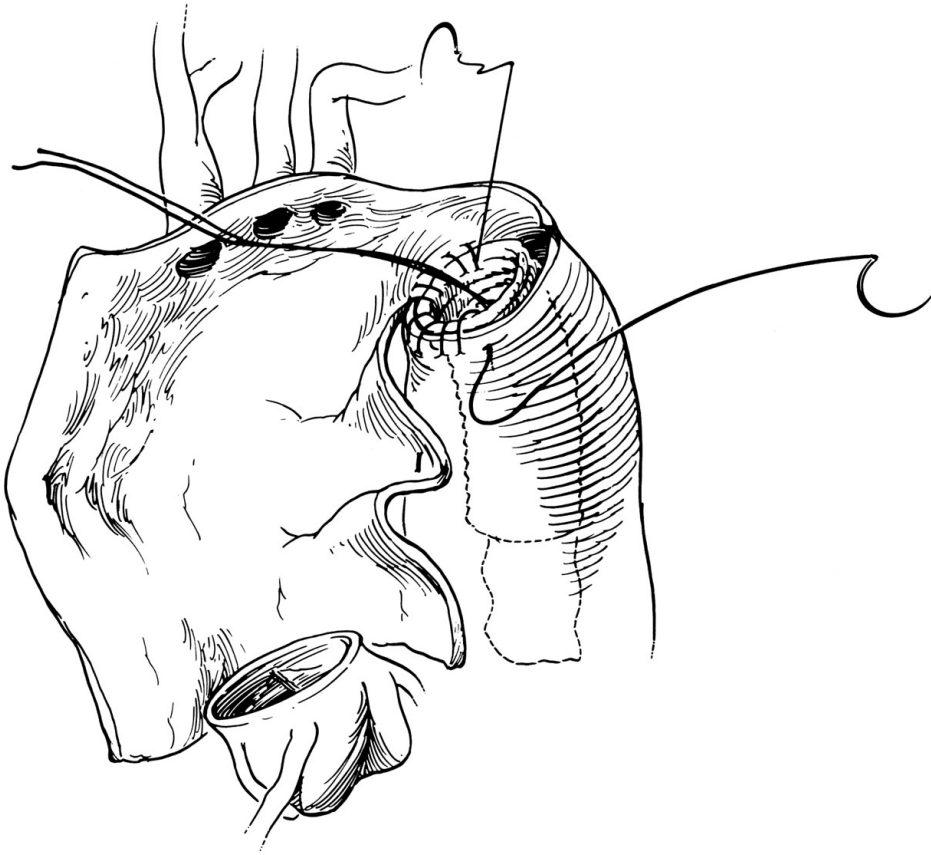
- Proximal and Distal Sealing
- Narrow true lumen
- Target vessels perfused by false lumen

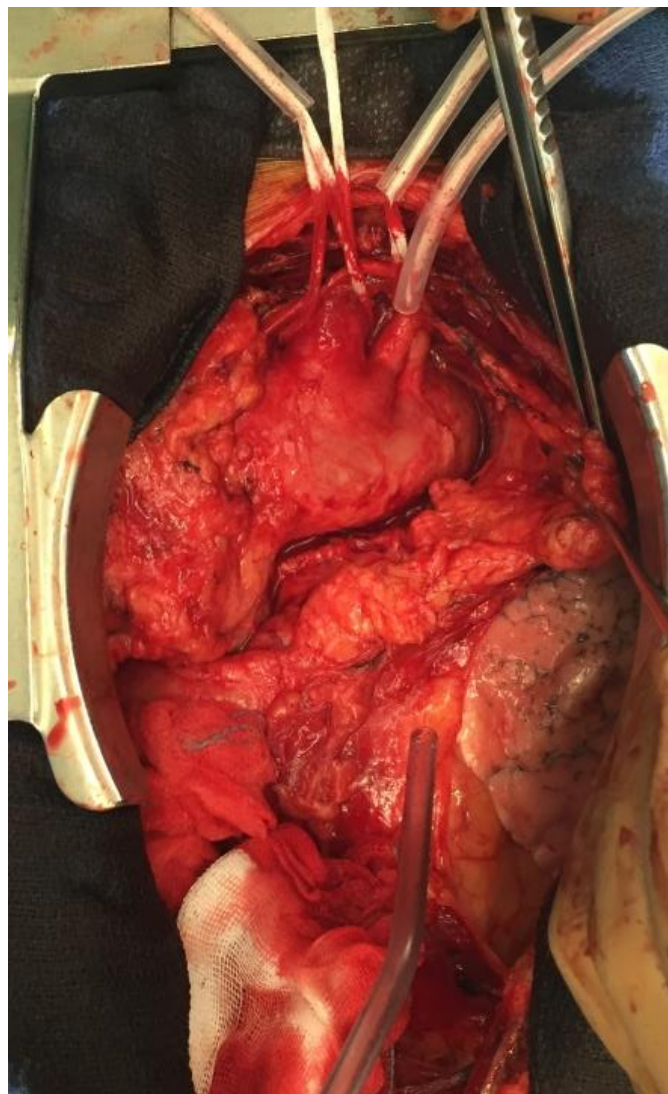




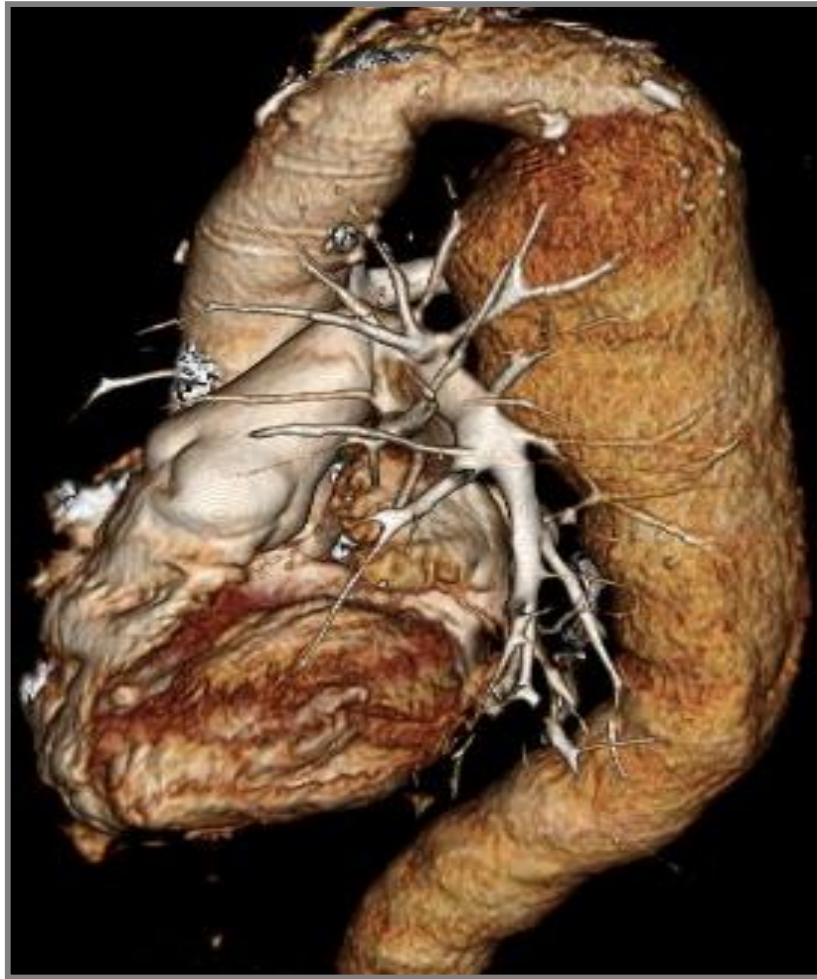


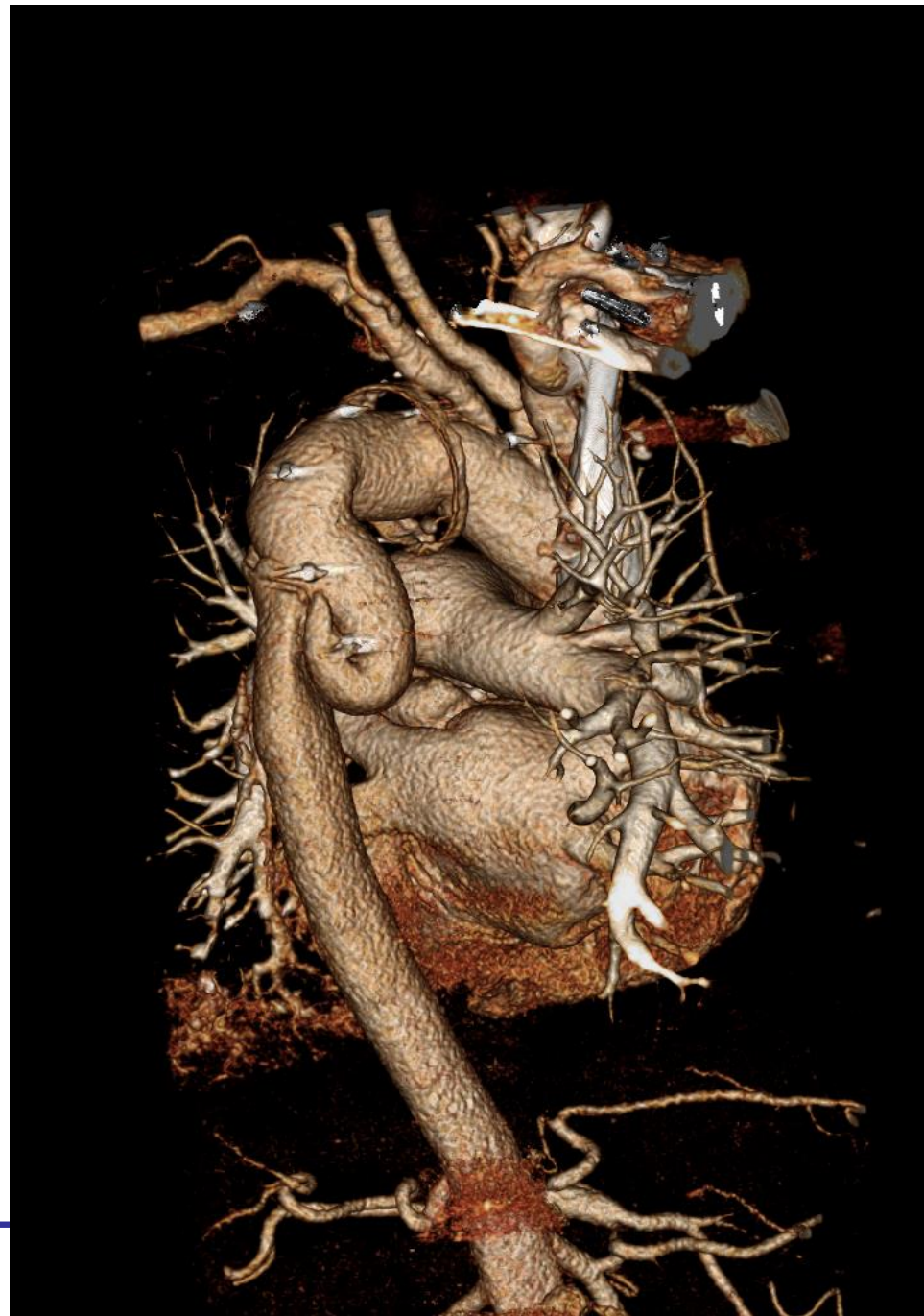
No Compromise on Proximal Seal - Open Surgery

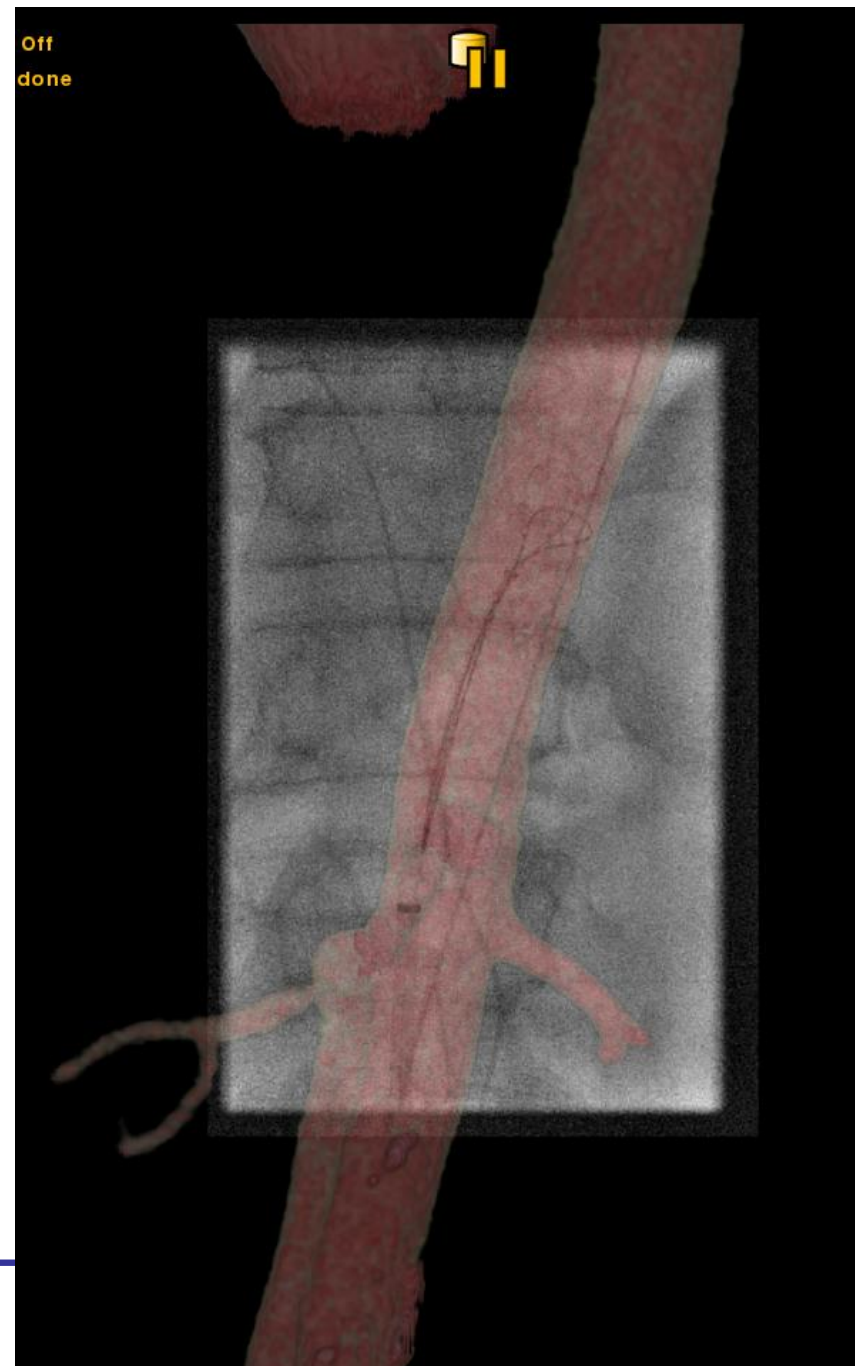




ELEPHANT TRUNK



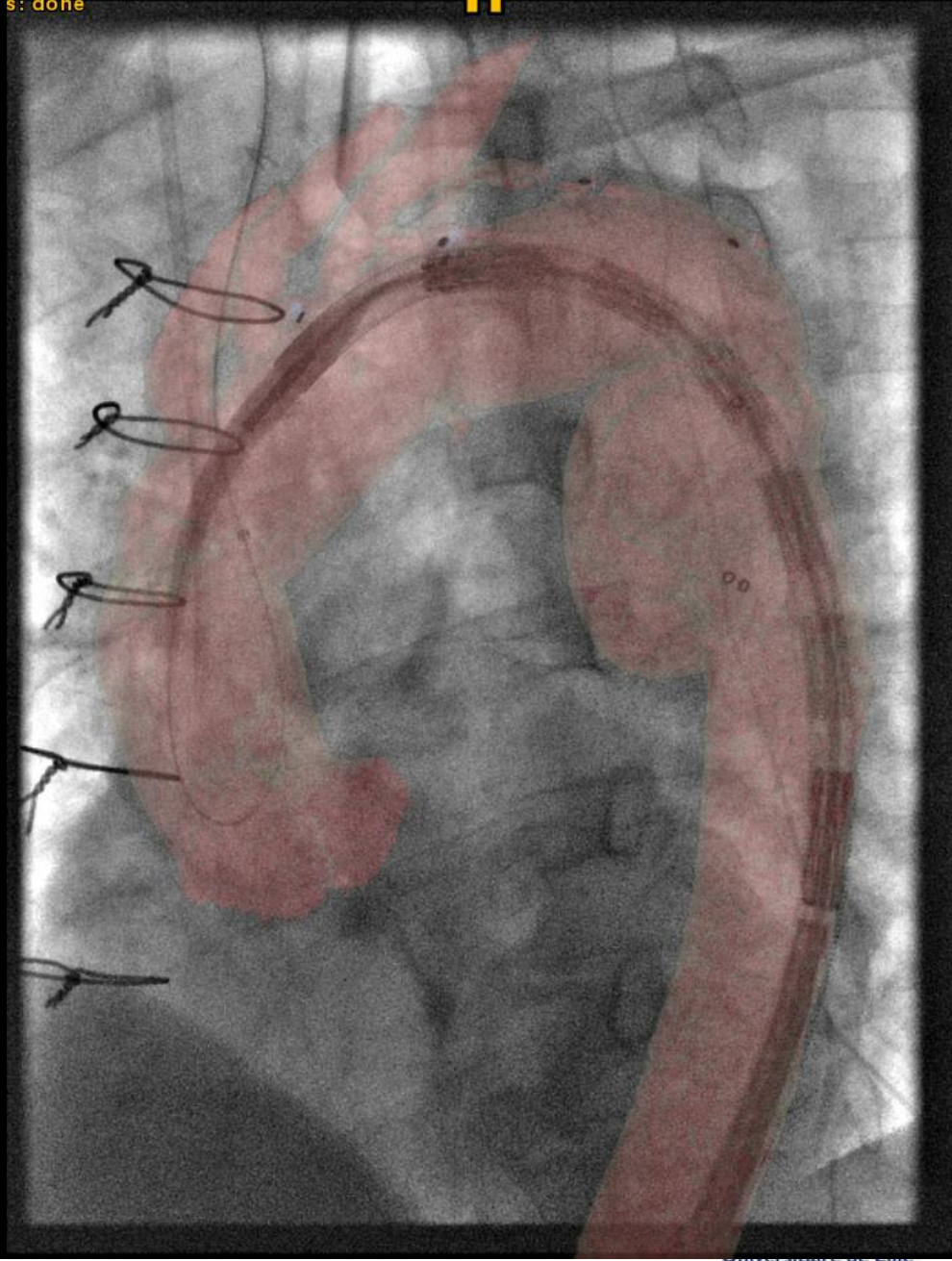




ff
one



1g Off
s: done



Frr
FO
LA
CA
L

Monitoring Off
ing Status: done



Frm
FOV
LAC
CAU
L



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Post Type A Repair Branched Arch Endograft

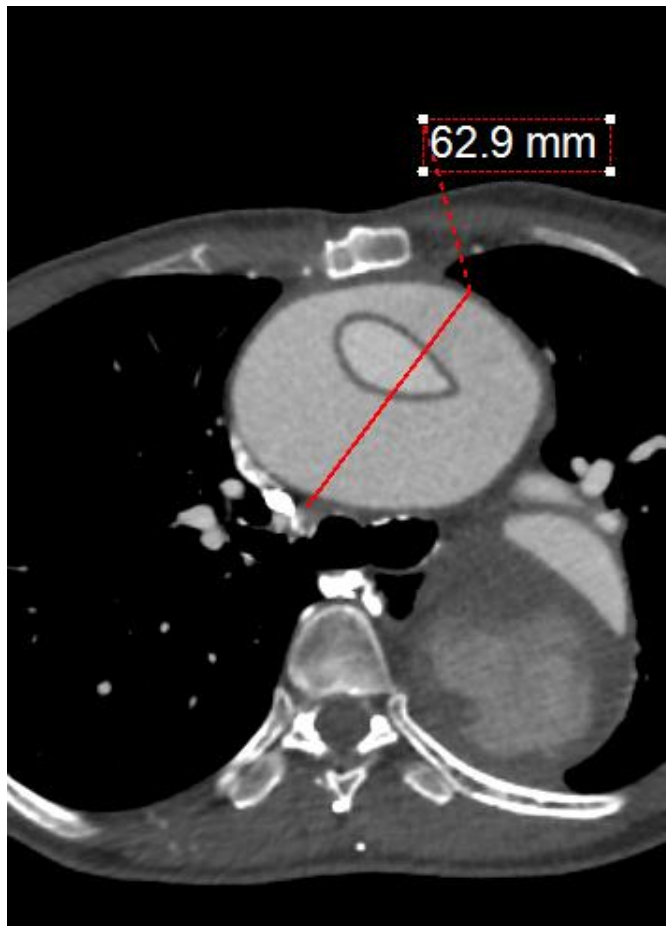






WW



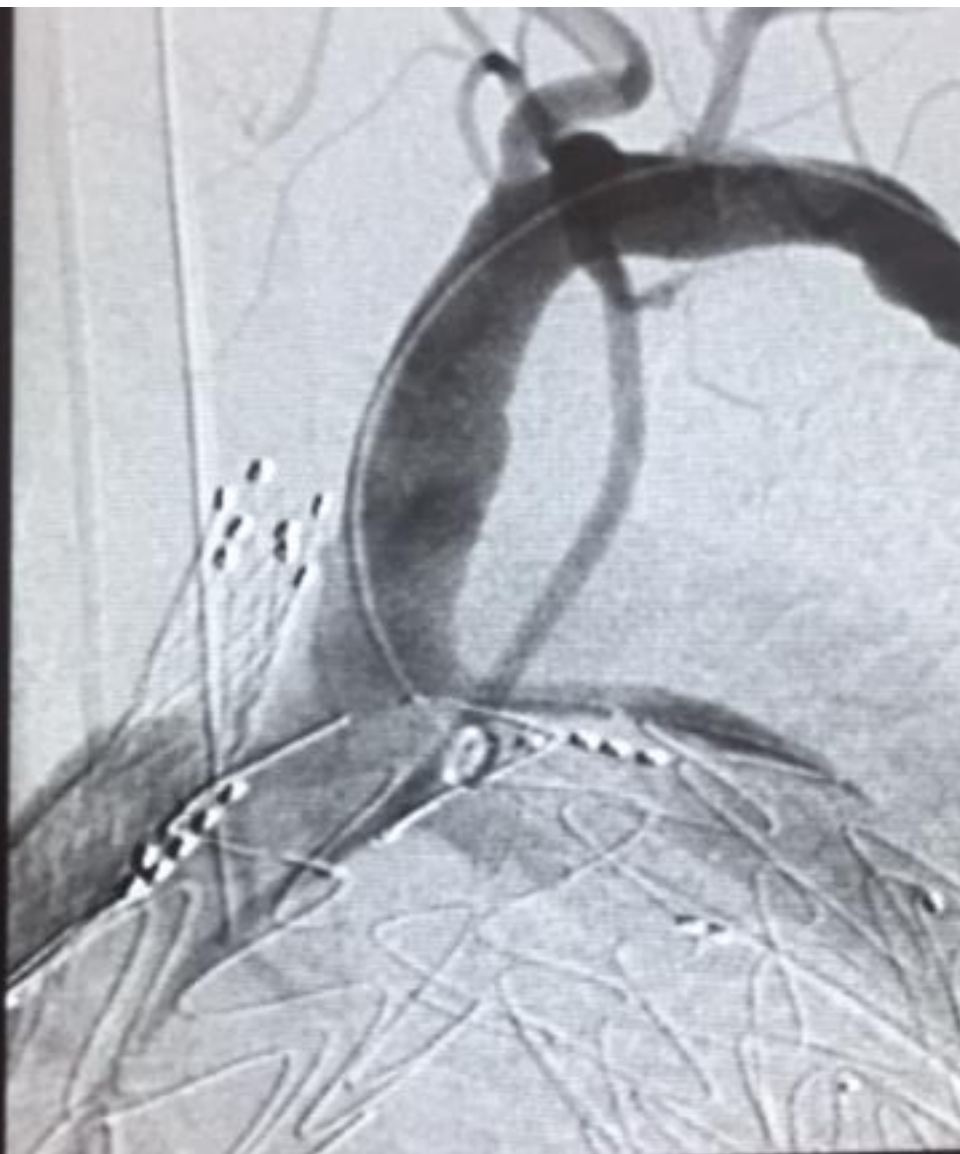


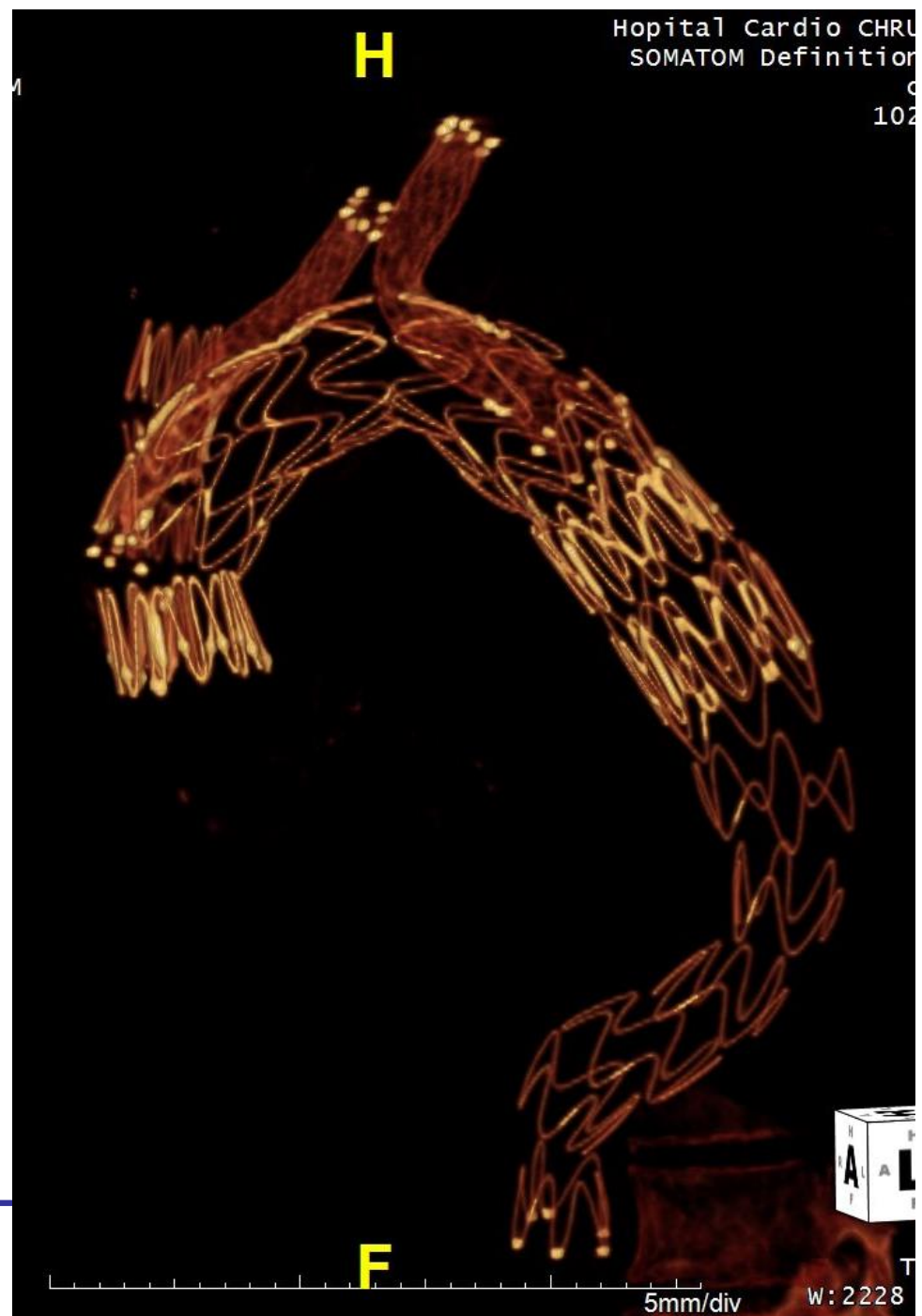
Pre-operative CT



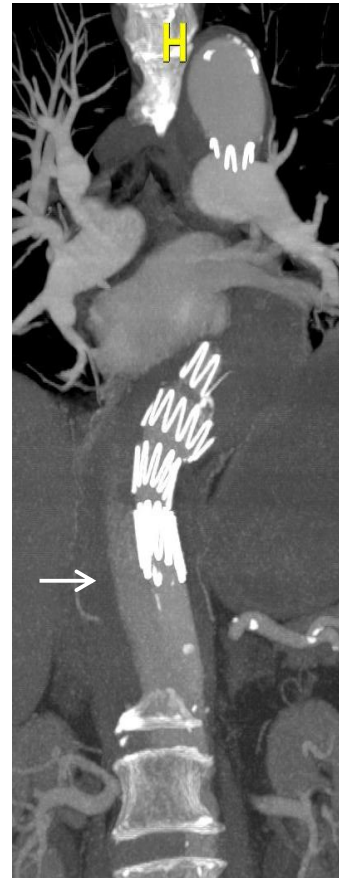
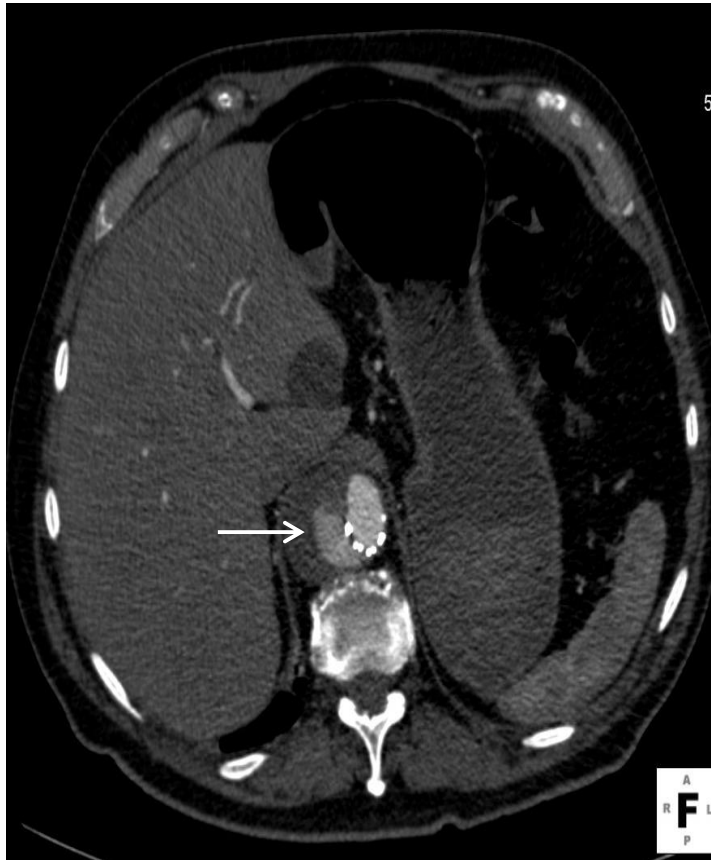
2-year control

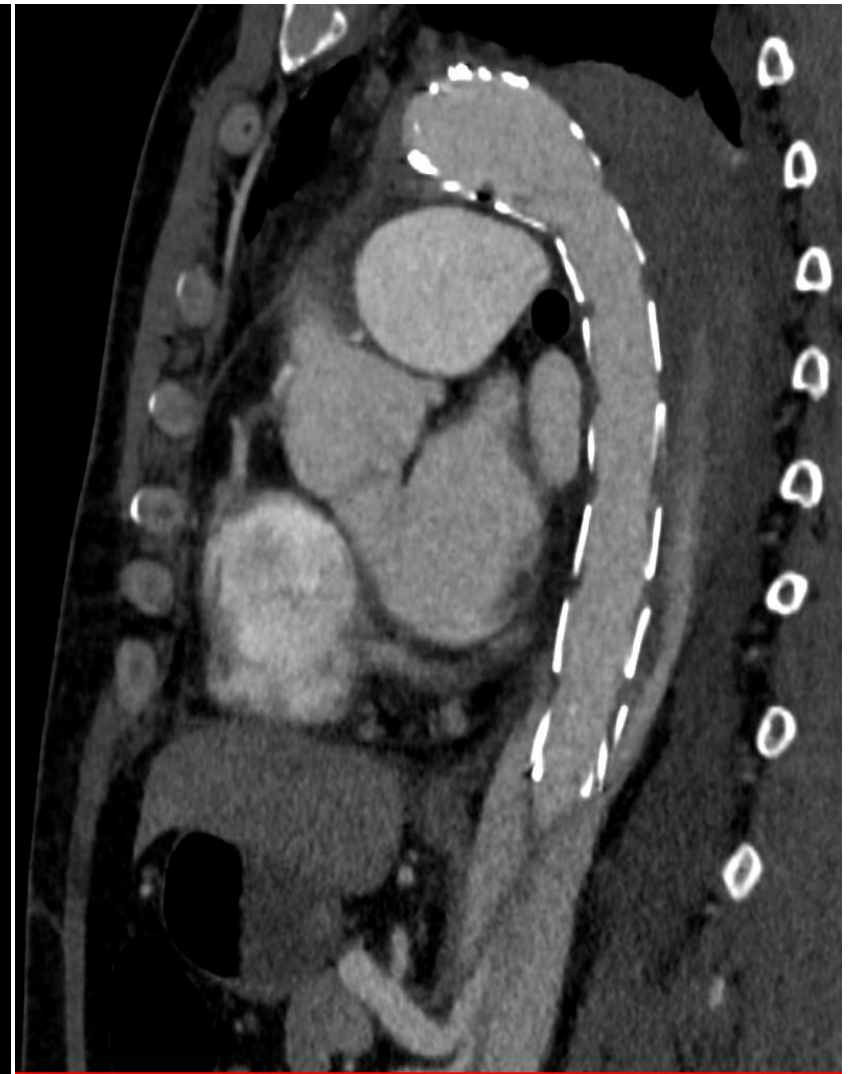
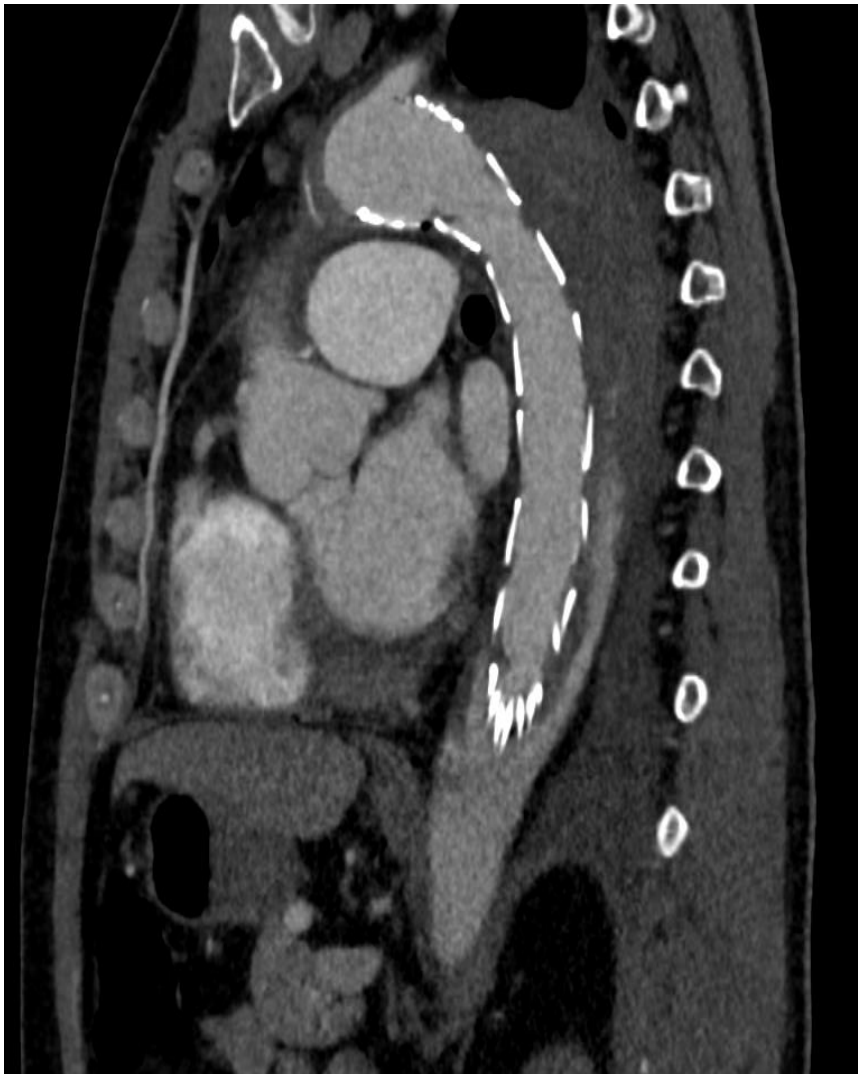




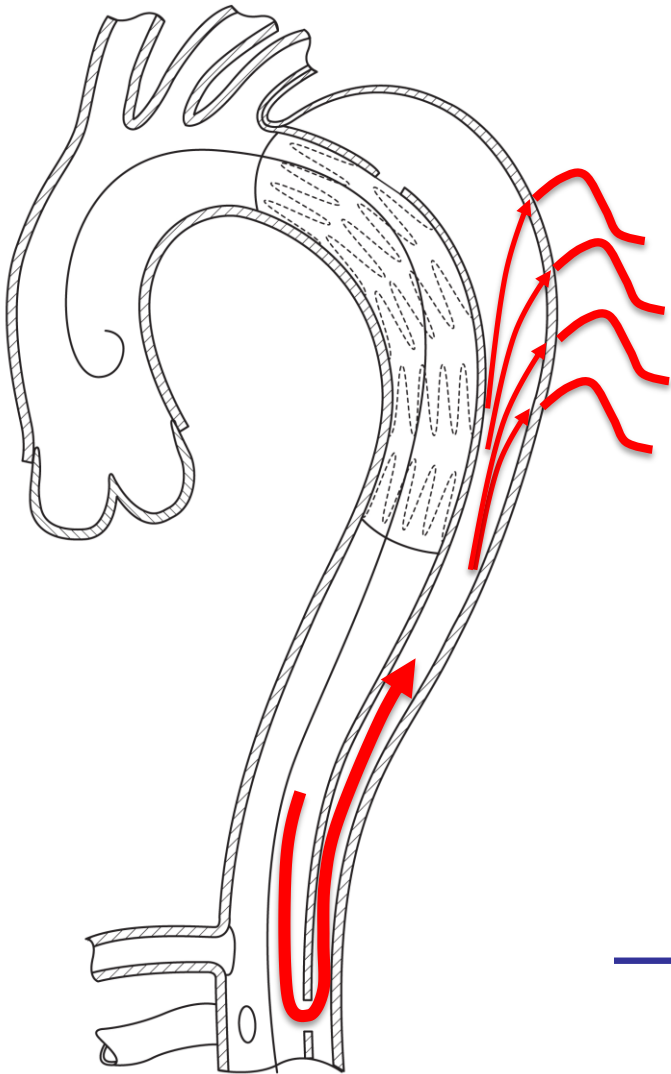


TEVAR DISTAL SEAL?





Failure to Remodel in Chronic Dissection



- Perfusion and pressure unchanged in false lumen
- Presence of Intercostals originating from false lumen
- False lumen back flow to Intercostals

Courtesy Tilo Kölbel

TEVAR in Chronic Dissections

TEVAR induces aortic remodeling :

- False lumen thrombosis
- True lumen expansion

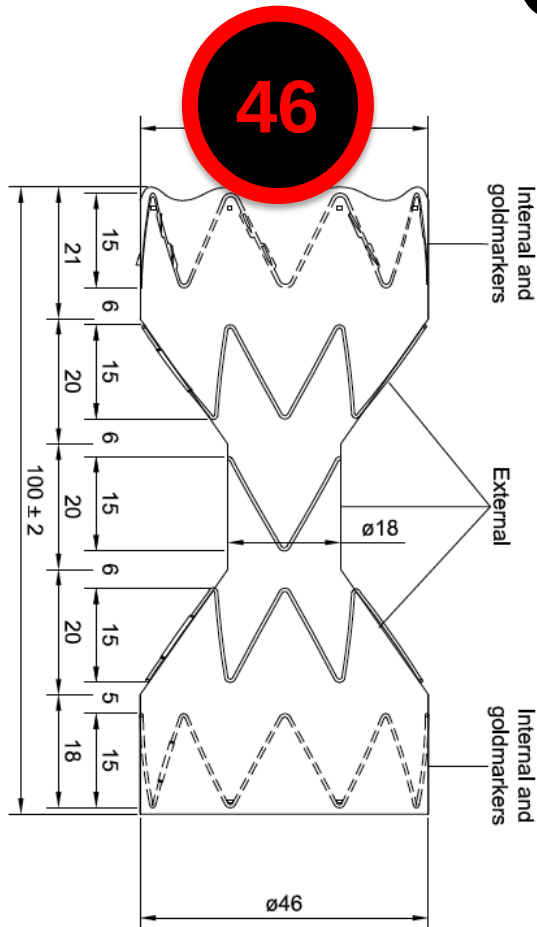
But this remodeling is
Limited to the DTA along the
stentgraft

◆ TECHNICAL NOTE ◆

Distal False Lumen Occlusion in Aortic Dissection With a Homemade Extra-Large Vascular Plug: The Candy-Plug Technique

**Tilo Kölbel, MD, PhD; Christina Lohrenz, MD; Arne Kieback, MD; Holger Diener, MD;
Eike Sebastian Debus, MD, PhD; and Axel Larena-Avellaneda, MD, PhD**

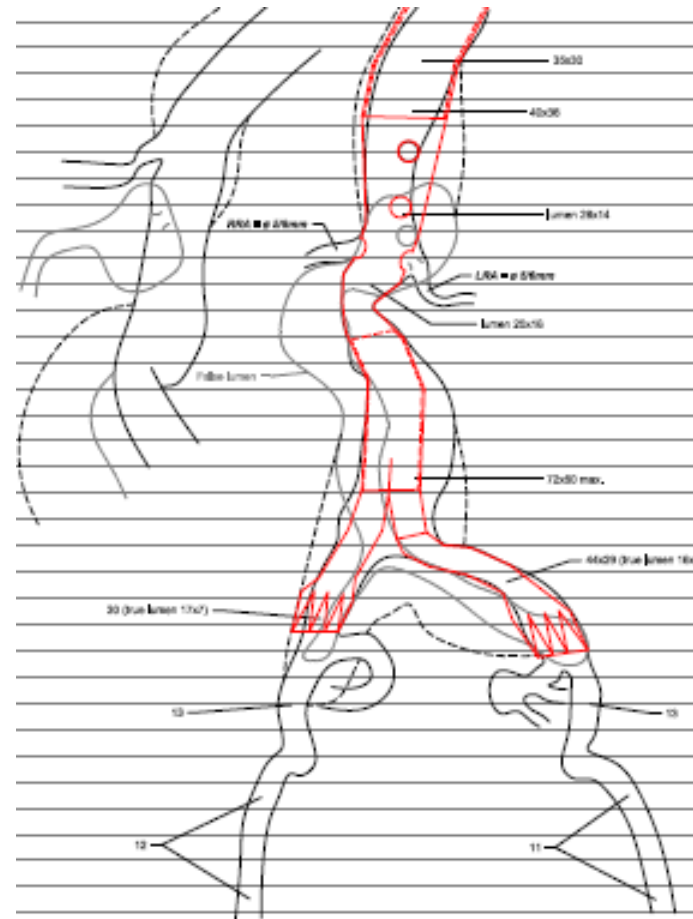
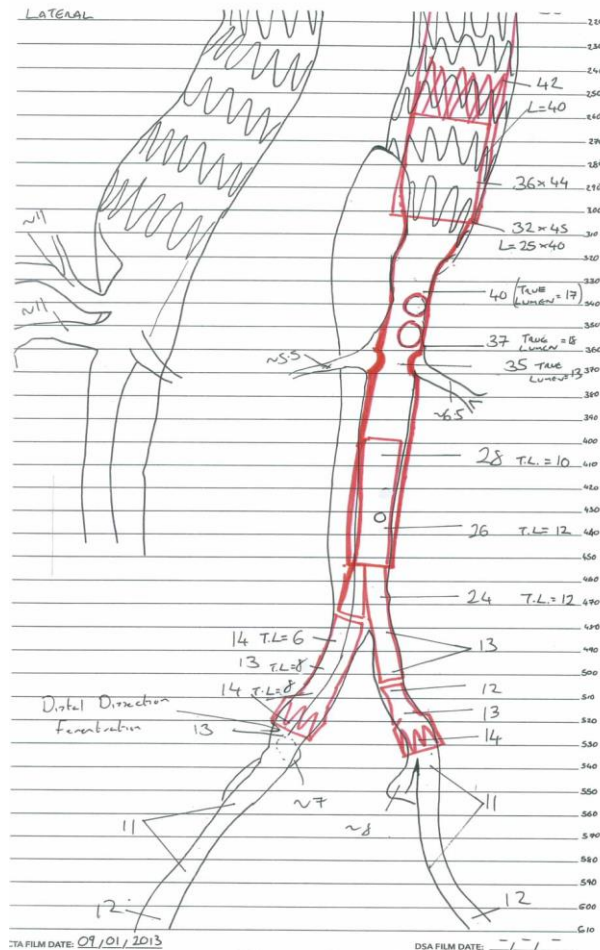
Candy-Plug



22mm Amplatzer plug II

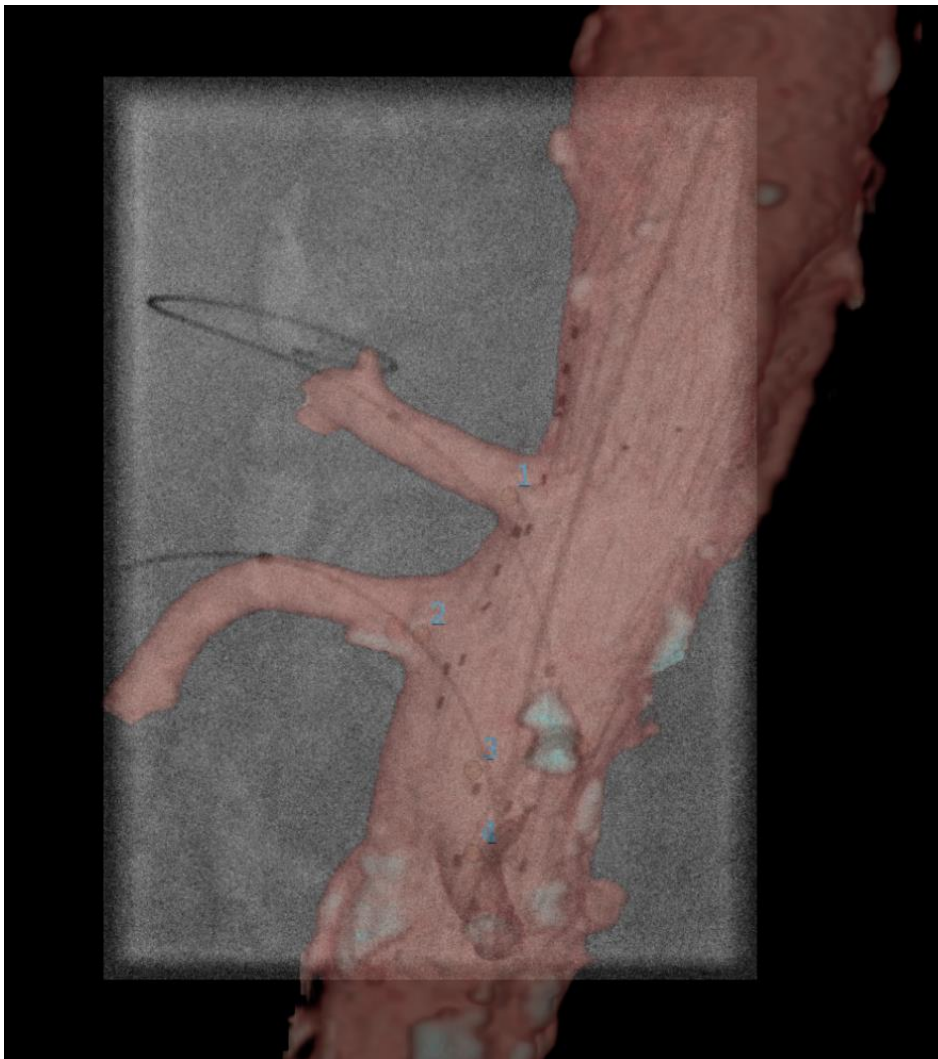


Fenestrated Distal Extension?

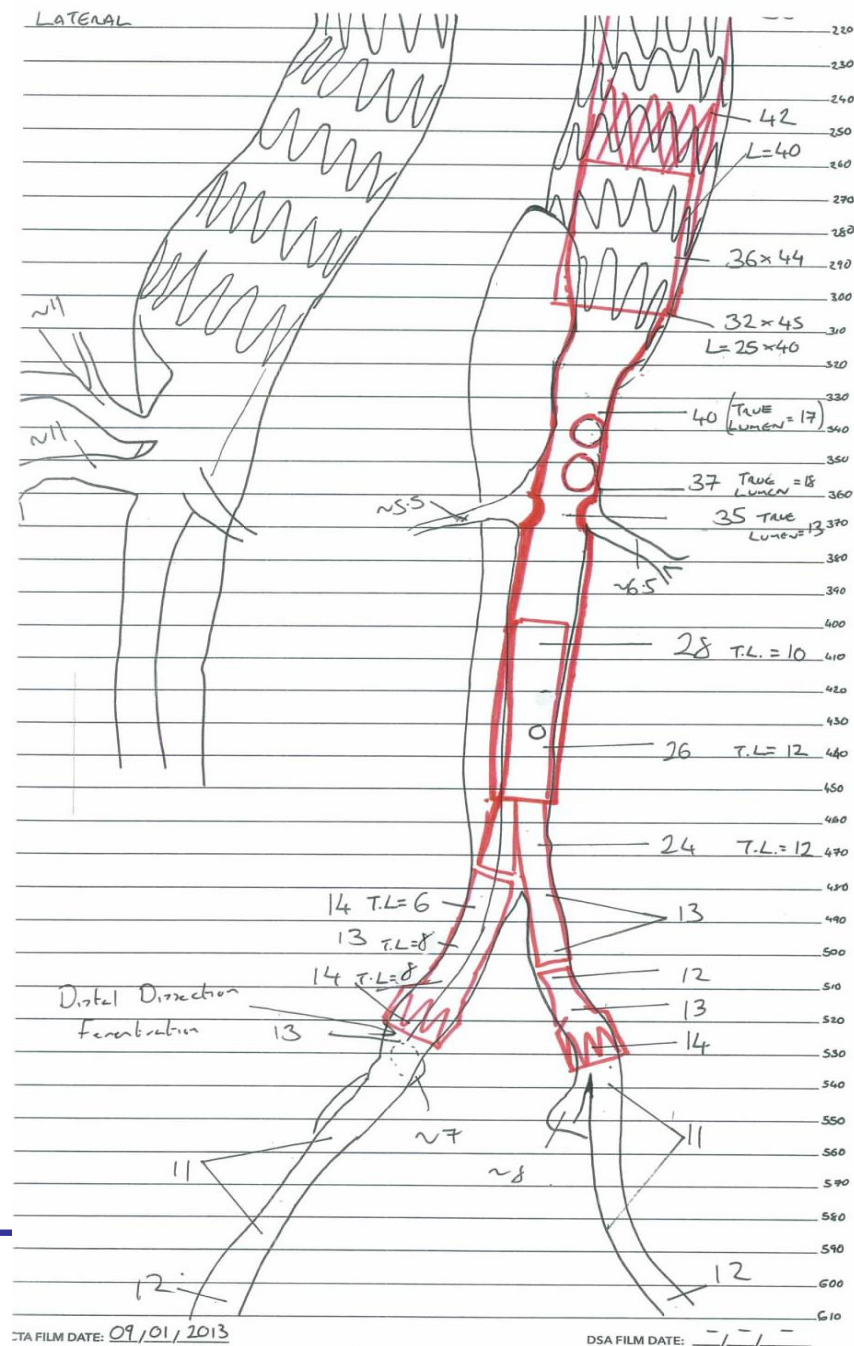


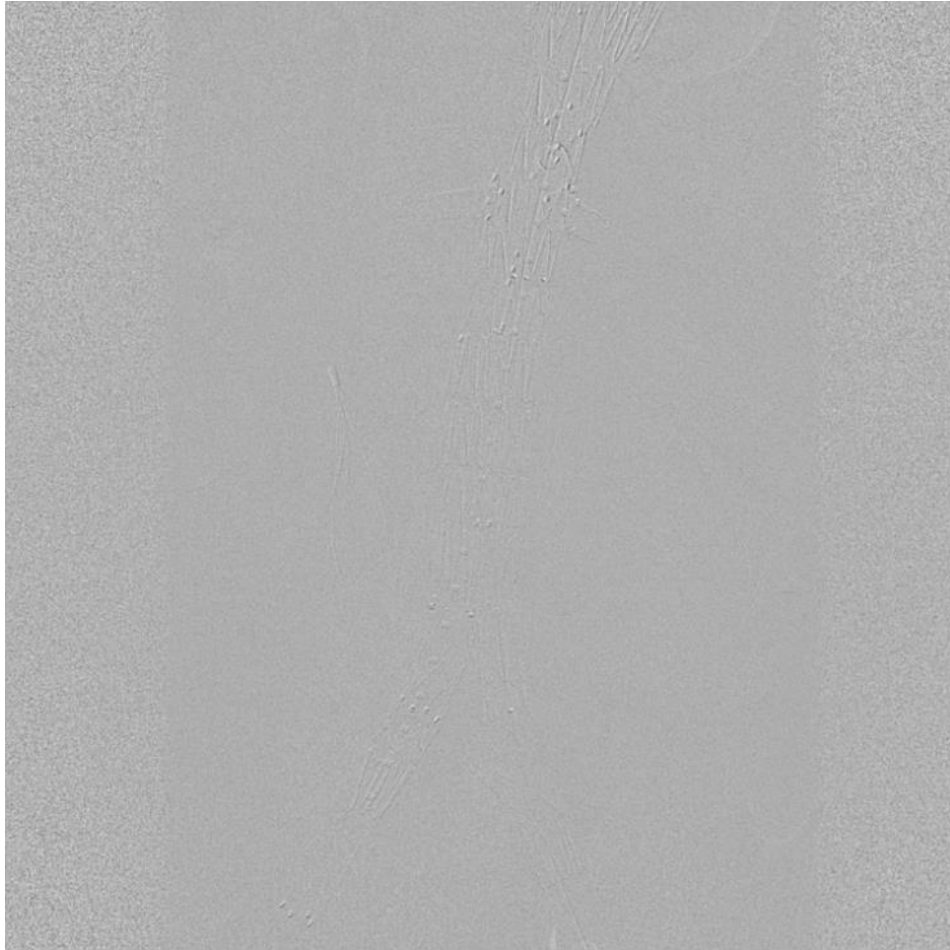


GE Discovery IGS 730

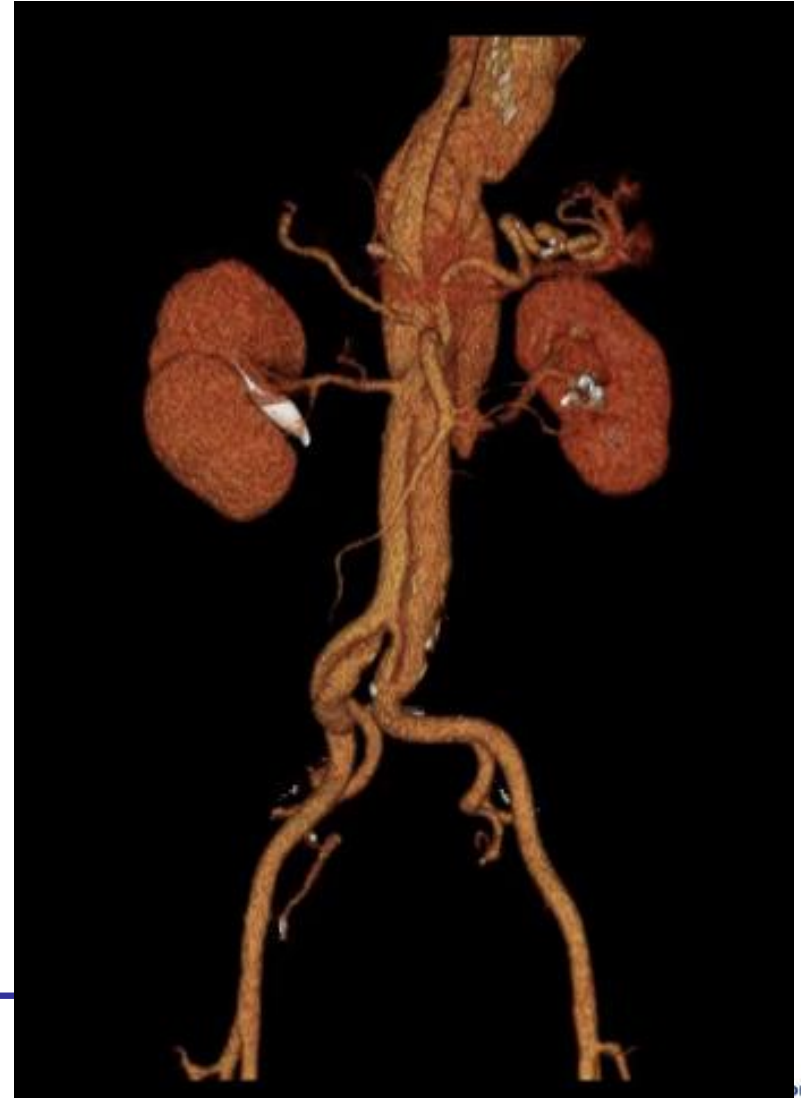


GE DISCOVERY IGS 730





Left Renal Perfused by (2) False Lumen



Age:51, M
Se:610
10/30/2012 12:16 PM
Kern:STANDARD

A

CHU REIMS
Discovery CT750 HD
SCAN-HRD
1024x1024
MPR
Filtre:Aucun

Age:51, M
Se:610
10/30/2012 12:16 PM
Kern:STANDARD

A

CHU REIMS
Discovery CT750 HD
SCAN-HRD
1024x1024
MPR
Filtre:Aucun

R

CT

5mm/div

L R

FOV:463.10 mm
HELICAL MODE
100 kV
Tilt:0.00
LAO 0: CAU 90
No: 3

P

5mm/div



TERARECON
W: 600 L: 200

FOV:463.10 mm
HELICAL MODE
100 kV
Tilt:0.00
LAO 0: CAU 90
No: 4

P

SMA

5mm/div

L R

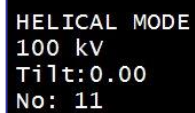


TERARECON
W: 600 L: 200



CHU REIMS
Discovery CT750 HD
SCAN-HRD
1024x1024

REFERENCES



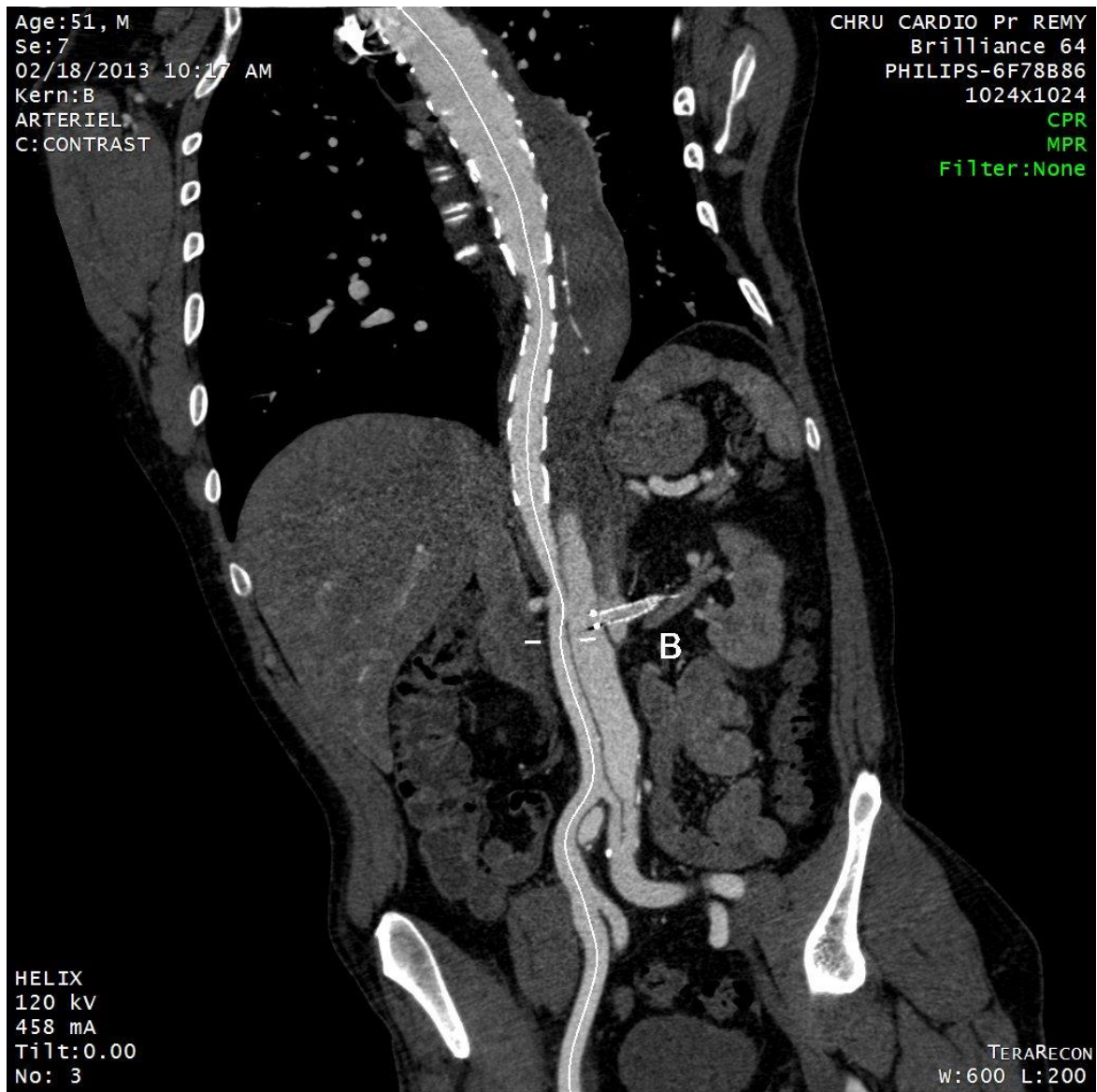
TERARECON
W: 600 L: 200

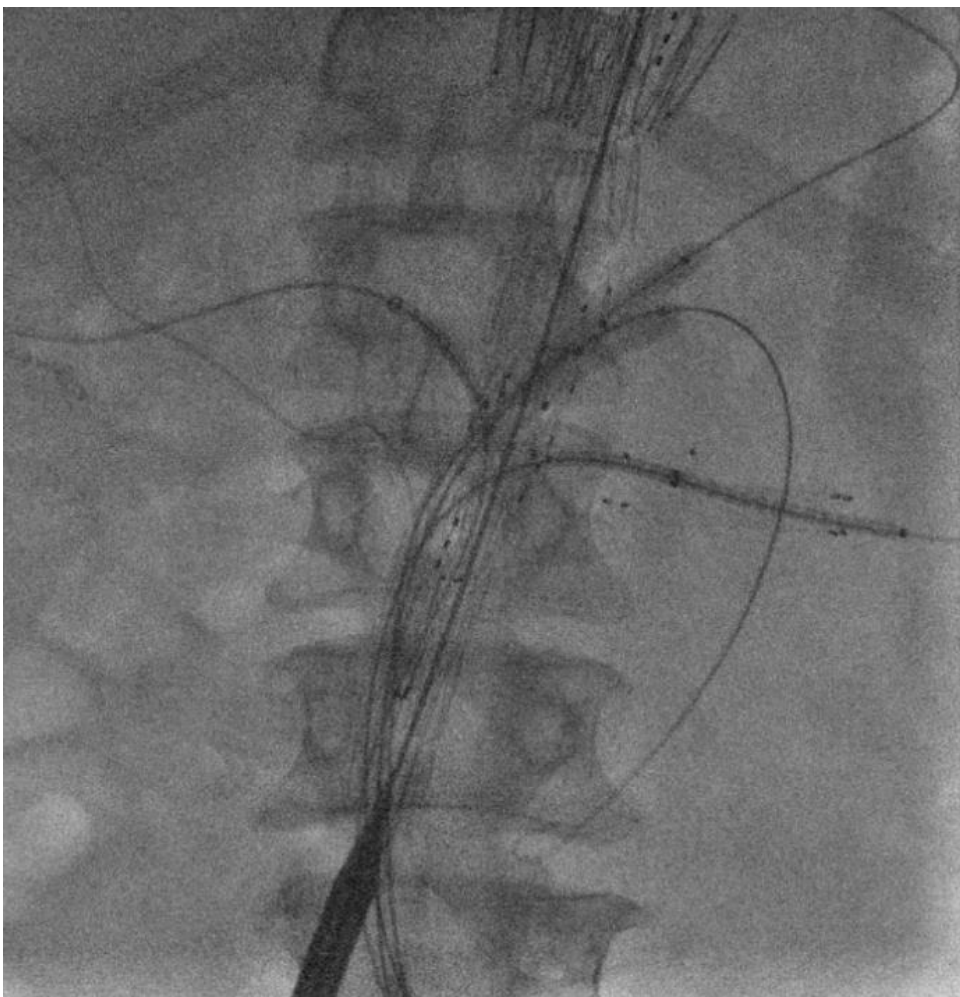
GE MEDICAL SYSTEMS
Innova Vision
Ex:
Se: 10
Im: 178

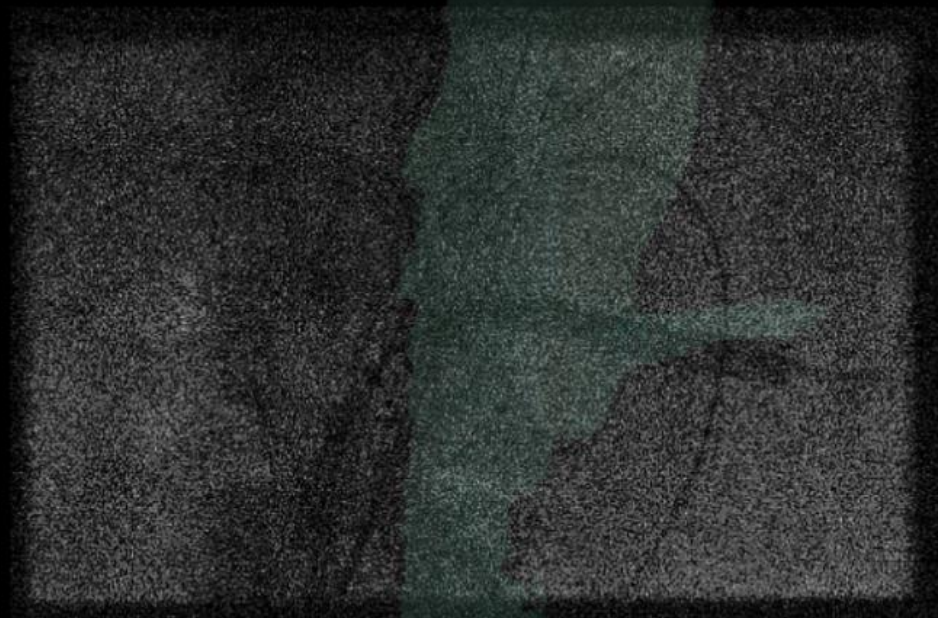
chu Lille Hal Cardiologique
DISSECTION MANAGEMENT

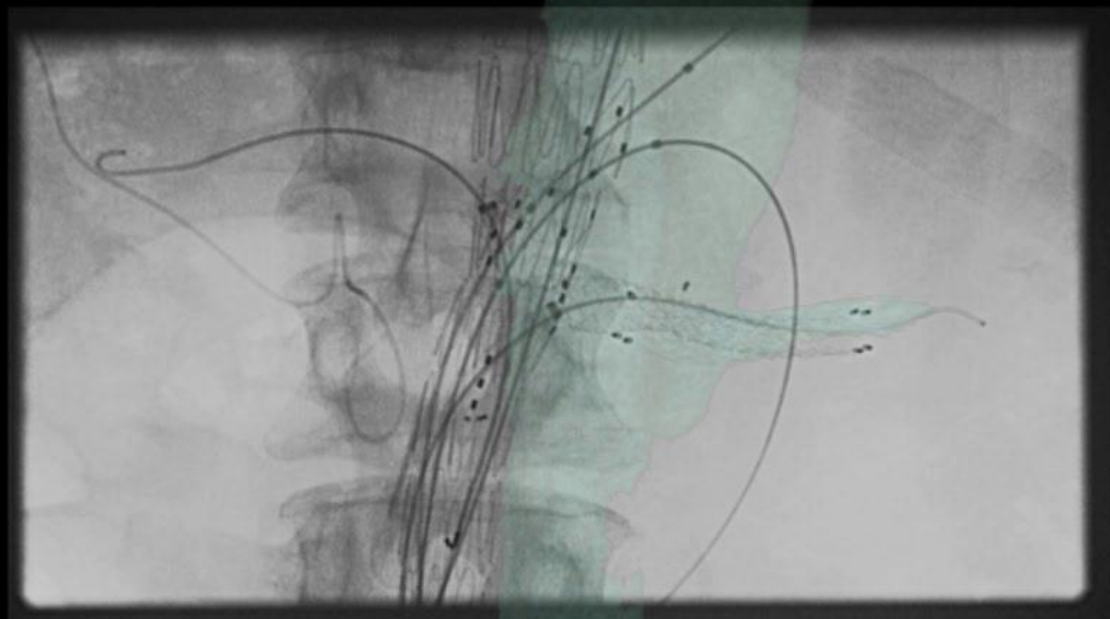
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FL:
ROT:



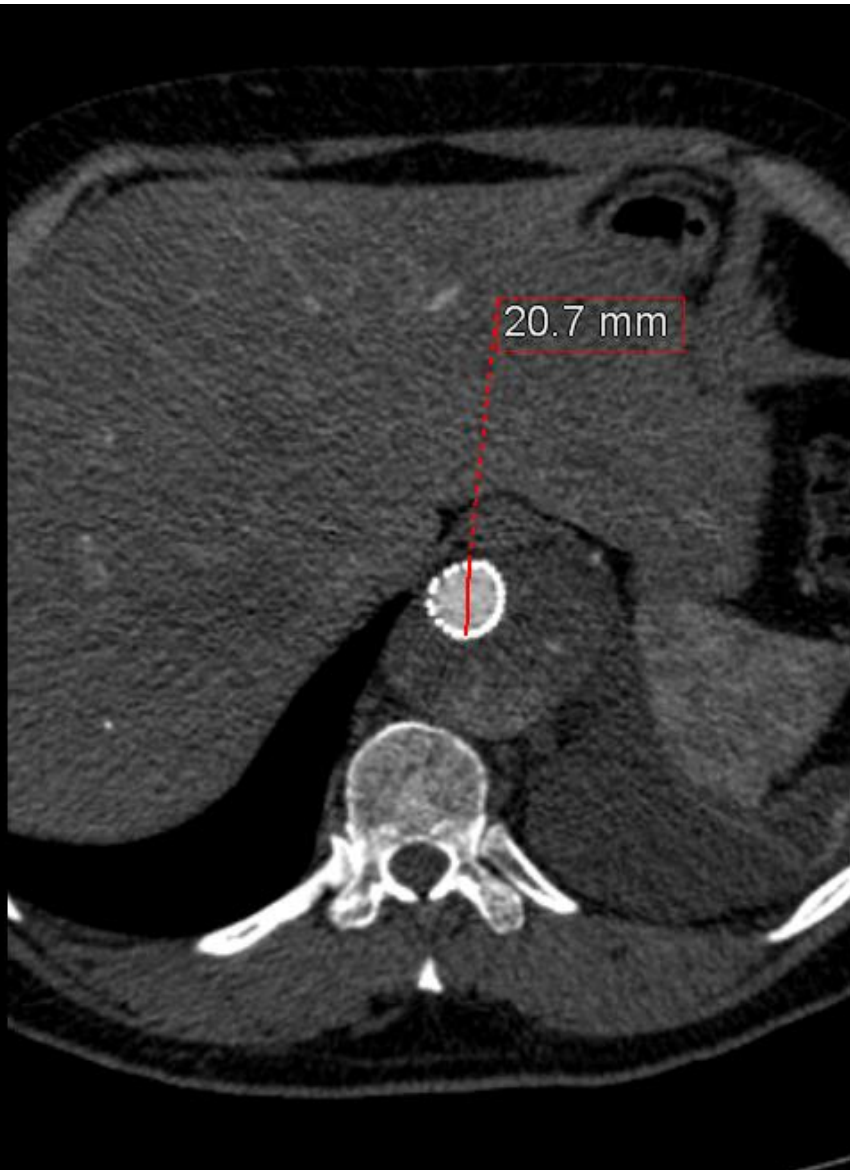




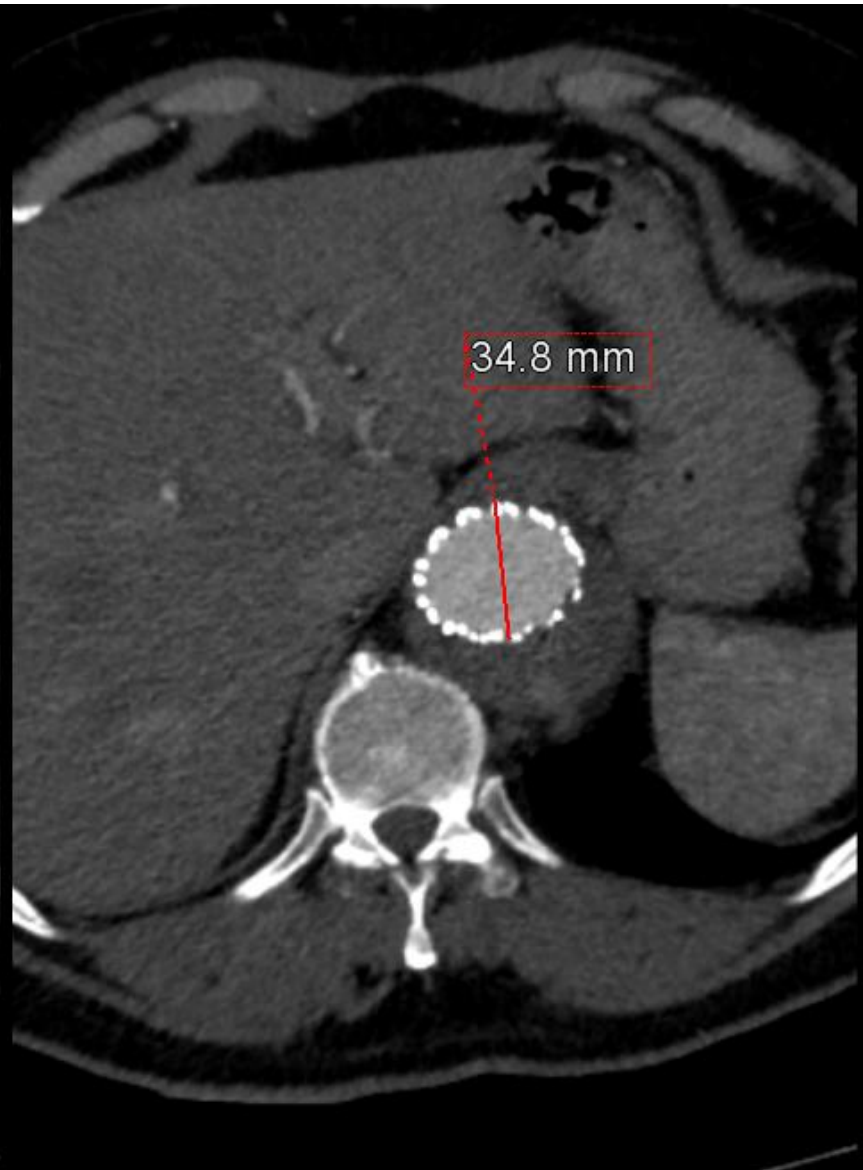








Post TEVAR



Post FEVAR

Staged Approach

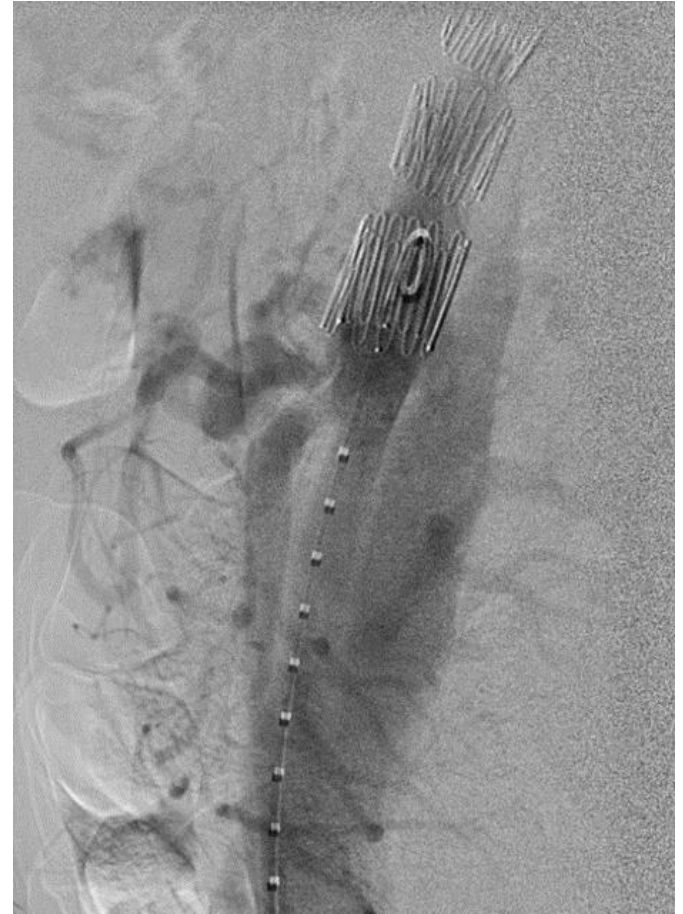
- 50 yo patient
- Step 1 (2009): Acute type A dissection with ascending aortic replacement
- Step 2 (2013): Redo sternotomy
 - Tirone David + Arch repair and elephant trunk



TEVAR



Step 3: TEVAR from Elephant Trunk and CT



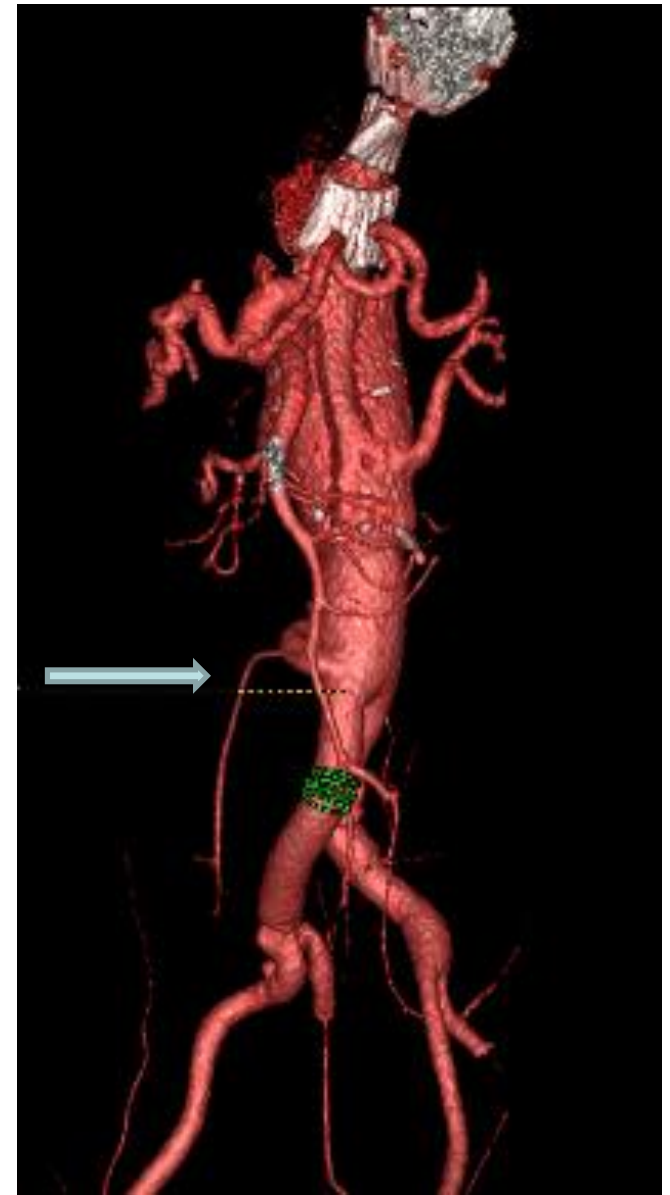
Step 4

Aorto Bi-Iliac Open Repair

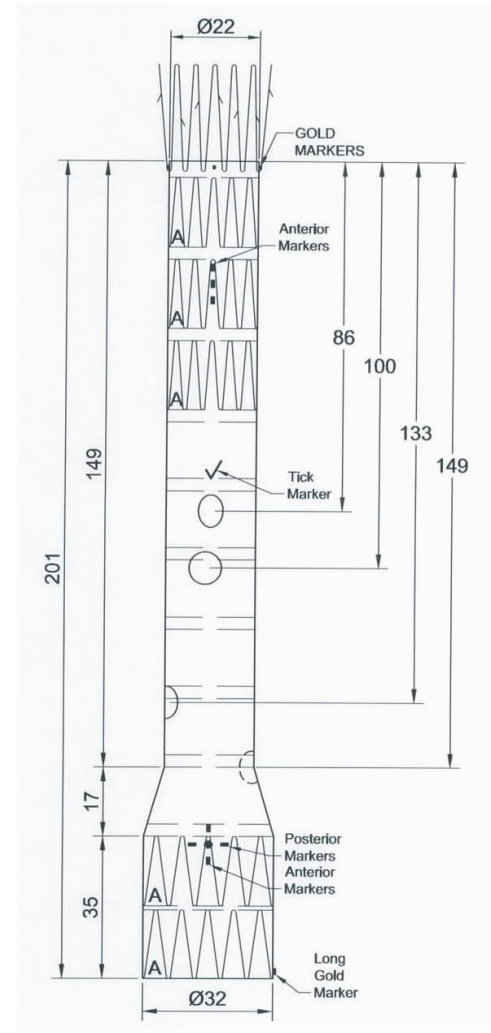
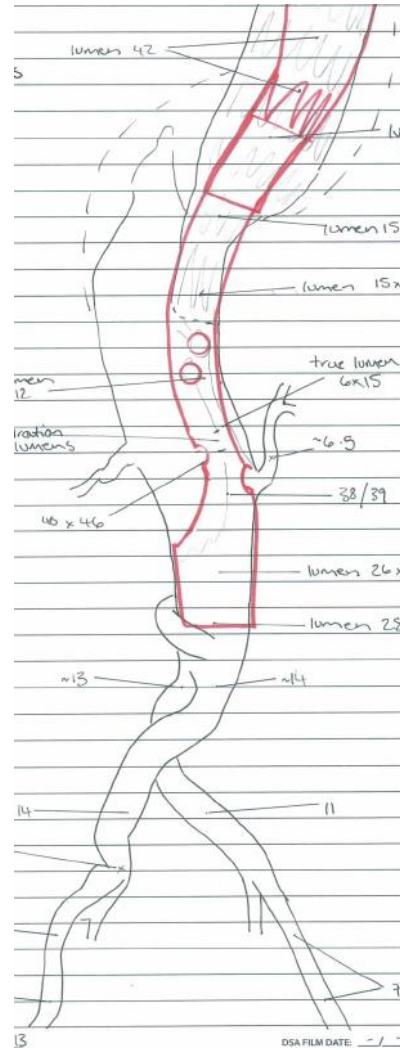
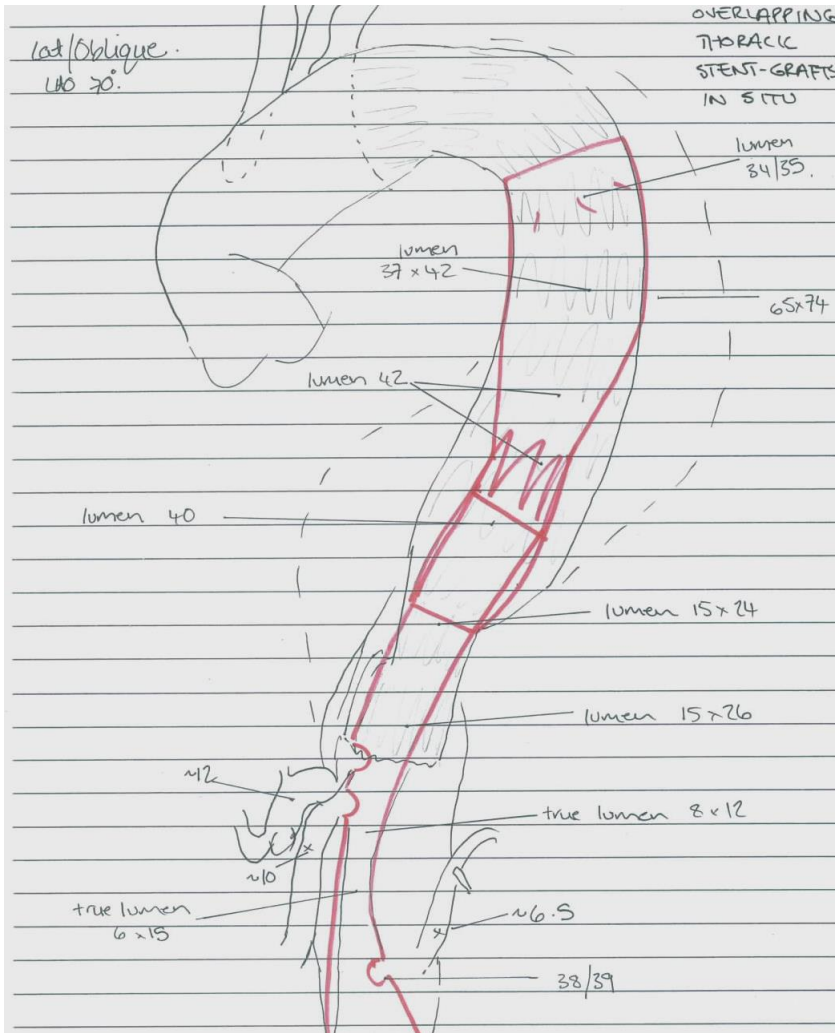
Goal:

Perfusion of

- Both Internal Iliac
- Distal lumbar arteries

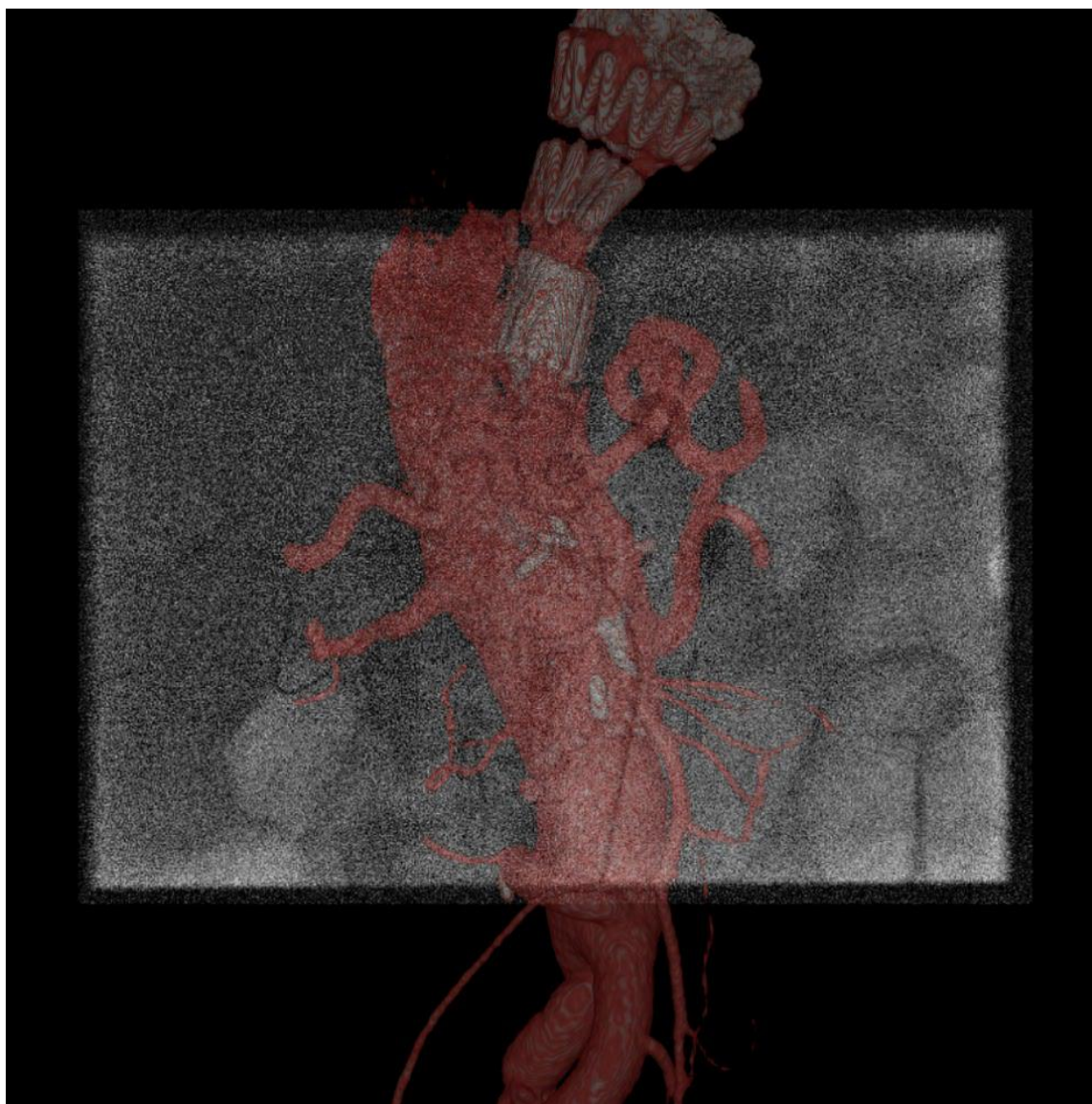


Step 5: Fenestrated Endograft

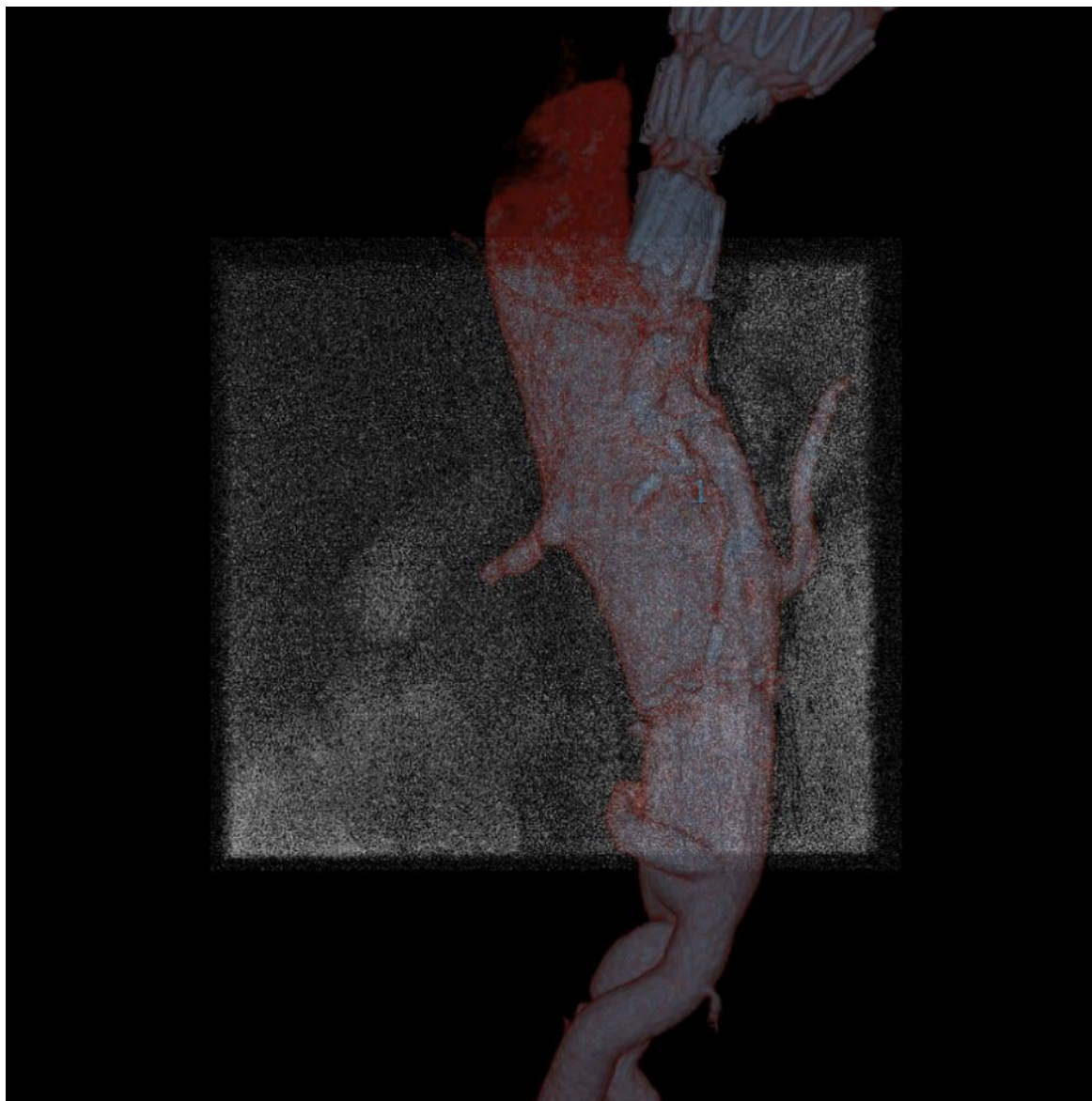


Small tear in front of
the right renal











TERARECON



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Expansion of true lumen

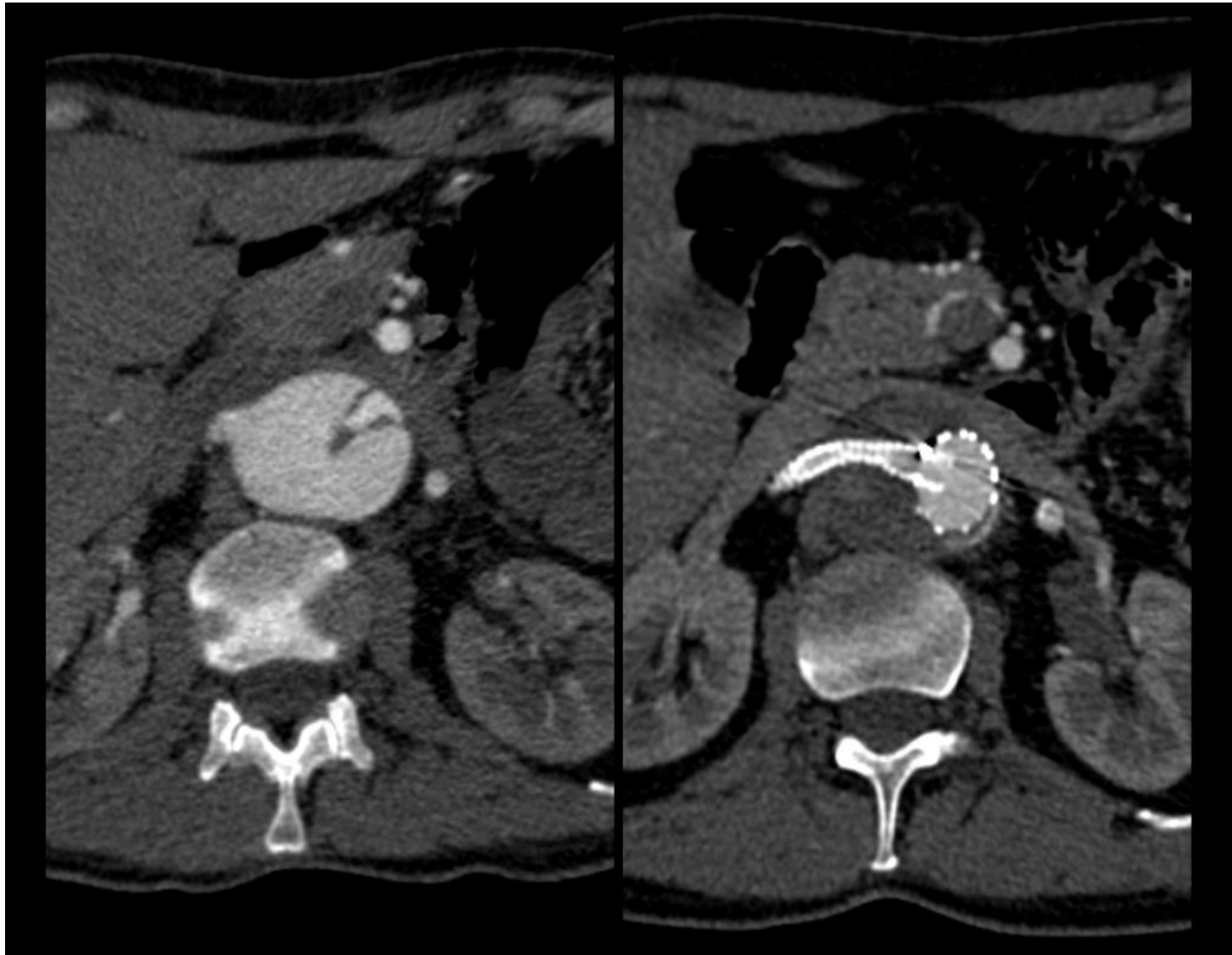


Post TEVAR



Post FEVAR



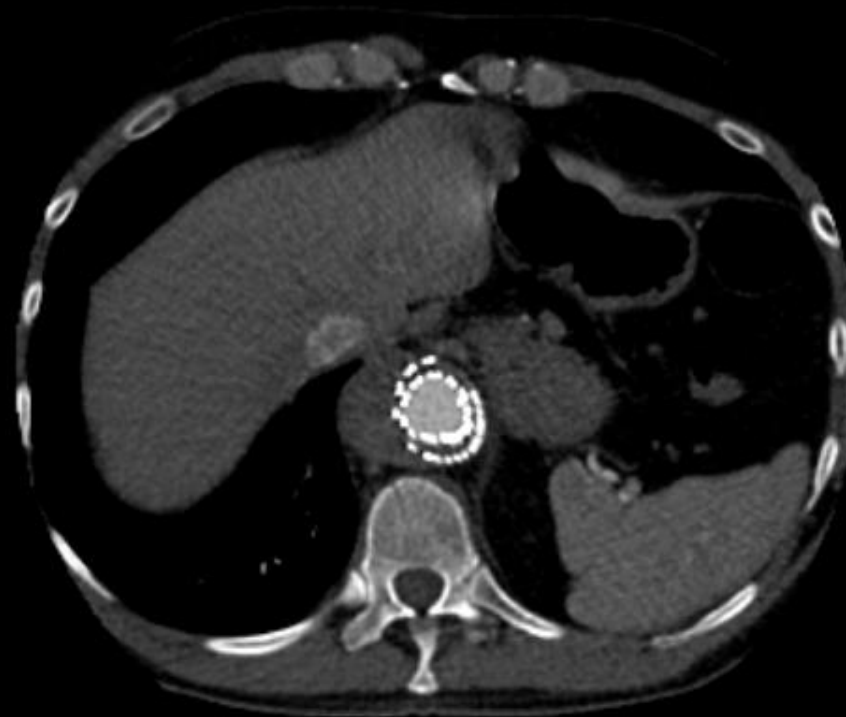


Post TEVAR

Post FEVAR



Post TEVAR



Post FEVAR





DATA

TABLE I.—*Results of three single centre series of patients with chronic aortic dissections treated with fenestrated/branched endografts.*

	Verhoeven Nurnberg, Germany 2012	Kitagawa CCF, USA 2013	Haulon Lille, France 2014
N. of patients	6	15	15
Median age	62 (44-71)	58 (33-71)	61 (31-77)
Maximal diameter (mm - median, range)	69 (64-73)	64 (43-97)	67 (56-79)
Connective tissue disease	NA	6 (40%)	3 (20%)
Arch involvement	0	1 (7%)	6 (40%)
Previous aortic surgery (including T-EVAR)	NA	12 (80%)	11 (73%)
Median nb of fenestrations/branches	3 (0-4)/1 (0-4)	NA	4 (0-4)/2 (0-2)
Median time elapsed (in months) between acute onset and complex EVAR (median, range)	32 (10-123)	124 (24-408)	48 (12-360)
Staged procedure (TM only)	NA	78%	45%
Technical success	100%	NA	100%
30d-mortality	0	0	1 (7%)
Reintervention	NA	8 (53%)	2 (13%)
Mean FU (months)	9 (3-15)	20 (1-62)	12 (1-36)



Early Experience of Endovascular Repair of Post-dissection Aneurysms Involving the Thoraco-abdominal Aorta and the Arch

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^a Aortic Center, Hôpital Cardiologique, CHRU Lille, France

^b Vascular Surgery, CHU Nancy, France

^c King's Health Partners, London, UK

Table 4. Early outcomes.

	Major adverse events, <i>n</i> (%)	In hospital mortality, <i>n</i> (%)	Spinal cord ischemia, <i>n</i> (%)	Secondary procedures, <i>n</i> (%)	Type 1 endoleak, <i>n</i> (%)
Aortic arch aneurysm (<i>n</i> = 7)	2 (28.5)	1 (14)	0 (0)	2 (28.5)	1 (14)
TAAA (<i>n</i> = 16)	3 (19)	1 (6) ^a	1 (6) ^a	0 (0)	1 (6)
Total (<i>n</i> = 23)	5 (22)	2 (8.7)	1 (4.4)	2 (8.7)	2 (8.7)

CONCLUSIONS

- Simple to very complex
- 3D WS analysis
- No compromise

