



FALSE LUMEN OCCLUSION TECHNICAL ASPECTS

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Disclosure

Speaker name:

.....SONIA RONCHEY.....

I do not have any potential conflict of interest

TEVAR is the first line treatment for Acute complicated type B dissection

Expert Consensus Document on the Treatment of Descending Thoracic Aortic Disease Using Endovascular Stent-Grafts*

[Lars G. Svensson](#), MD, PhD  [Nicholas T. Kouchoukos](#), MD, [D. Craig Miller](#), MD, [Joseph E. Bavaria](#), MD, [Joseph S. Coselli](#), MD, [Michael A. Curi](#), MD, MPA, [Holger Eggebrecht](#), MD, [John A. Elefteriades](#), MD, [Raimund Erbel](#), MD, [Thomas G. Gleason](#), MD, [Bruce W. Lytle](#), MD, [R. Scott Mitchell](#), MD, [Christoph A. Nienaber](#), MD, [Eric E. Roselli](#), MD, [Hazim J. Safi](#), MD, [Richard J. Shemin](#), MD, [Gregorio A. Sicard](#), MD, [Thoralf M. Sundt III](#), MD, [Wilson Y. Szeto](#), MD, [Grayson H. Wheatley III](#), MD

Ann Thorac Surg 2008

Surgical Management of Descending Thoracic Aortic Disease: Open and Endovascular Approaches **A Scientific Statement From the American Heart Association**

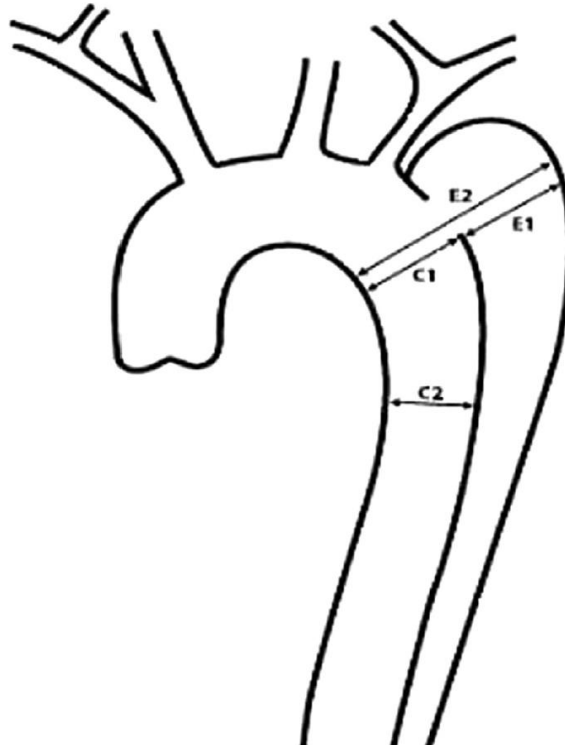
Michael A. Coady, MD, MPH, Chair; John S. Ikonomidis, MD, PhD, FAHA; Albert T. Cheung, MD; Alan H. Matsumoto, MD, FAHA; Michael D. Dake, MD; Elliot L. Chaikof, MD; Richard P. Cambria, MD; Christina T. Mora-Mangano, MD; Thoralf M. Sundt, MD; Frank W. Sellke, MD, FAHA; on behalf of the American Heart Association Council on Cardiovascular Surgery and Anesthesia and Council on Peripheral Vascular Disease

Circulation 2010

TEVAR is good option for Acute uncomplicated type B dissection

Endovascular Repair of Acute Uncomplicated Aortic Type B Dissection Promotes Aortic Remodelling: 1 Year Results of the ADSORB Trial

J. Brunkwall ^{a,*}, P. Kasprzak ^b, E. Verhoeven ^c, R. Heijmen ^d, P. Taylor ^d, the ADSORB Trialists ^e, P. Alric, L. Canaud, M. Janotta, D. Raithel, M. Malina, Ti. Resch, H.-H. Eckstein, S. Ockert, T. Larzon, F. Carlsson, H. Schumacher, S. Classen, P. Schaub, J. Lammer, L. Lönn, R.E. Clough, V. Rampoldi, S. Trimarchi, J.-N. Fabiani, D. Böckler, D. Kotelis, D. Böckler, D. Kotelis, H. von Tenng-Kobligk, N. Mangialardi, S. Ronchey, G. Dialetto, V. Matoussevitch



FL DECREASE

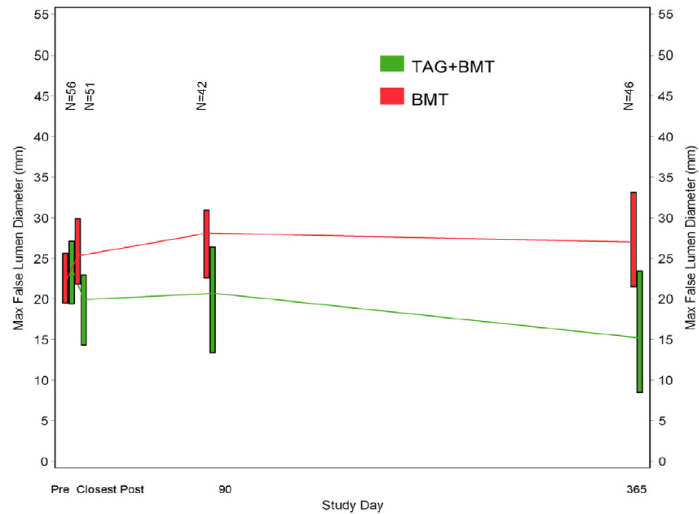


Figure 3. Evolution of the false lumen by treatment group during the one year follow up. At 1 year, the false lumen decreased in size in the TAG+BMT group but did not so in the BMT group ($p < .001$).

TL EXPANSION

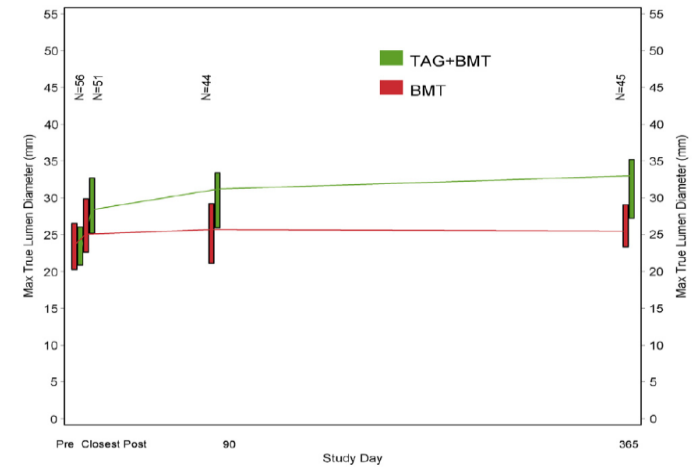


Figure 2. Maximum true lumen by treatment group during follow up. At 1 year, the true lumen expanded in the TAG+BMT group, but did not so in the BMT group ($p < .001$).

SIMILAR AD

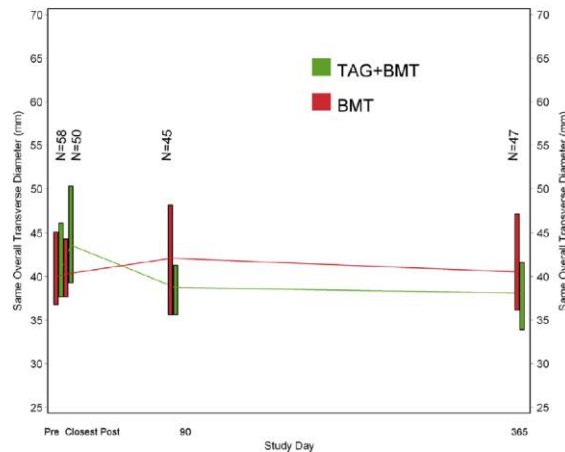


Figure 4. Aortic diameter was similar at baseline and the difference at 1 year did not reach statistical significance ($p < .062$).

GOALS OF TEVAR

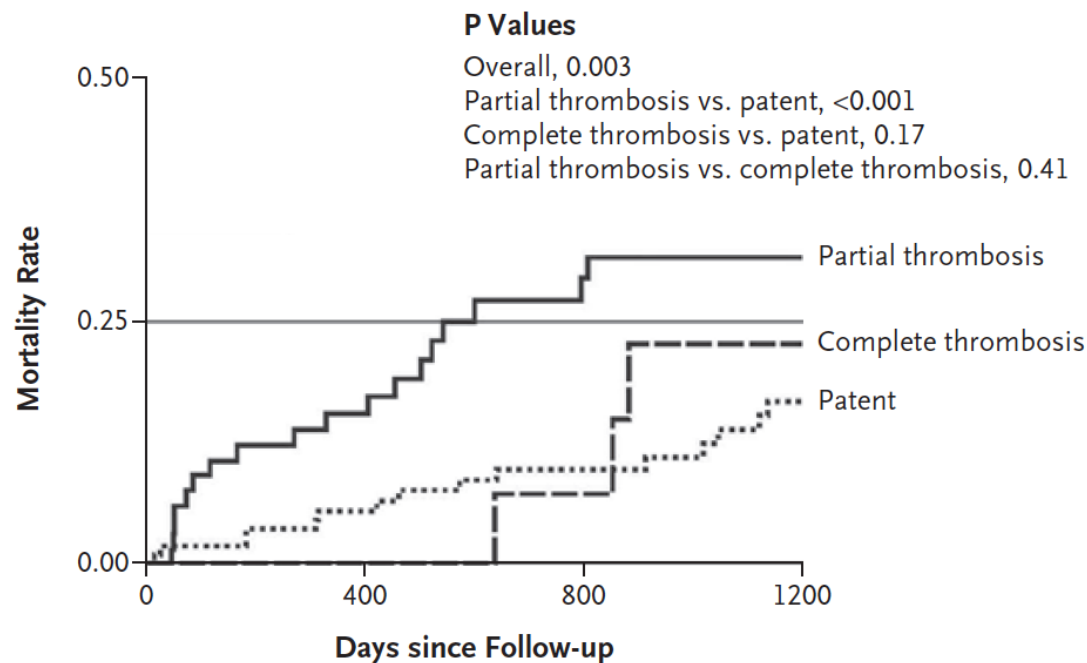
ACUTE PHASE

- CLOSE PRIMARY ET
- RESTORATION OF TRUE LUMEN FLOW
- ABROGATION OF IMPENDING/ RUPTURE
- RELIEF OF MALPERFUSION

DELAYED BENEFITS

- OBLITERATION OF THE FL
- AVOID RISK OF ANEURYSMAL DILATATION AND RUPTURE

PERSISTENT FL PATENCY AFTER SG IS THE PROBLEM



No. at Risk

Patent	111	96	75	56
Partial thrombosis	67	48	32	24
Complete thrombosis	19	17	12	4

Figure 1. Kaplan–Meier Mortality Curve Stratified According to the Status of the False Lumen.

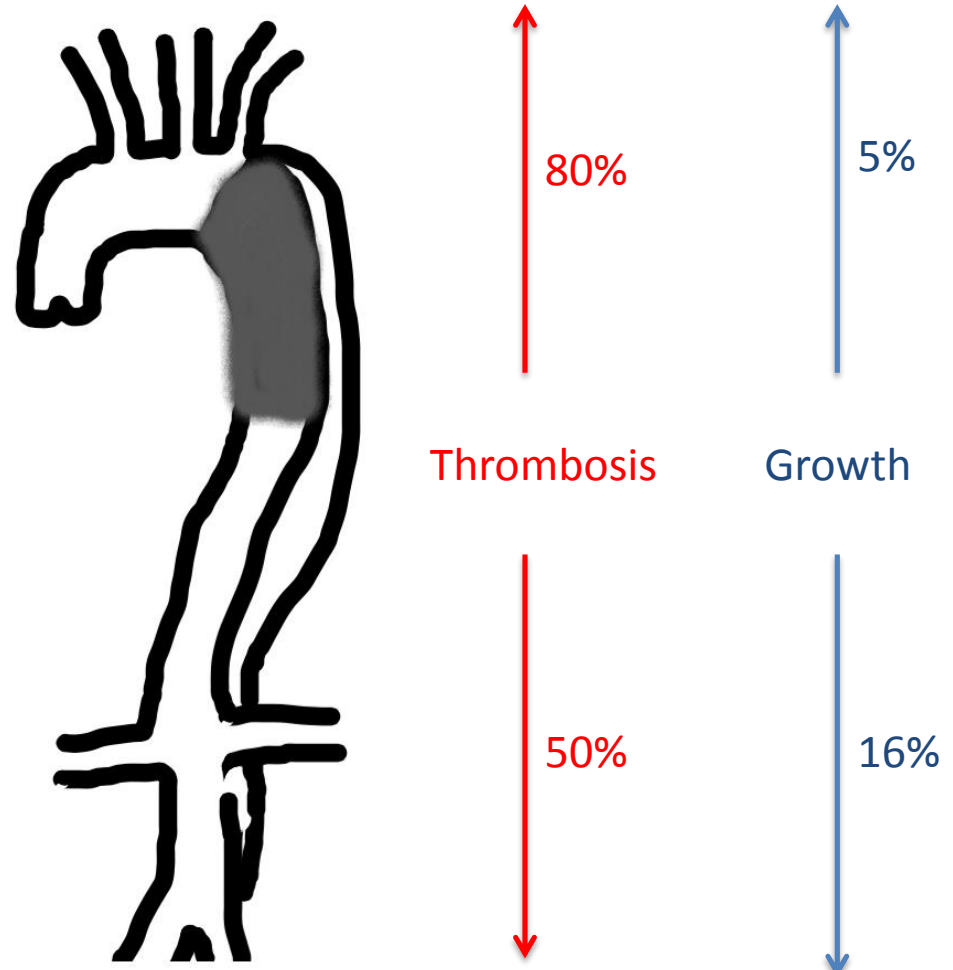
P values were calculated by the log-rank test. Overall denotes comparison of all three curves.

FL thrombosis rate

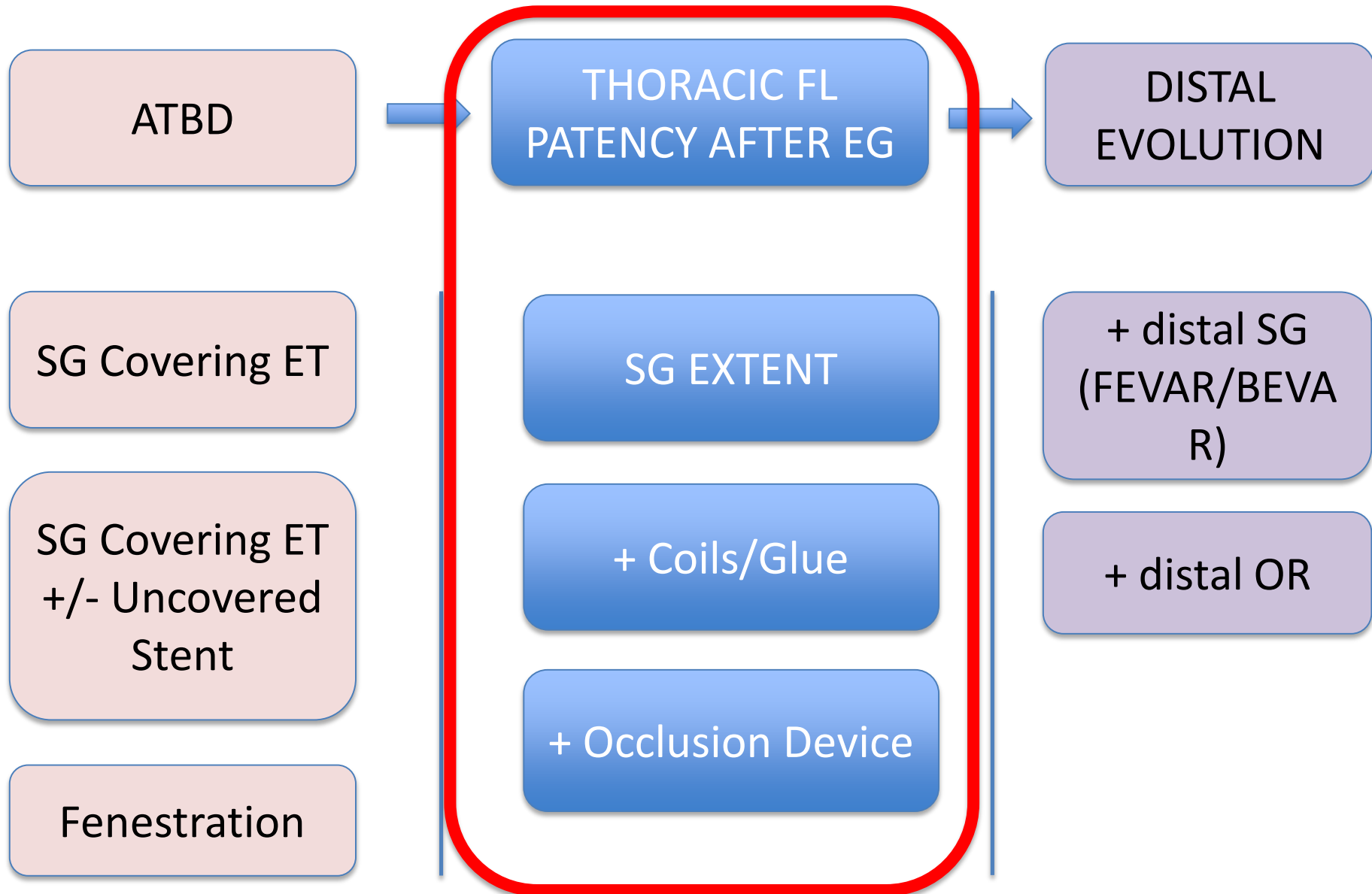
	Total FL Thrombosis	Partial FL Thrombosis	N
Wiedemann 2014	7%	24%	110
Zhu 2015	85%	14%	28
Huang 2015	95%	NR	72
Cambria 2015	40%	12%	50
Brunkwall (ADSORB) 2014		70%	61
Nienaber (INSTEAD XL)	66%	7%	72%

Swedish Multicenter Study

- 129 TBAD
- 9 yrs ('94-'05)
- Fup 14 mths



How to manage False Lumen



Author	Embolic Agent	N
Ogawa JVT 2016	Candy Plug	1
Kolbel JVT 2016	Coils	2
Hussain Annals 2015	Coils & Glue	1
Idrees JVS 2015	Occluders + Others	21
Mendes JVT 2015	Amplatzer	1
Kolbel JVT 2013	Candy Plug	1
Hofferberth JVT 2012	Coils + Glue + Occlusion Balloons	10
Norberto JVS 2011	Coils	5
Smith EVT 2009	Coils	1
Riga JVIR 2009	Coils & Onyx	1
Hager JVS 2008	Coils & Covered Stents	1

LSA + INTERCOSTAL

Image size: 512 x 512
View size: 1173 x 827
WI: 107 WW: 738

A

SPINOLA GIUSEPPINA 1397755 (72 y, 69 y)
S3 TORACE - ADDOME - unmarked

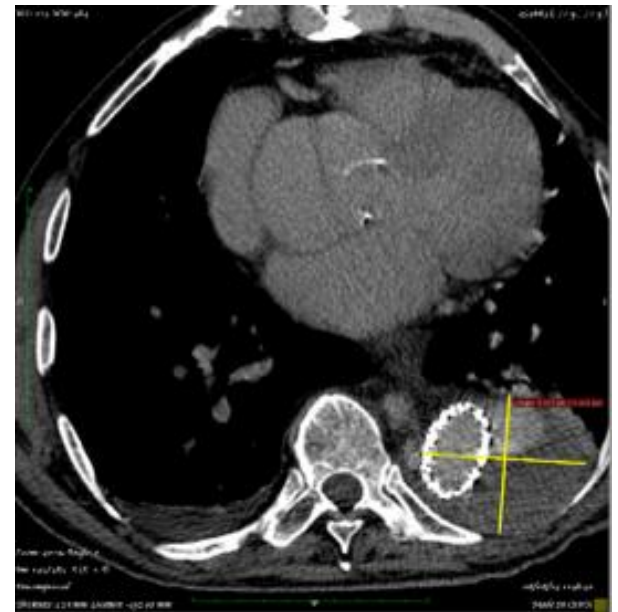
49157
4



PLUG & COILS



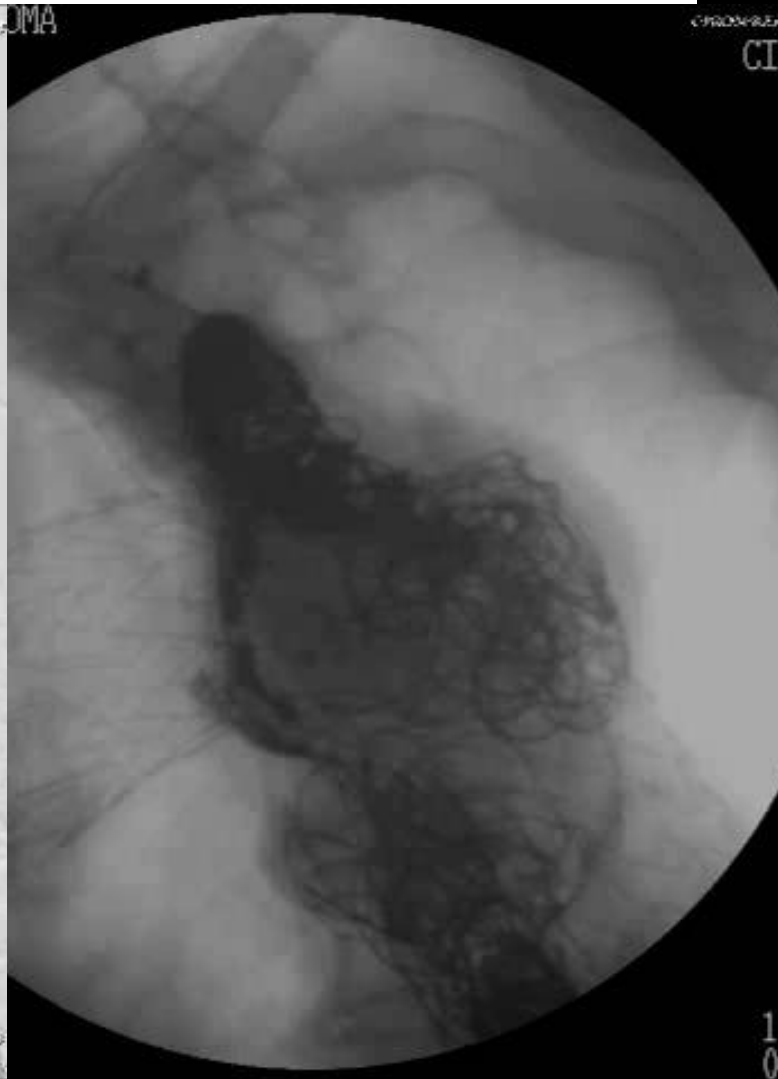
RESIDUAL TYPE A



LCCA-LSA BYPASS + LCCA SANDW+LSA PLUG

FL PATENCY FROM LSA/GUTTERS/DISTAL



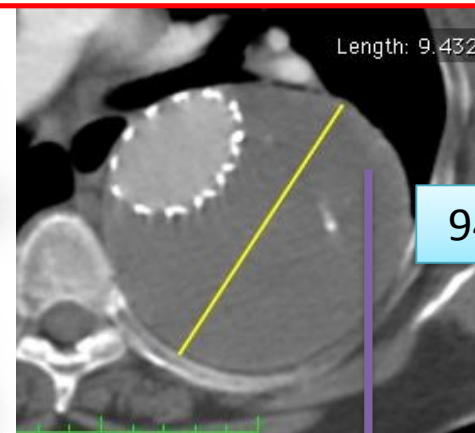
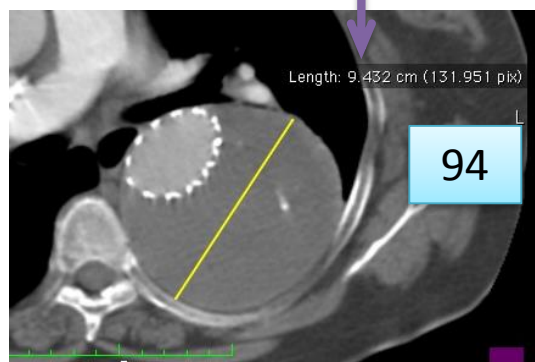
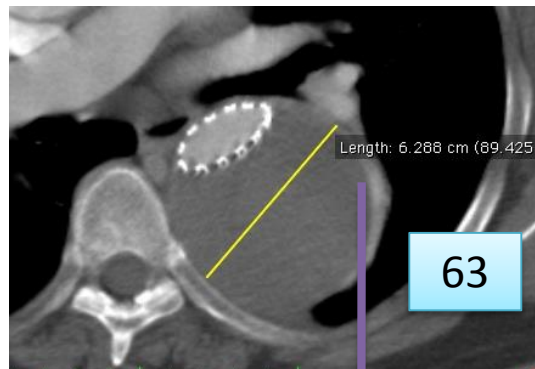


DISTAL EXTENSION
+ COILS

SECOND STEP GLUE
(ONIX)



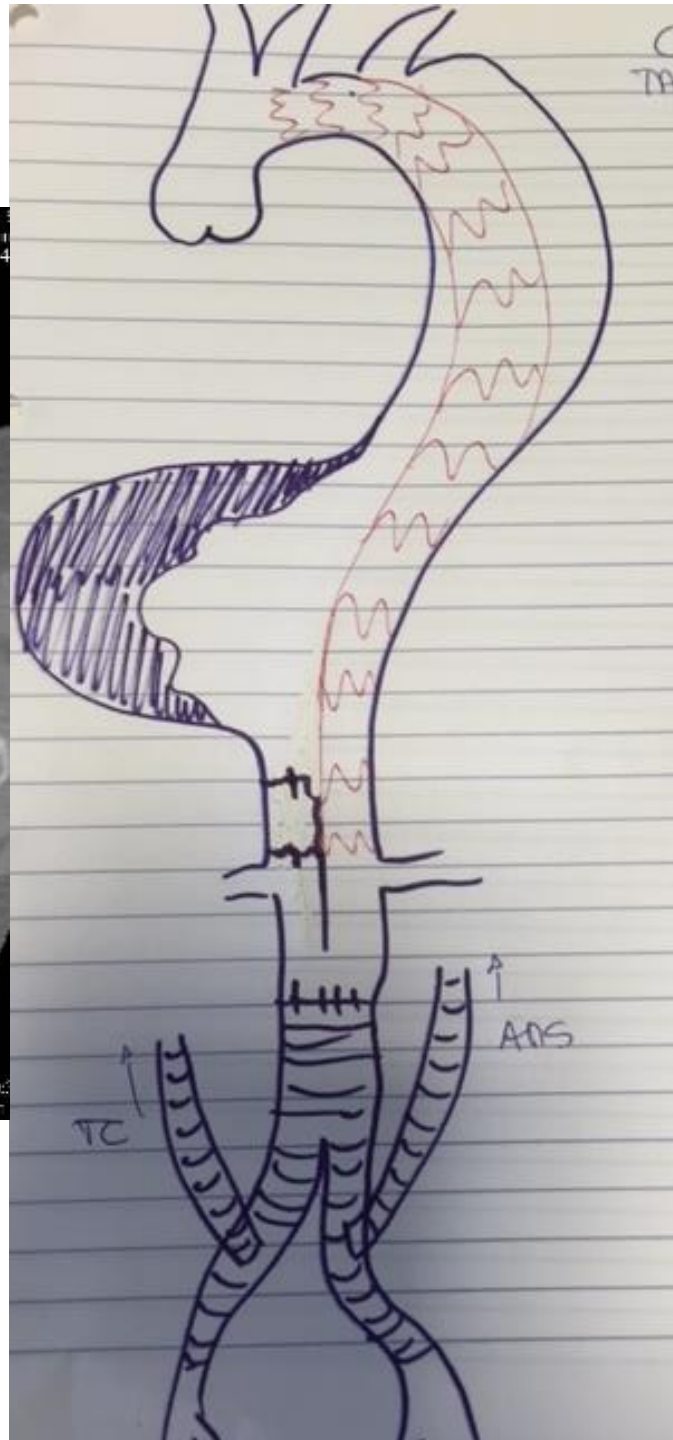
DISTAL EXTENTION AND PLUG

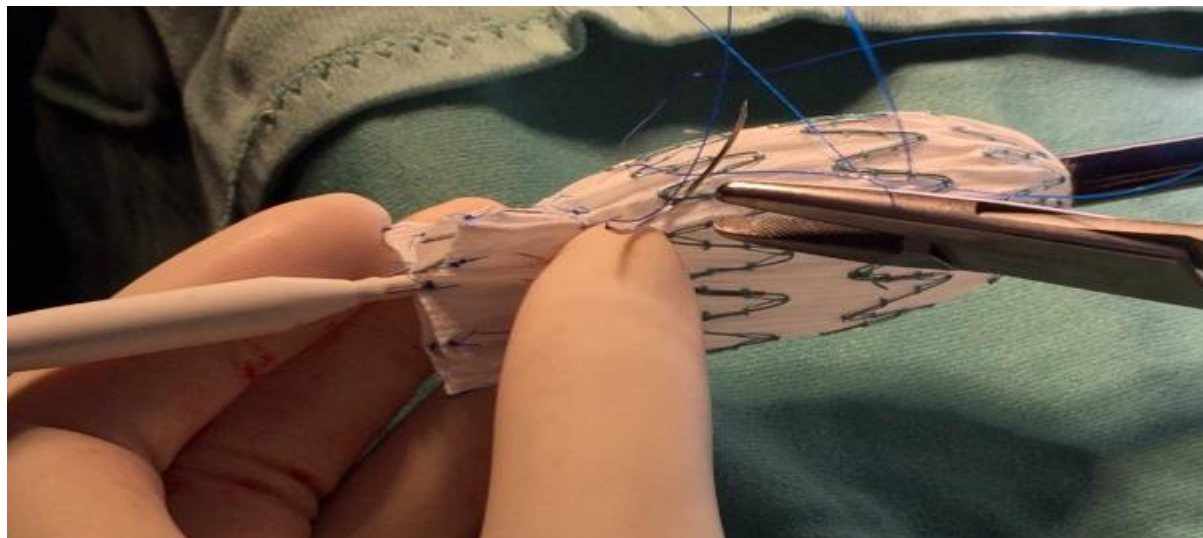


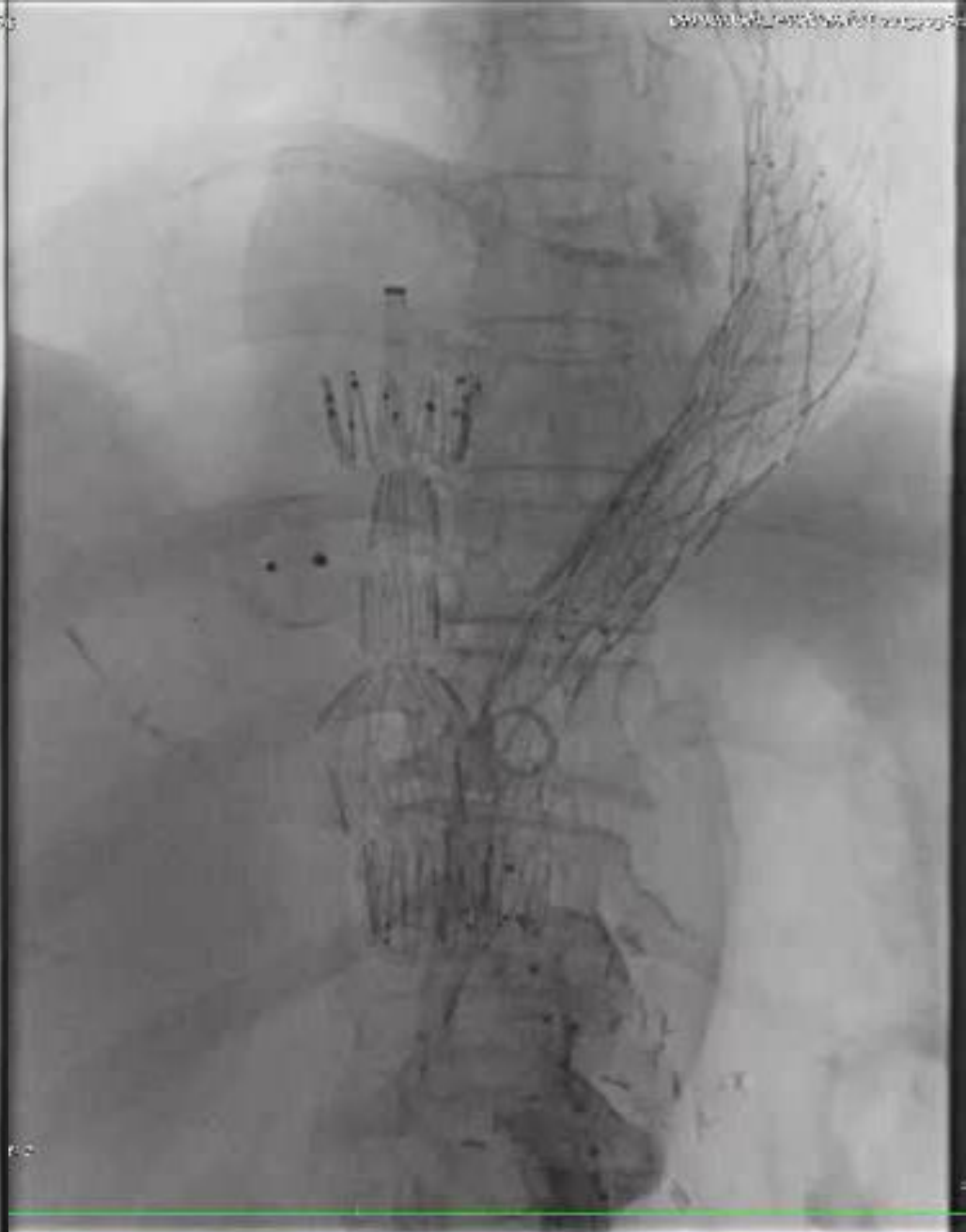
2005 > 2011
INCREASED FL DIAMETER

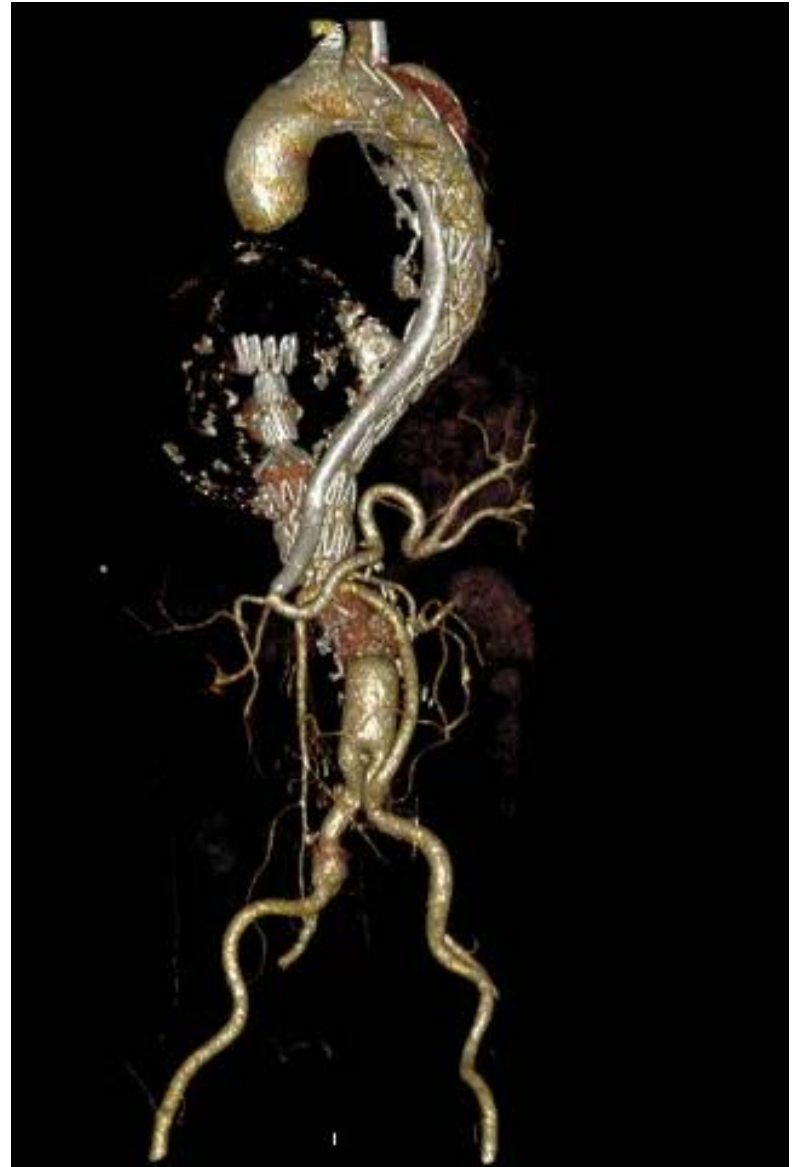
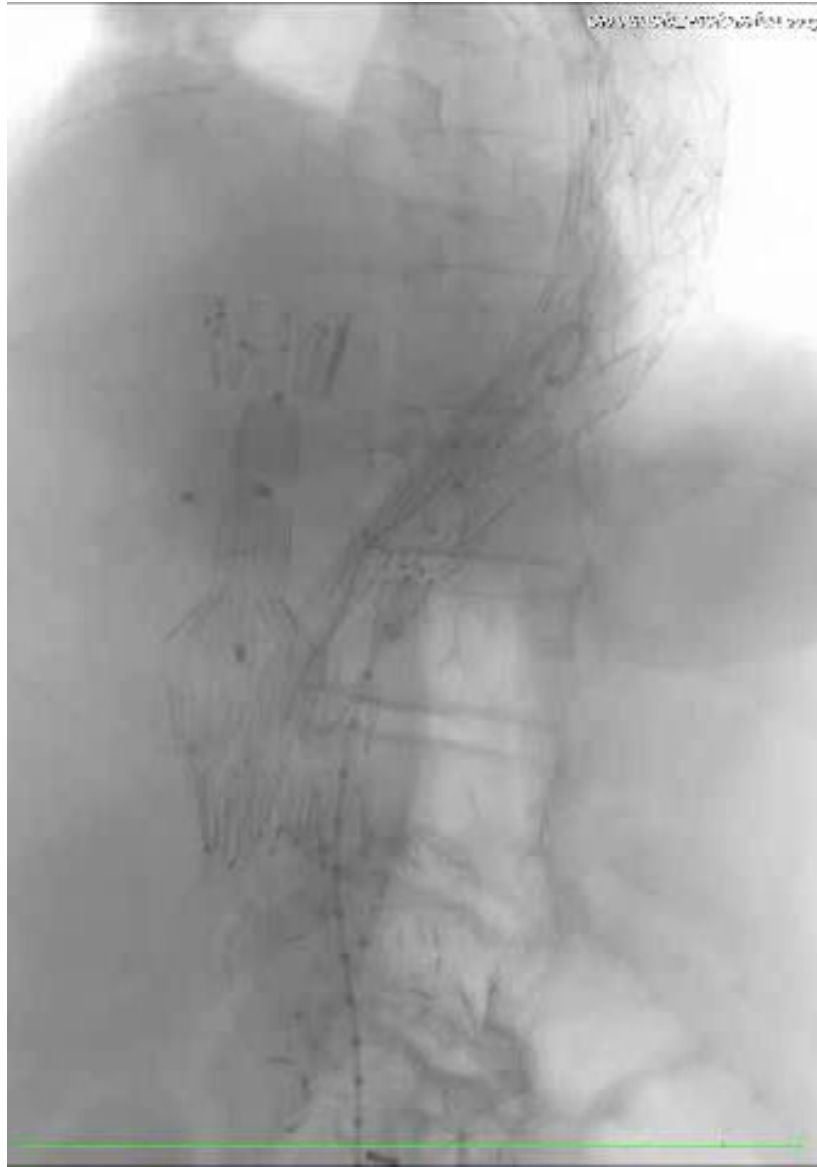
2011: DISTAL EXT + PLUG
DECREASED FL DIAMETER

HYBRID TECHNIQUE



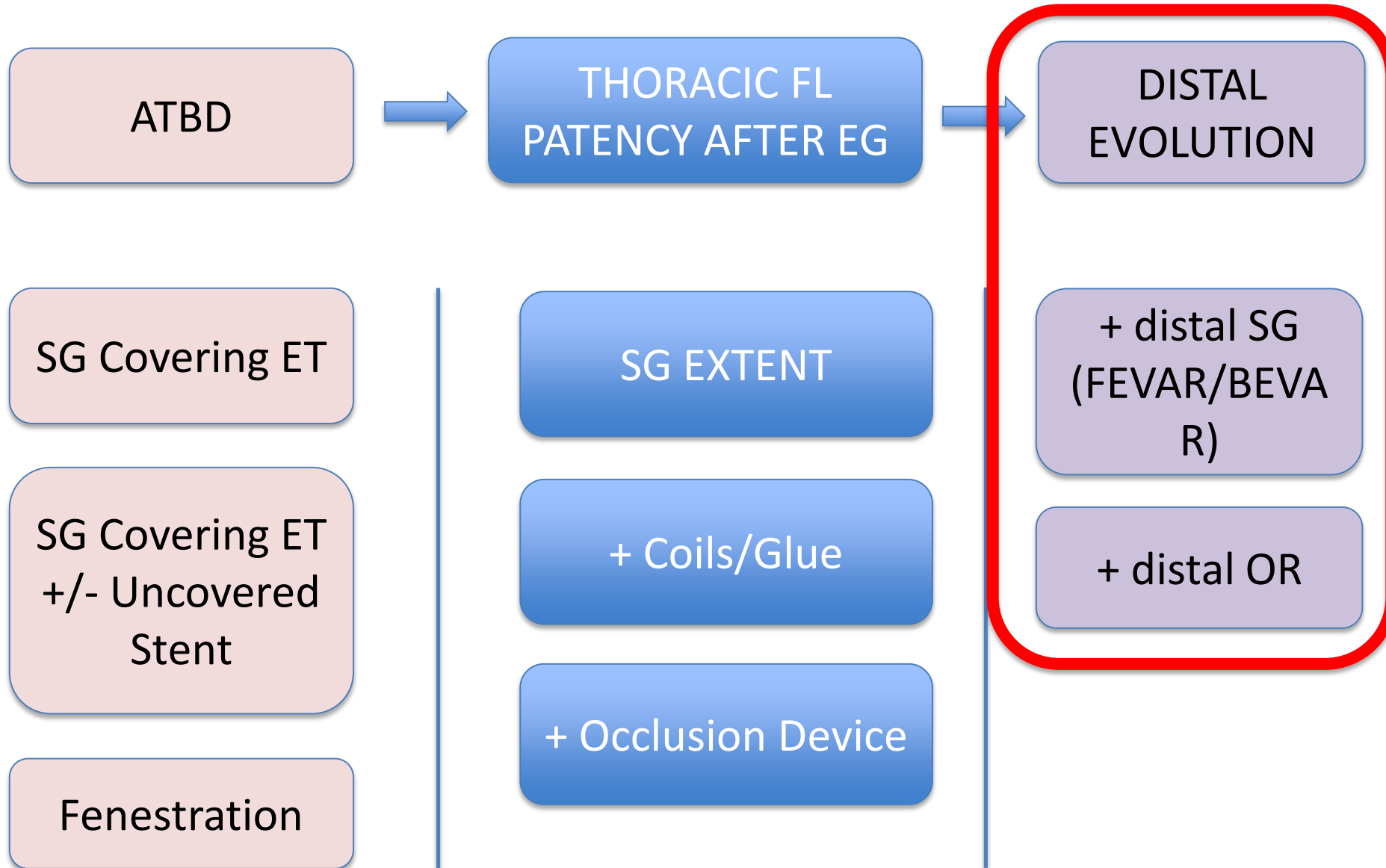






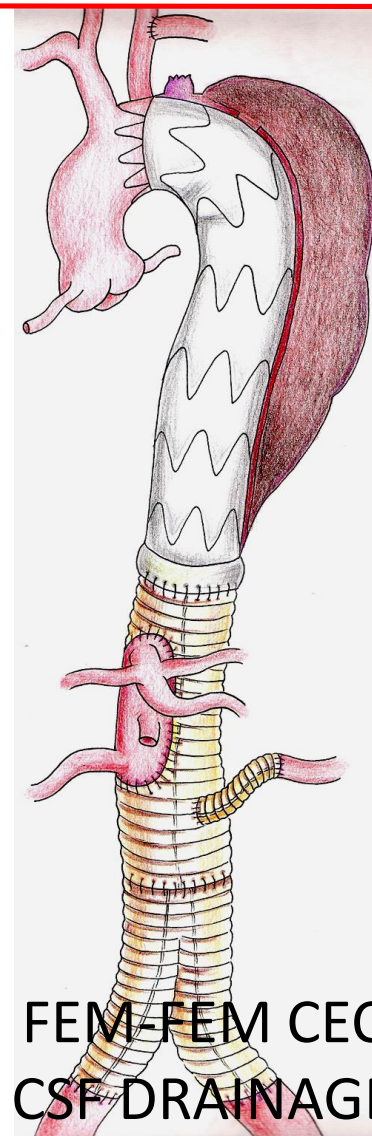
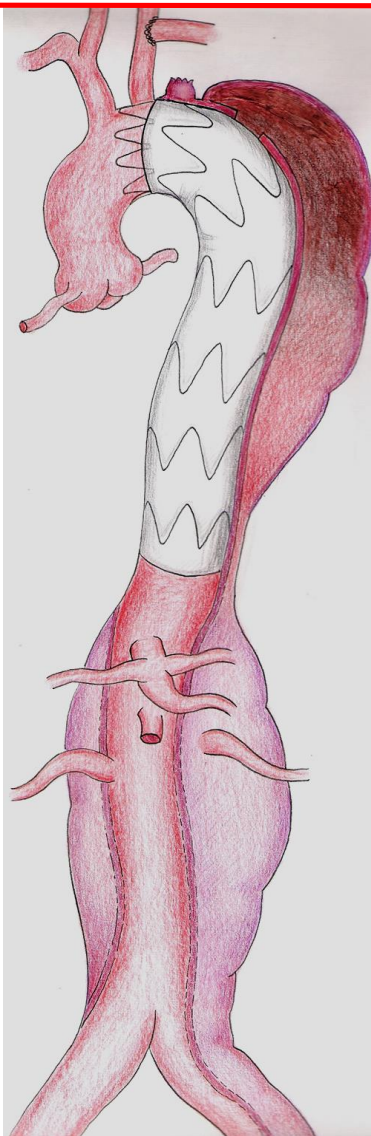
Author	Embolic Agent	N	F-Up mnths	Complete Thrombosis	Sac = or >	Sac <
Idrees JVS 2015	Occluders + Others	21	25	60%		62%
Hofferberth JVT 2012	Coils + Glue + Occlusion Balloons	10	63		90%	10%
Norberto JVS 2011	Coils	5	11		60%	40%

How to manage False Lumen





“HYBRID” TREATMENT

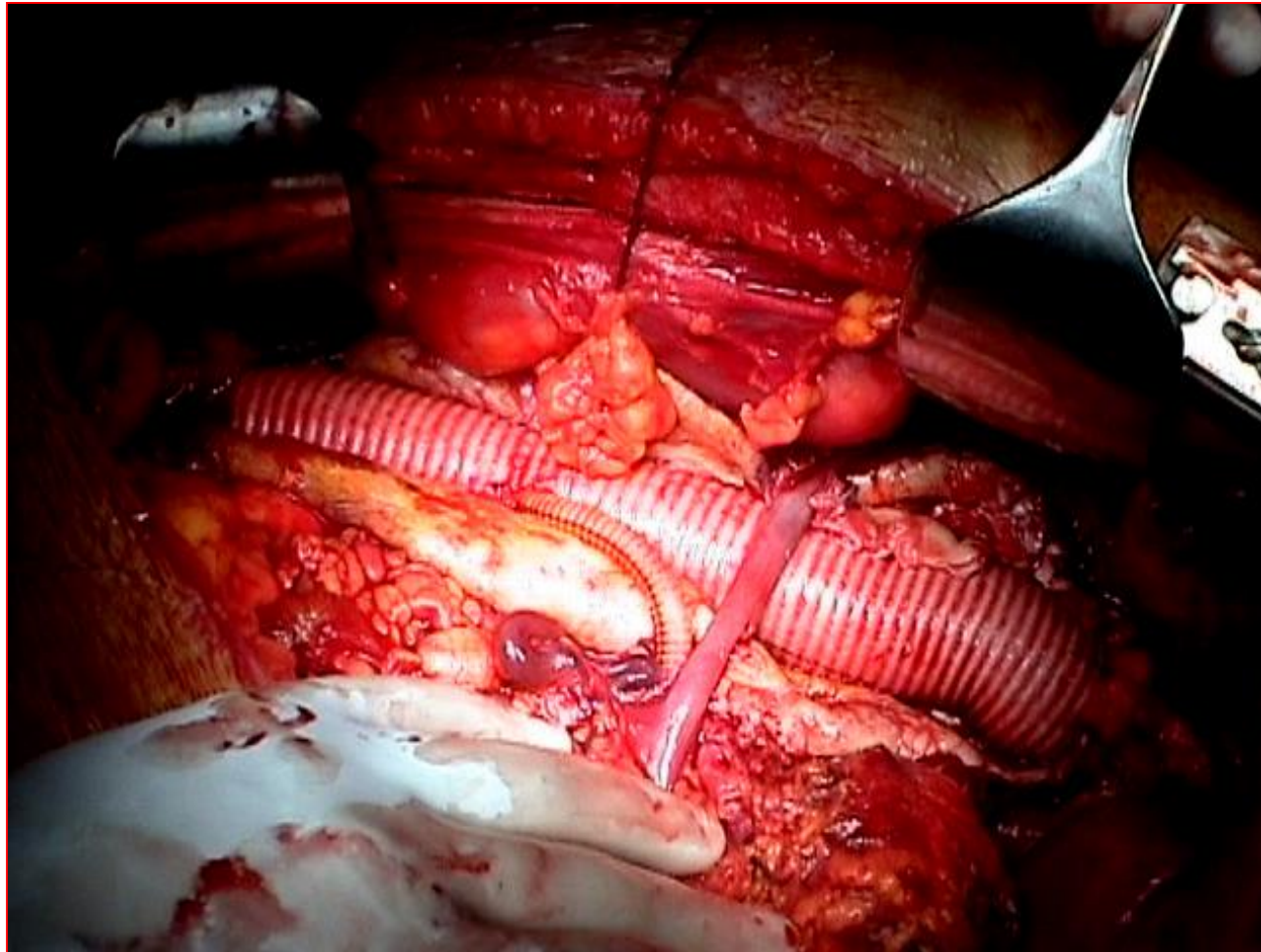


FEM-FEM CEC
CSF DRAINAGE



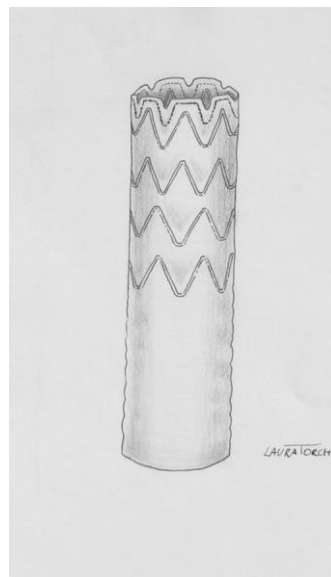
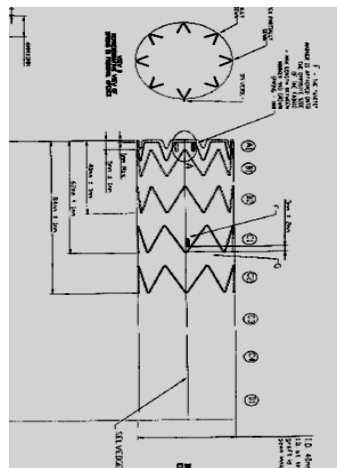


“HYBRID” TREATMENT



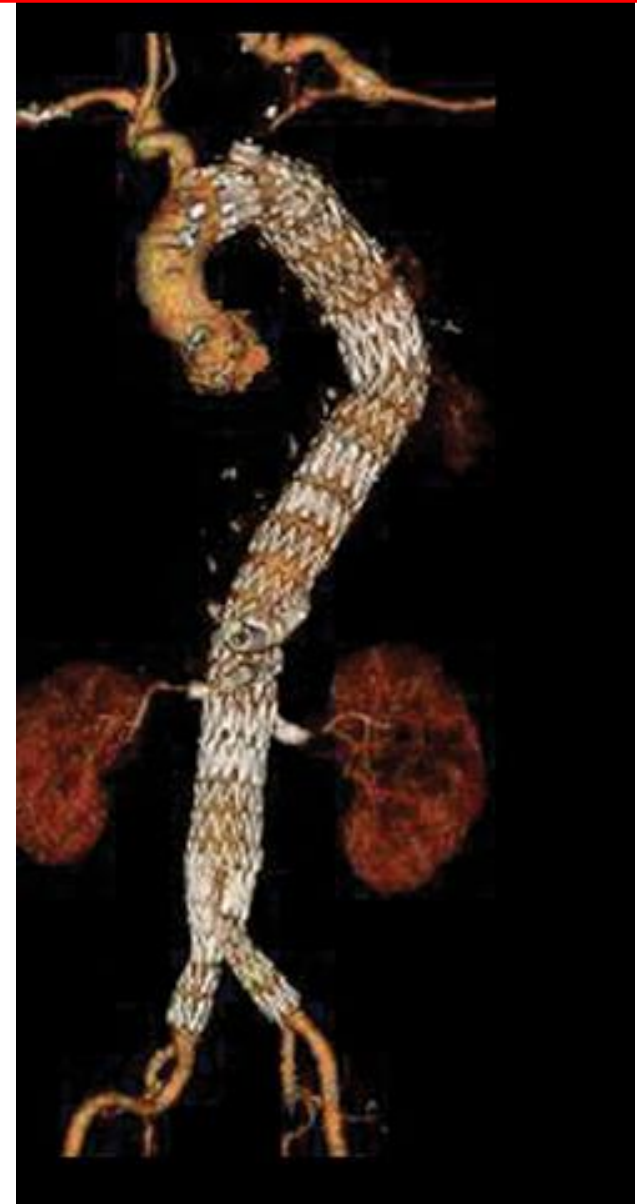
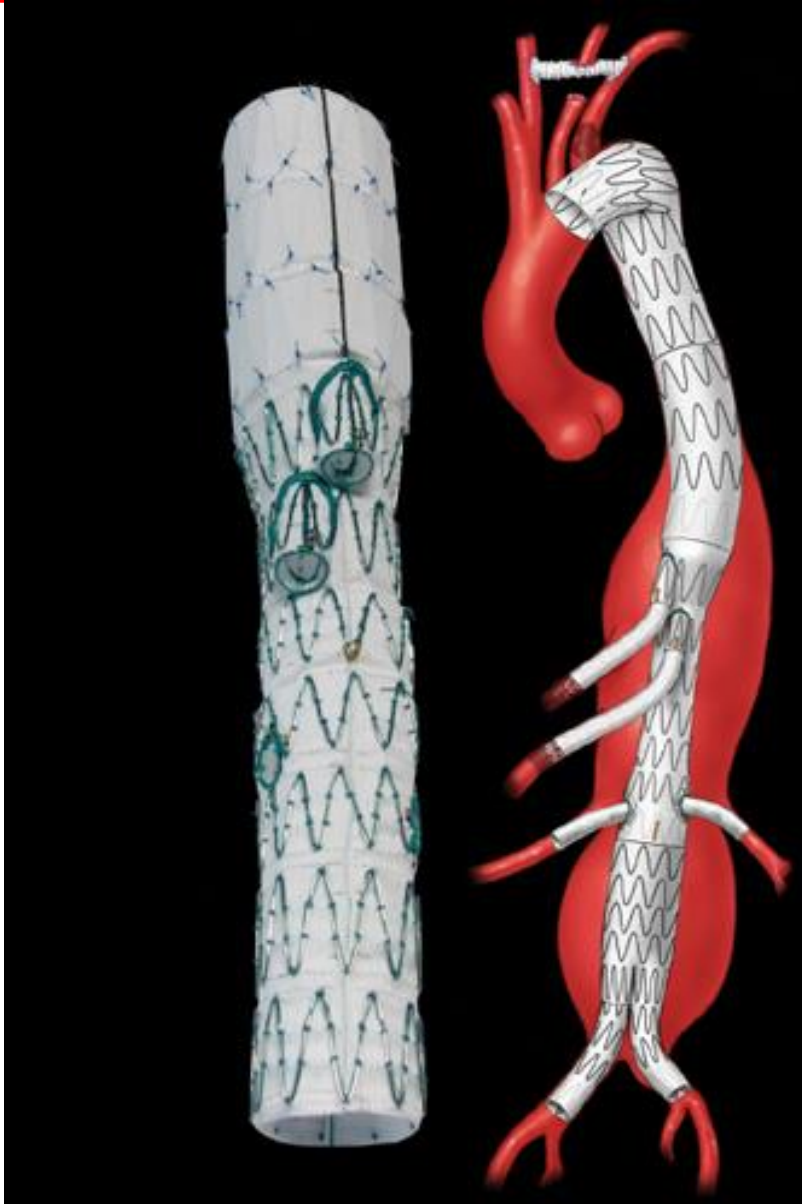


STAGED “HYBRID” TREATMENT





BRANCHED/FENESTRATED STENT-GRAFT



Conclusions

- FL patency is one of the main causes of disease progression
 - Embolization strategies have not yet changed the natural history of the disease
 - Fenestrated/branch are a promising solution