CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY
JANUARY 19-21 2017
MARRIOTT RIVE GAUCHE & CONFERENCE CENTER
PARIS, FRANCE
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Are Long Term Results of TEVAR for Dissection as Good as Expected?

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Disclosure

Speaker name: Jean-Marc ALSAC

- Speaker, Proctor, and Consultant for Educational Training
  - ABS BOLTON Medical
  - WL GORE & Associates
  - ENDOLOGIX Inc.
  - BARD Medical

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Natural History

Growth Rate of Aortic Diameter in Patients With Type B Aortic Dissection During the Chronic Phase

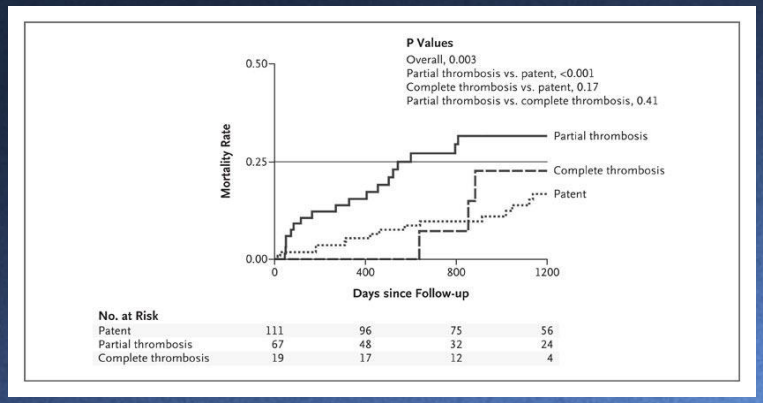
Eijun Sueyoshi, MD; Ichiro Sakamoto, MD; Kuniaki Hayashi, MD; Tetsuji Yamaguchi, MD; Tatuya Imada, MD

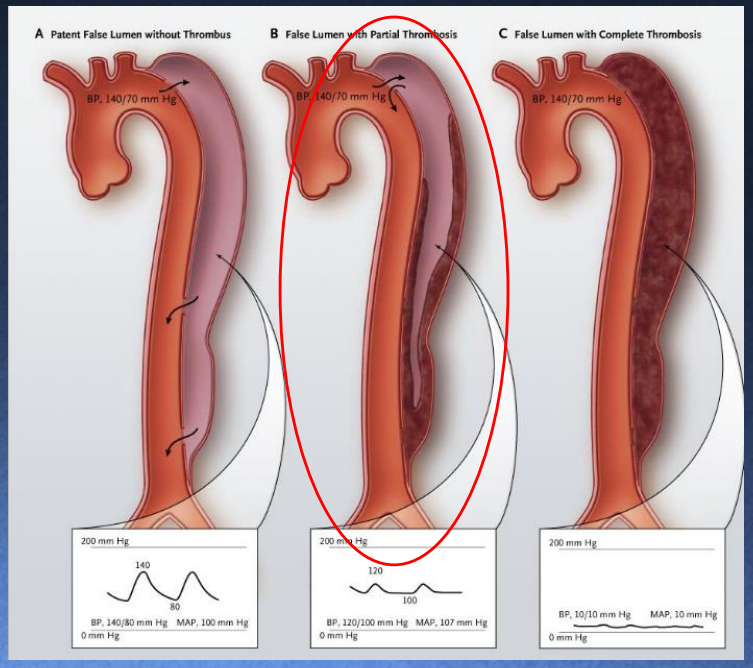
Circulation **September 14, 2004**

Patient Characteristics	Mean Growth Rate (mm/year)
Sex	
Male (n=112)	1.2±6.6*
Female (n=65)	3.3±5.2*
Thrombosed false lumen	
Present (n=51)	−1.4±8.6*
Absent (n=126)	3.3±4.2*
COPD	
Present (n=22)	5.9±7.0*
Absent (n=154)	1.4±5.8*

The NEW ENGLAND JOURNAL of MEDICINE

Tsai TT et al. N Engl J Med 2007;357:349-359.





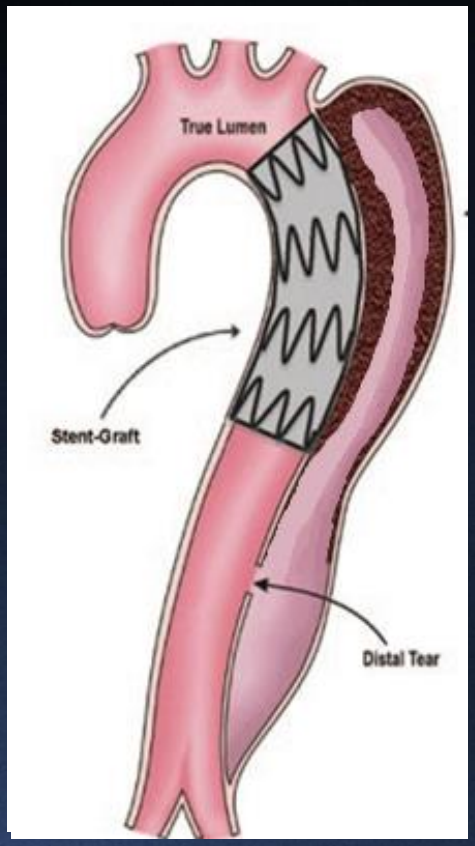
32 % Mortality at 3 years

Results of preventive TEVAR

- **INSTEAD XL : 5 years results**

Circ Cardiovasc Interv 2013

5 y Follow-up	72 TEVAR	68 OMT	P
Aneurysmal progression	27.0 %	46.1 %	.04
Aortic related Mortality	6.9 %	19.3 %	.04



Closure of the proximal tear is **efficient**

but **not always sufficient**

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Results of preventive TEVAR

Survival After Endovascular Therapy in Patients With Type B Aortic Dissection

A Report From the International Registry of Acute Aortic Dissection (IRAD)

JACC: CARDIOVASCULAR INTERVENTIONS, VOL. 6, NO. 8, 2013
AUGUST 2013:876–82

American Heart Association

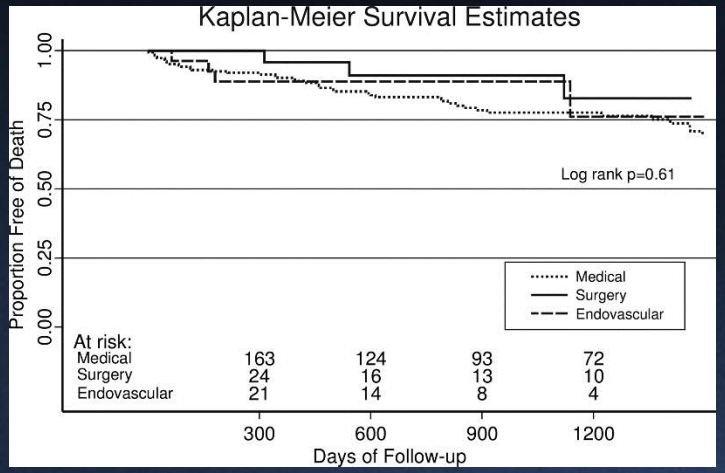


Table 5. Follow-Up Outcomes: Kaplan-Meier Estimates

	Medical (Cumulative %)	Endovascular (Cumulative %)	p Value
Freedom from aortic growth or new aneurysm			
1 yr	86.6 (254)	81.5 (73)	0.822
2 yrs	74.9 (155)	72.5 (44)	
3 yrs	65.5 (95)	60.0 (28)	
4 yrs	53.4 (69)	56.0 (14)	
5 yrs	26.7 (45)	37.3 (8)	

Aortic growth after TEVAR :

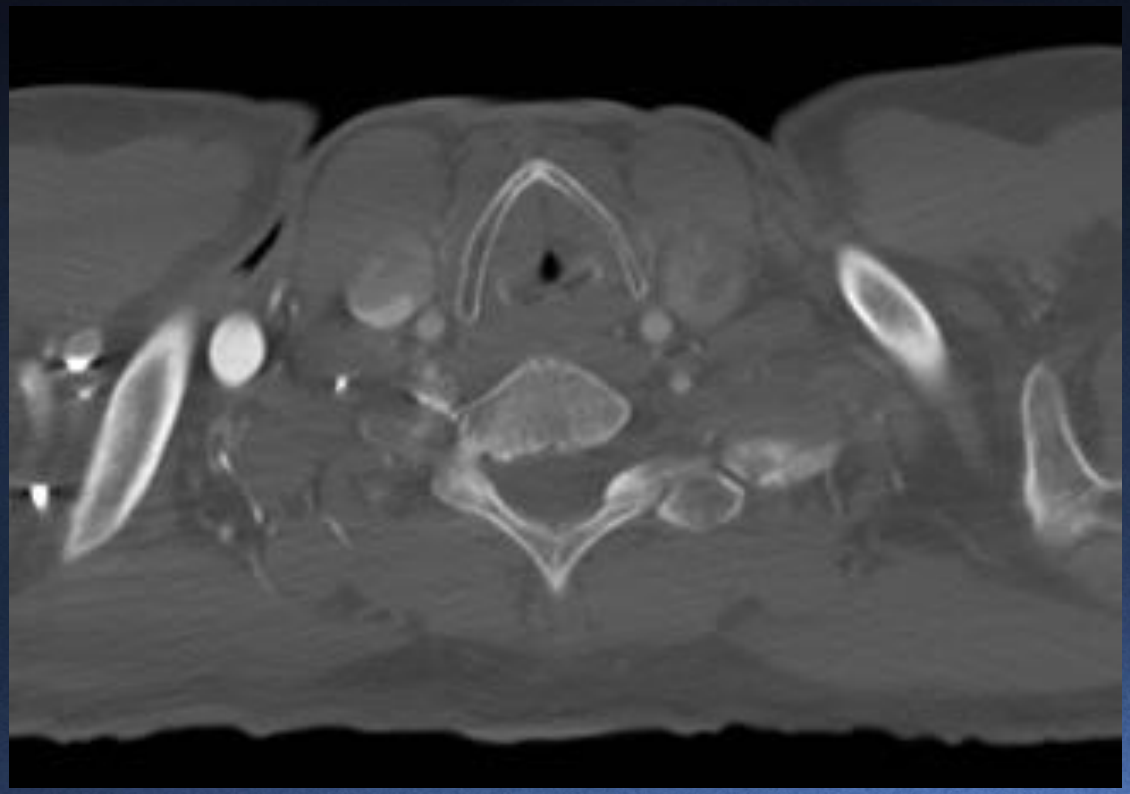
¼ at 2 yrs

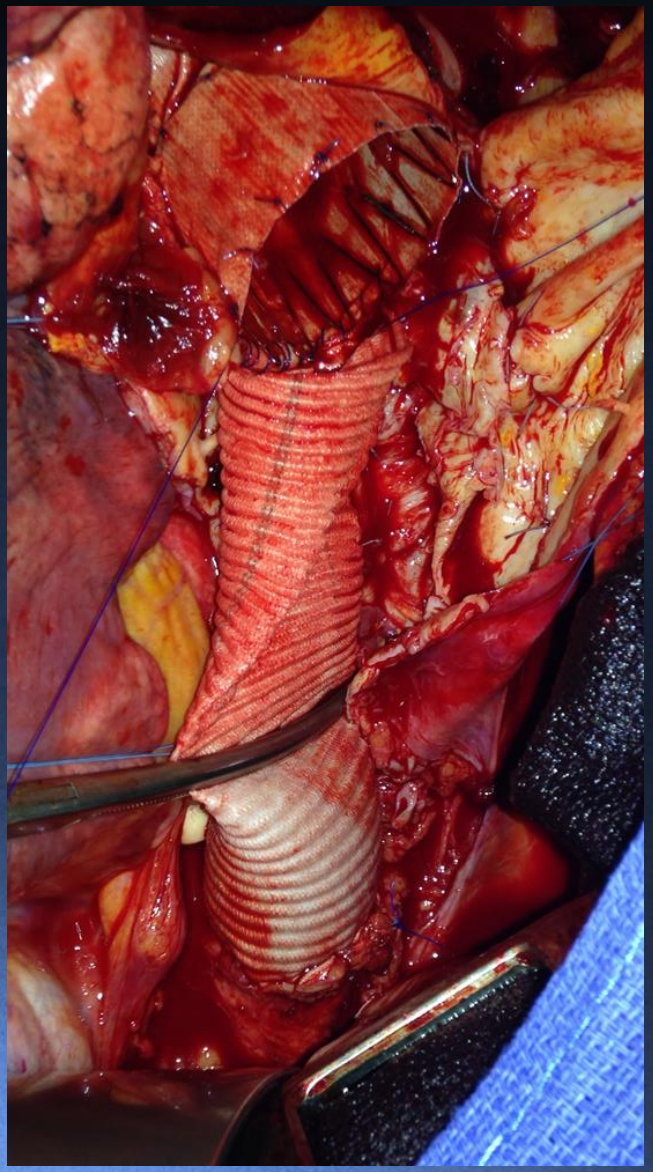
1/3 at 3 yrs

½ at 4 yrs

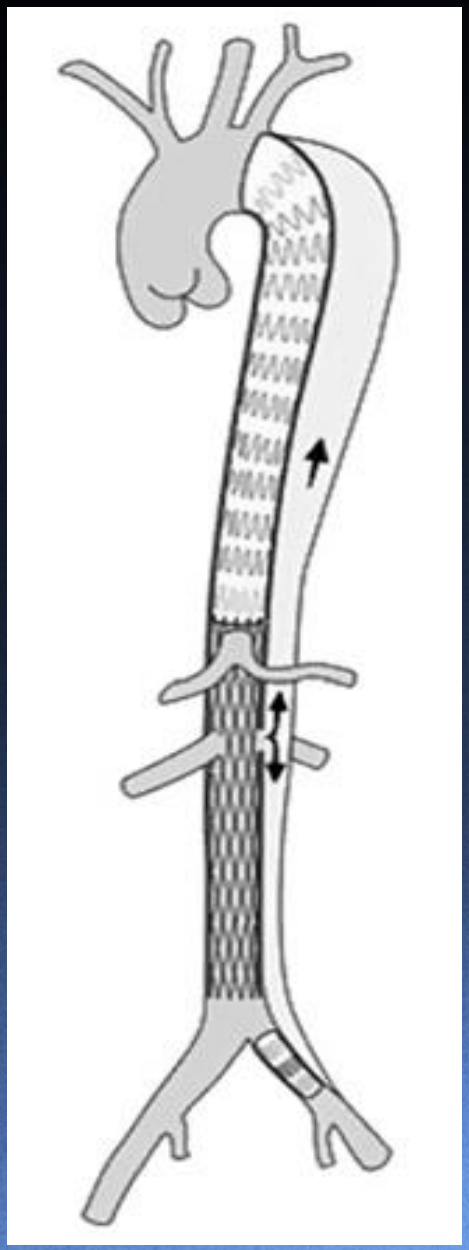
2/3 at 5 yrs

Results of preventive TEVAR





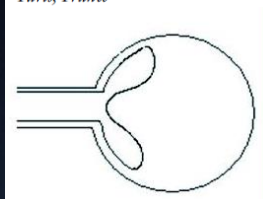
What about Petticoat ?

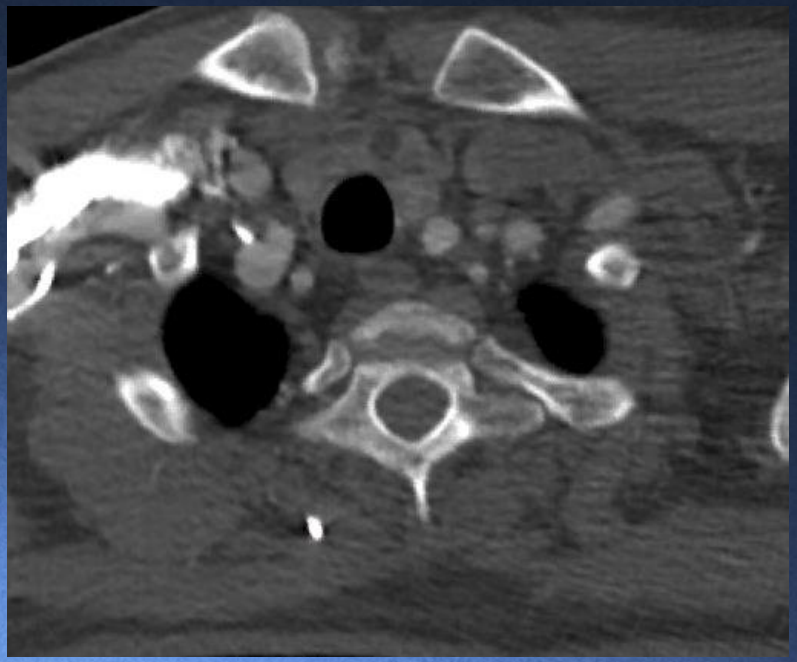


Experience of the Zenith Dissection Endovascular System in the emergency setting of malperfusion in acute type B dissections

JVS 2014

Jean-Marc Alsac, MD, PhD, Antoine Girault, MD, Salma El Batti, MD, Marwan Abou Rjeili, MD, Faris Alomran, MD, Paul Achouh, MD, PhD, Pierre Julia, MD, PhD, and Jean-Noël Fabiani, MD,
Paris, France





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What about Petticoat ?

Prospective multicenter clinical trial (STABLE) on the endovascular treatment of complicated type B aortic dissection using a composite device design

Joseph V. Lombardi, MD,[a] Richard P. Cambria, MD,[b] Christoph A. Nienaber, MD,[c] Roberto Chiesa, MD,[d] Omke Teebken, MD, PhD,[e] Anthony Lee, MD,[f] Peter Mossop, MD,[g] and Priya Bharadwaj, PhD,[h] on behalf of the STABLE investigators, *Camden, NJ; Boston, Mass; Milan, Italy; Rostock and Hannover, Germany; Boca Raton, Fla; Fitzroy, Victoria, Australia; and West Lafayette, Ind*

2012 JVS

- Improves TL perfusion and diameter
- 1/3 of FL Thrombosis at 1 year

Systematic Review

Systematic review of outcomes of combined proximal stent-grafting with distal bare stenting for management of aortic dissection

Ludovic Canaud[1,2], Elsa Madeleine Faure[2], Baris Ata Ozdemir[1], Pierre Alric[2], Matt Thompson[1]

2014 ACTS

- Improves TL perfusion and diameter
- Fails to suppress FL patency

Volume analysis of true and false lumens in acute complicated type B aortic dissections after thoracic endovascular aortic repair with stent grafts alone or with a composite device design

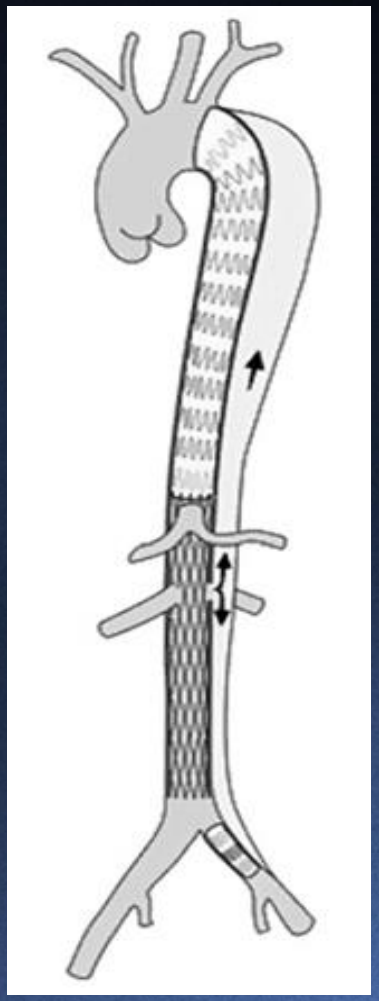
Jonathan Sobocinski, MD, PhD,[a] Joseph V. Lombardi, MD,[b] Nuno V. Dias, MD, PhD,[c] Ludovic Berger, MD, PhD,[d] Qing Zhou, PhD,[e] Feiyi Jia, PhD,[e] Timothy Resch, MD, PhD,[c] and Stéphan Haulon, MD, PhD,[a] *Lille and Caen, France; Camden, NJ; Malmö, Sweden; and West Lafayette, Ind*

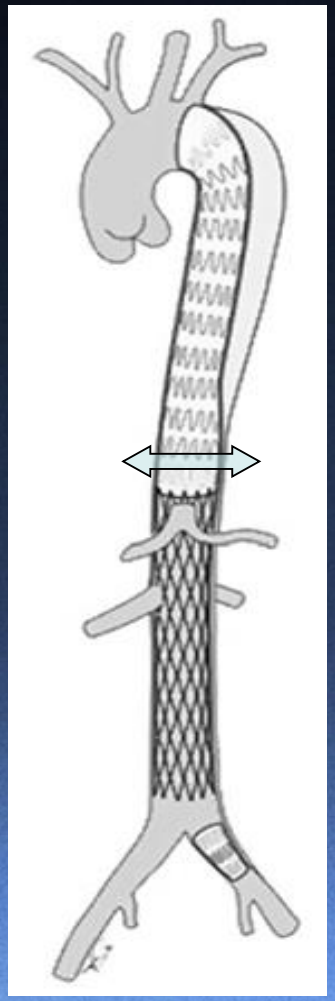
2016 JVS

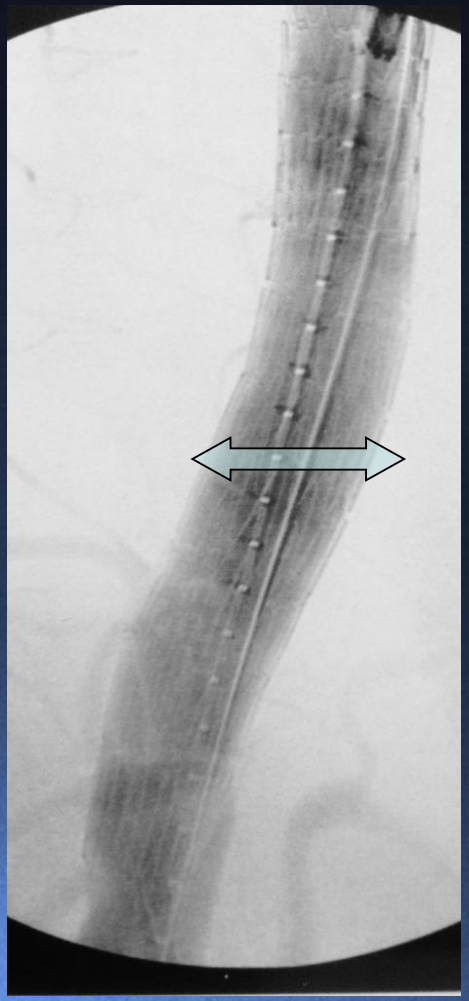
- Promotes TL expansion
- Significant growth of visceral aorta

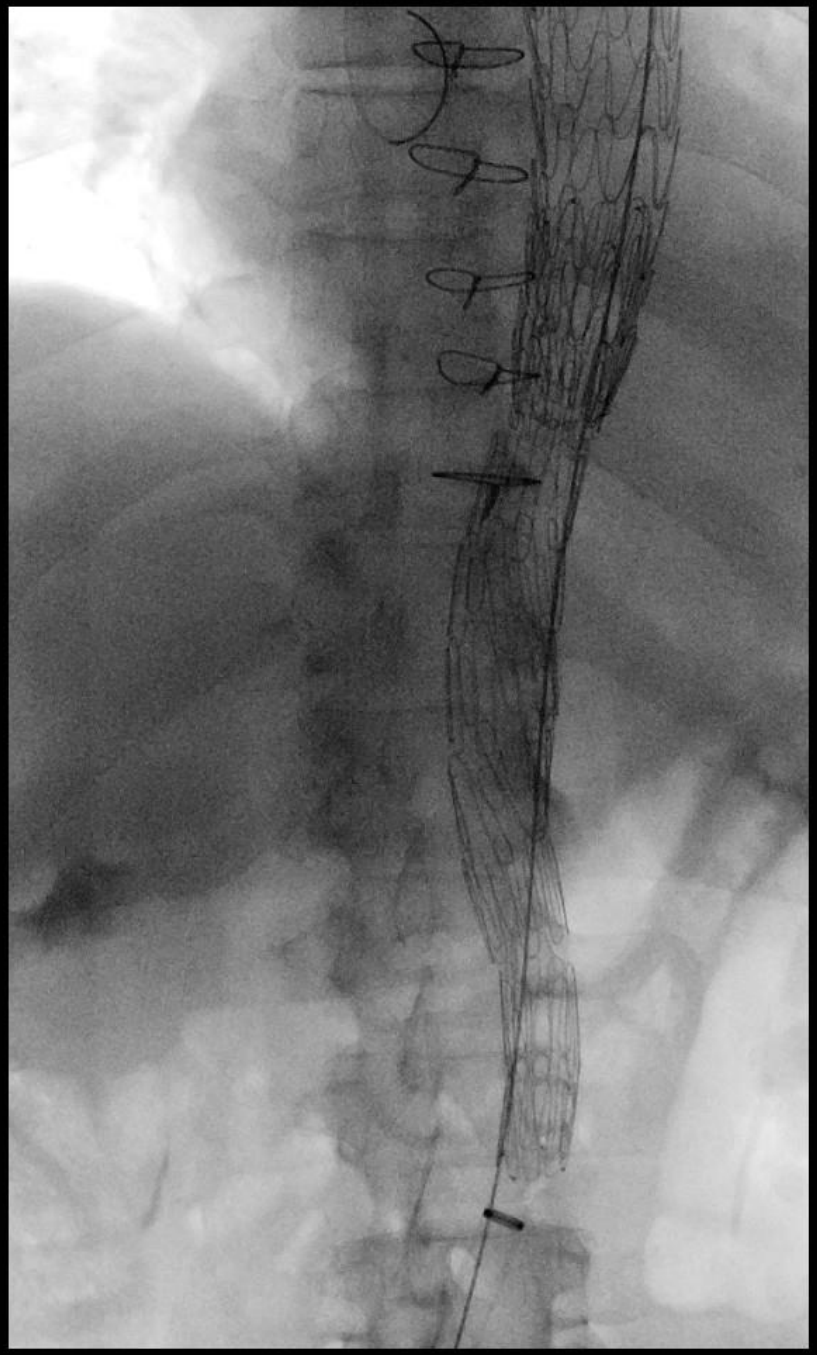
What about Petticoat ?

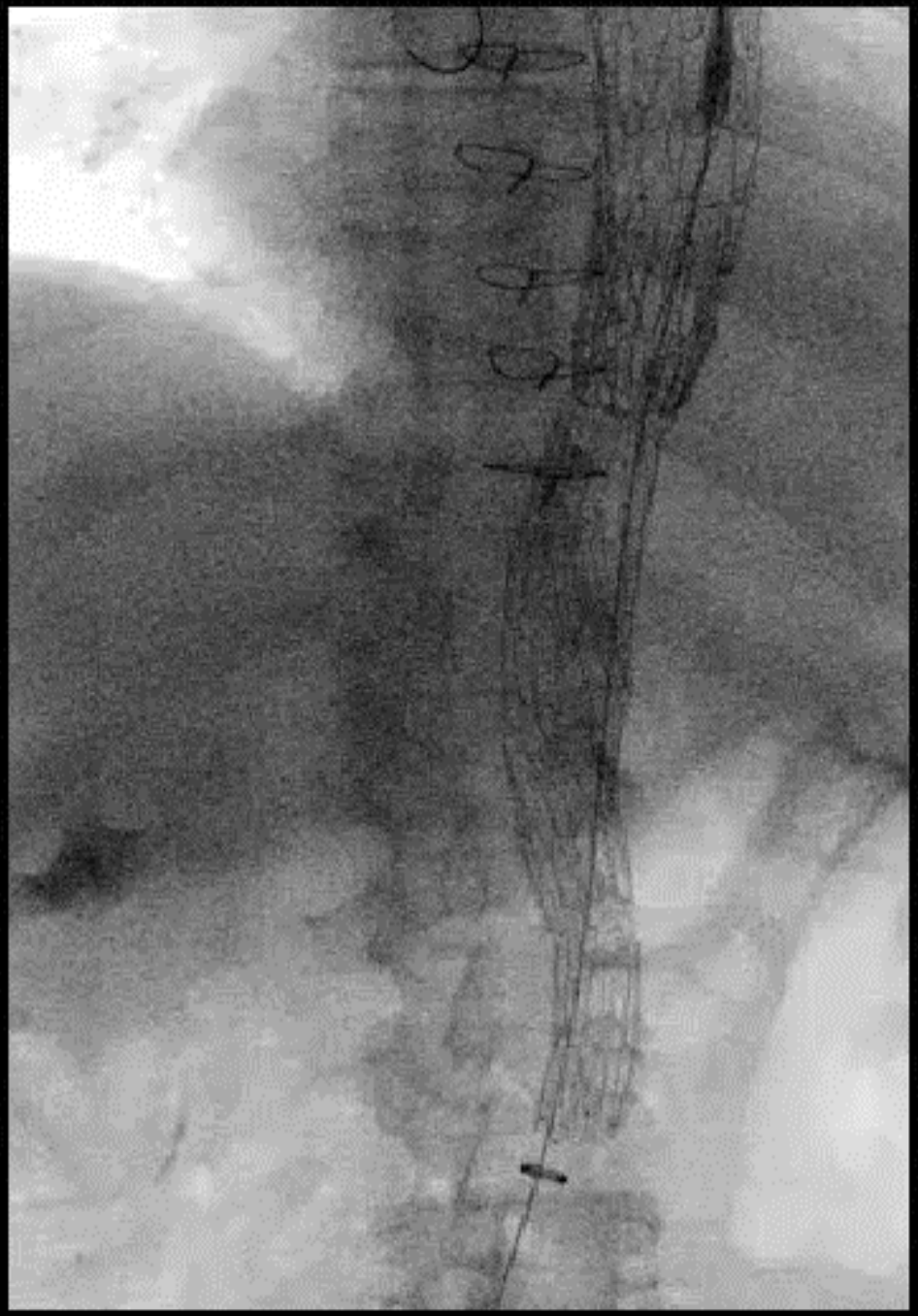
Stent-Assisted Balloon-Induced Intimal Disruption and Relamination in Aortic Dissection Repair: The STABILISE concept JTCS 2014

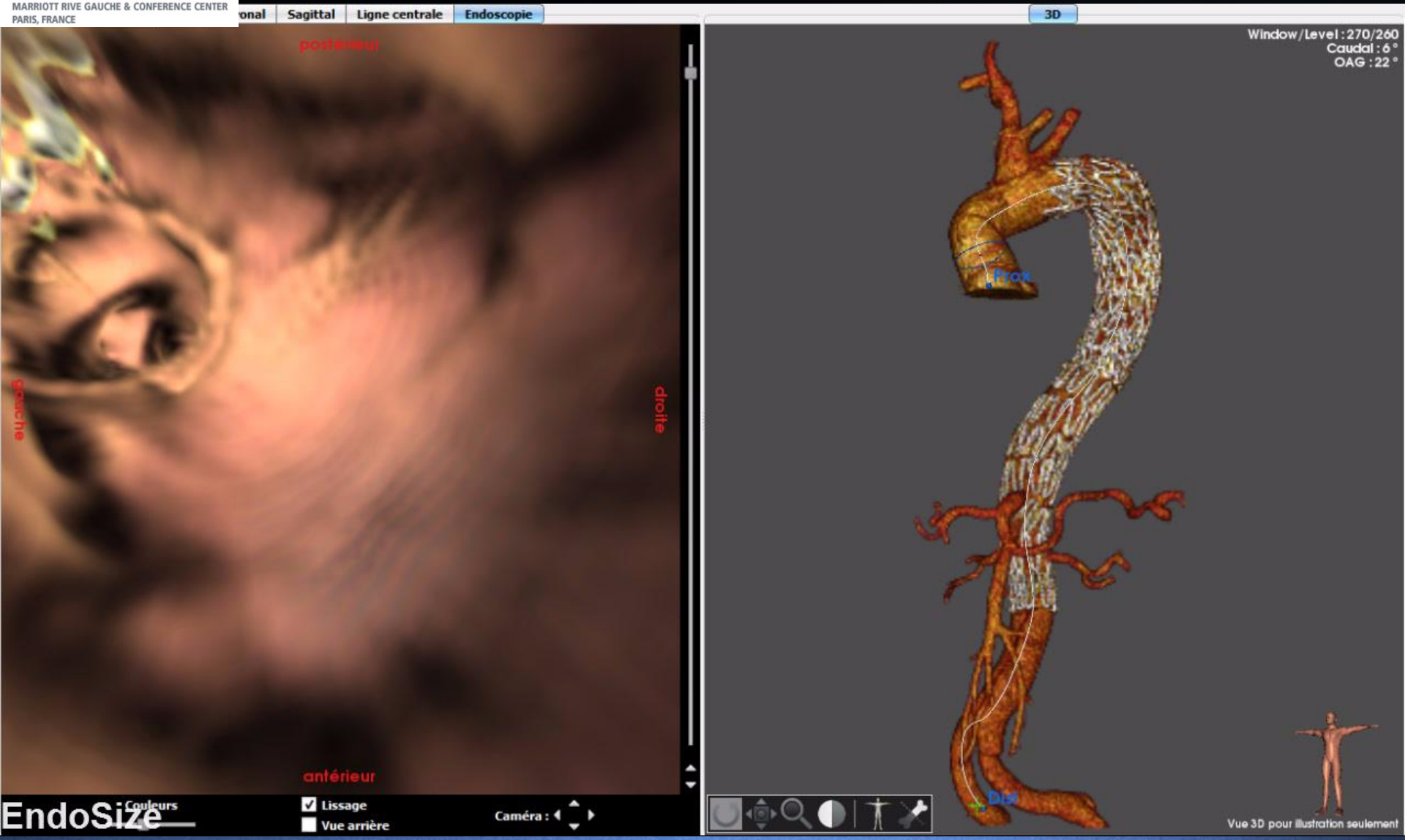






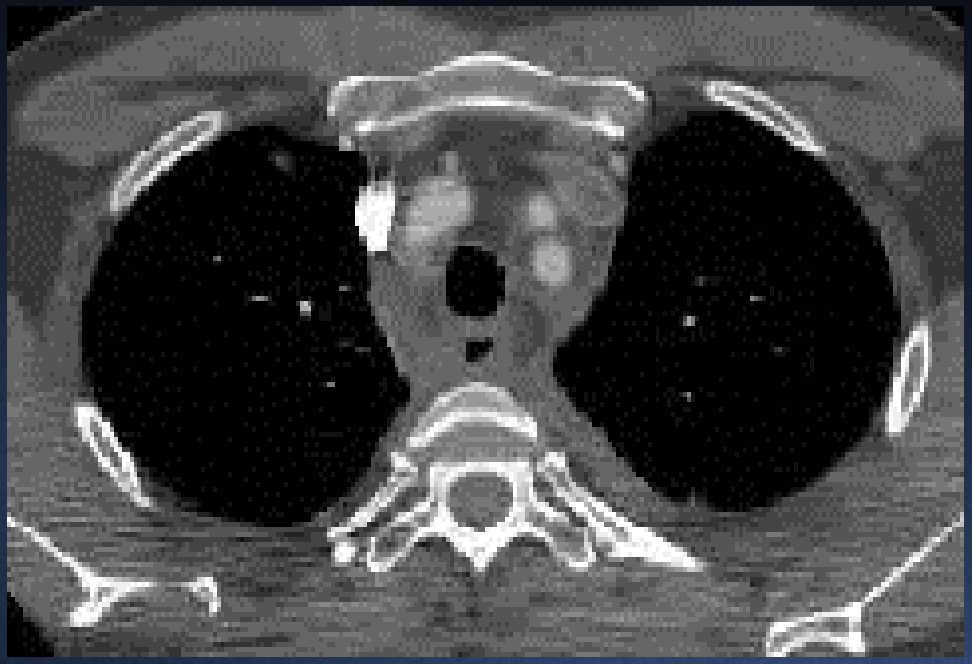





onal
Sagittal
Ligne centrale
Endoscopie
3D
postérieur
gauche
droite
antérieur
Couleurs
Lissage
Vue arrière
Caméra :
Window/Level : 270/260
Caudal : 6 °
OAG : 22 °
Prox
Dist
Vue 3D pour illustration seulement

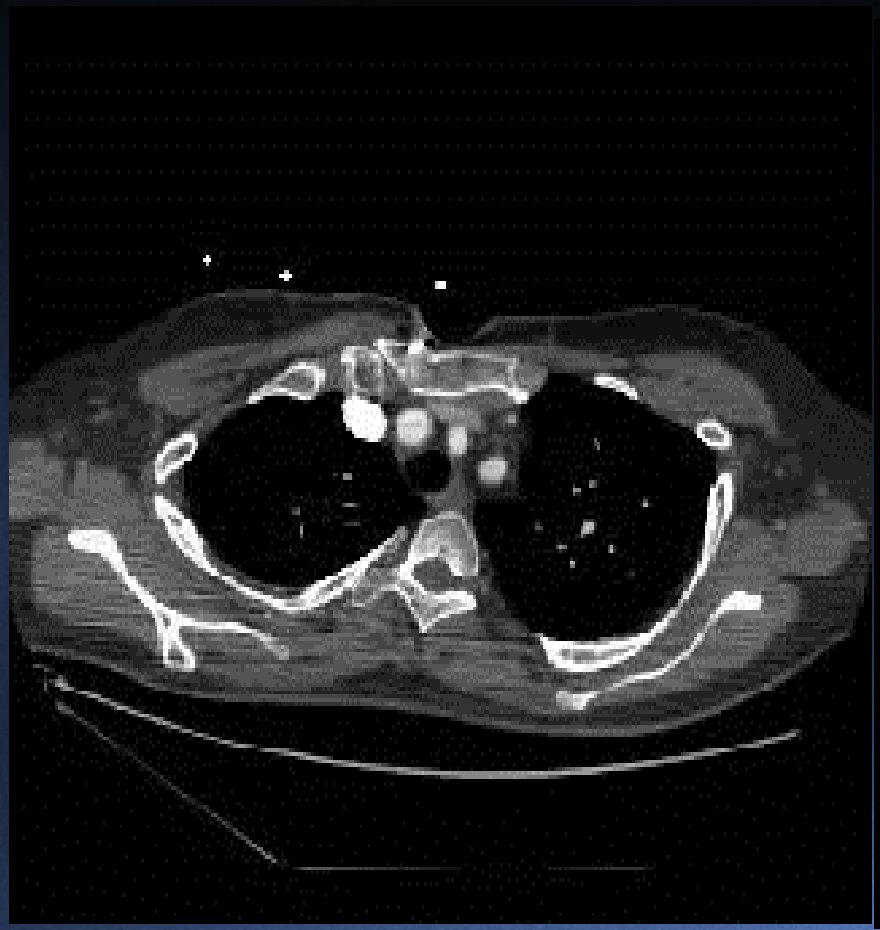
EndoSize

2 years results



63 y/o GP patient

2 years results



47 y/o Marfan patient

2 years results

45 y/o Type A patient

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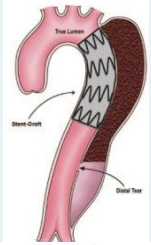
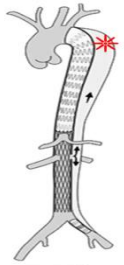
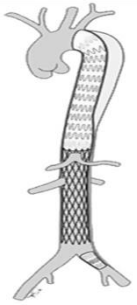
8 years SOS Aorte experience

115 TEVAR for Acute TBAD
(82 males, aged 58 y/o ± 18)
Mean follow-up of 29 months ± 16

Groups	
	**TEVAR** N= 50
	**STABLE** N= 19
	**STABILISE** N = 46

Conclusion

- Long term results of TEVAR are disappointing
- 1/3 to 2/3 will experience aneurysmal growth
- Strict surveillance and restrictive Medical treatment

Should a more agressive Aortic Repair be recommended ?

Conclusion

- STABILISE technique safe / reproducible
- Efficient to treat acute complications
- Seems to prevent Aneurysmal Progression
- Low reintervention rate
- Decreased Overall Mortality During Follow-up

1st line treatment for acute / subacute TBAD

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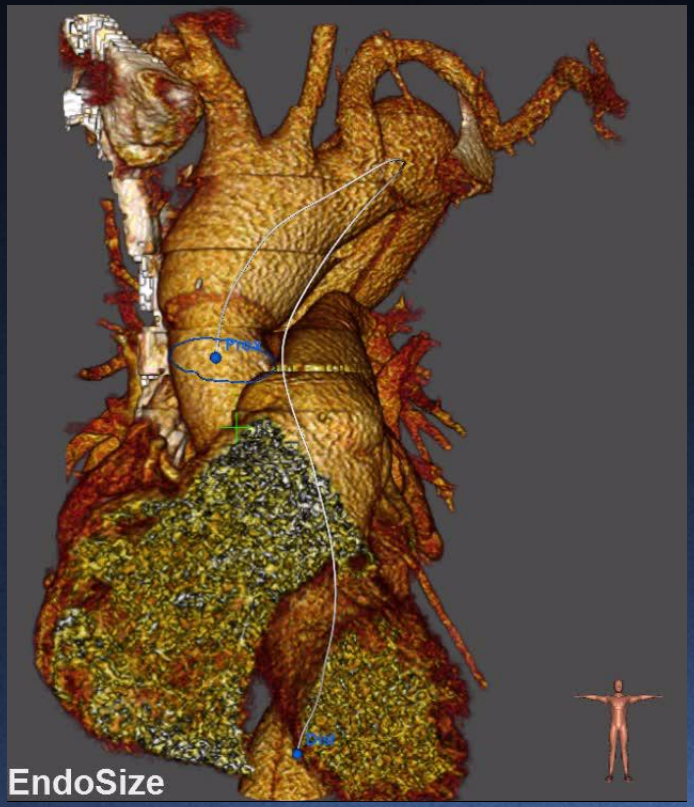
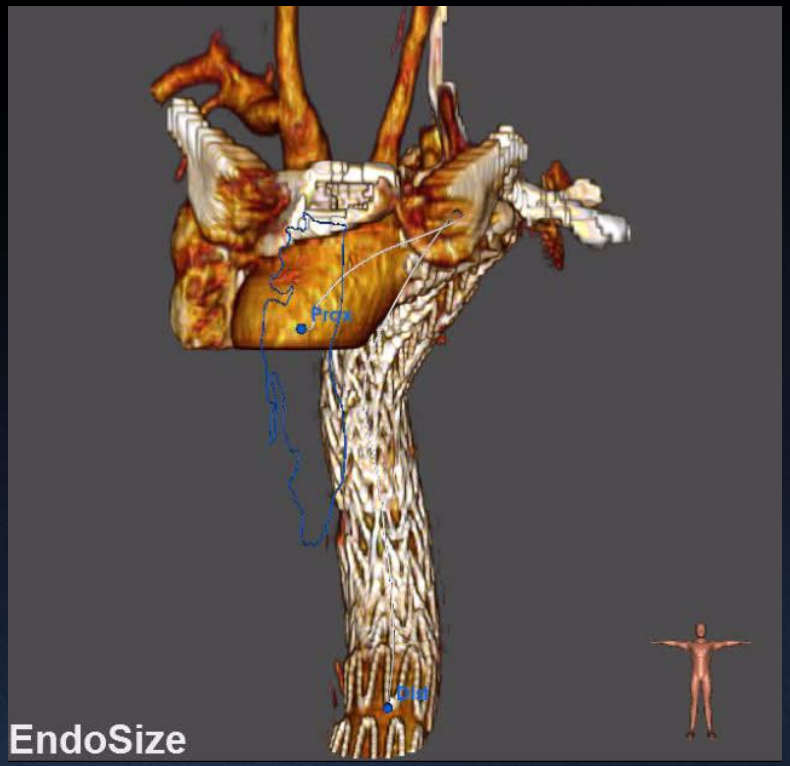
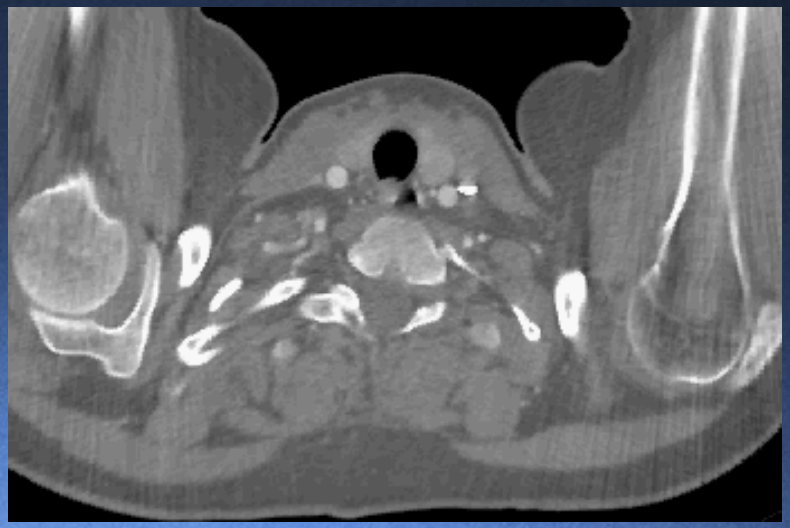
23 y/o Marfan patient







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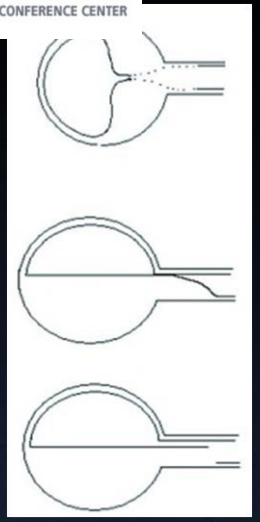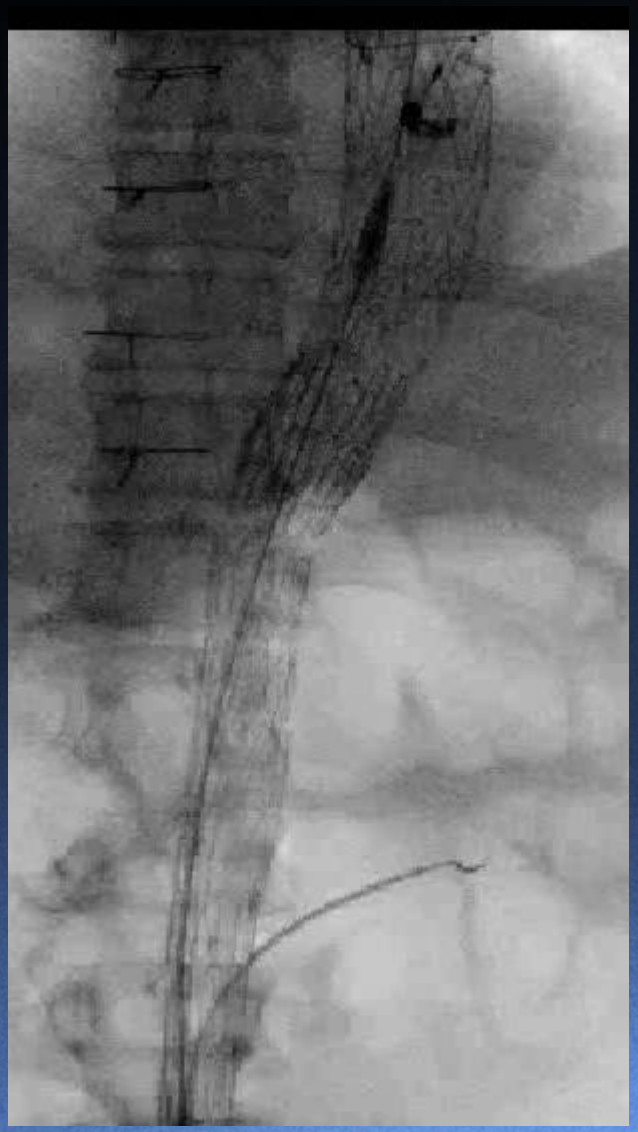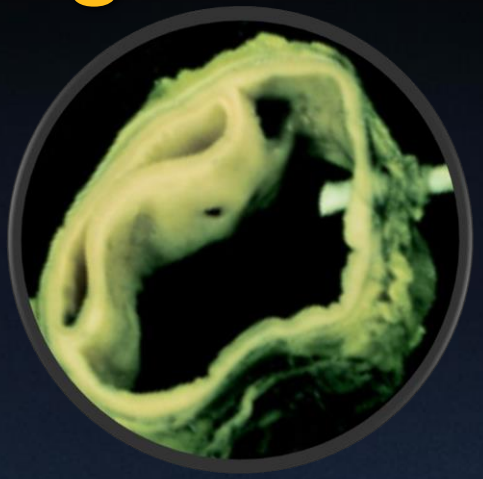
Collateral stenting