

# **Ascending aortic endografting**

## **The Bolton Medical experience**

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# Disclosure

Speaker, Proctor, travel support

Bolton Medical

Speaker, travel support

Cook Medical

Research Support

Boston Scientific, Jotec

# „Off label“ stentgrafts in ascending aorta:

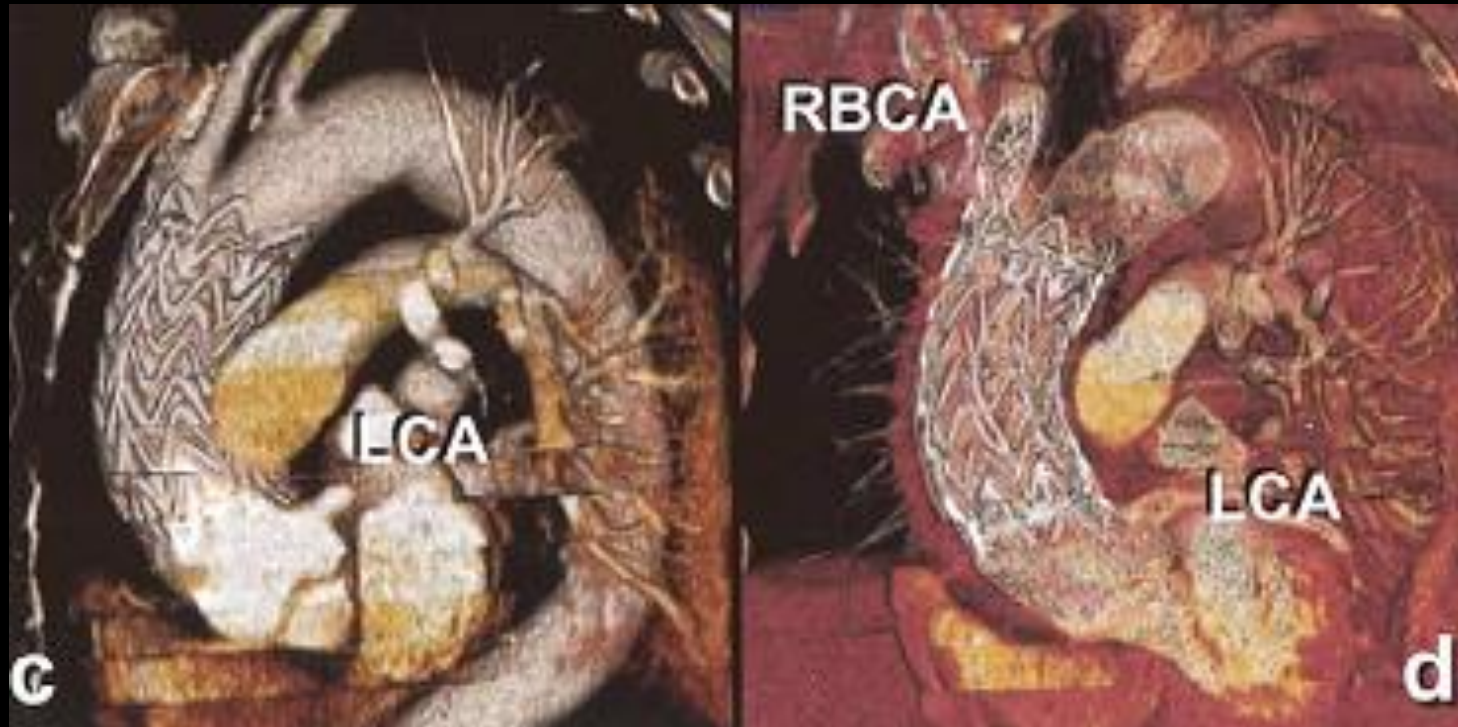
Thoracic devices:

- Stentgraft length – too long (min 100mm)

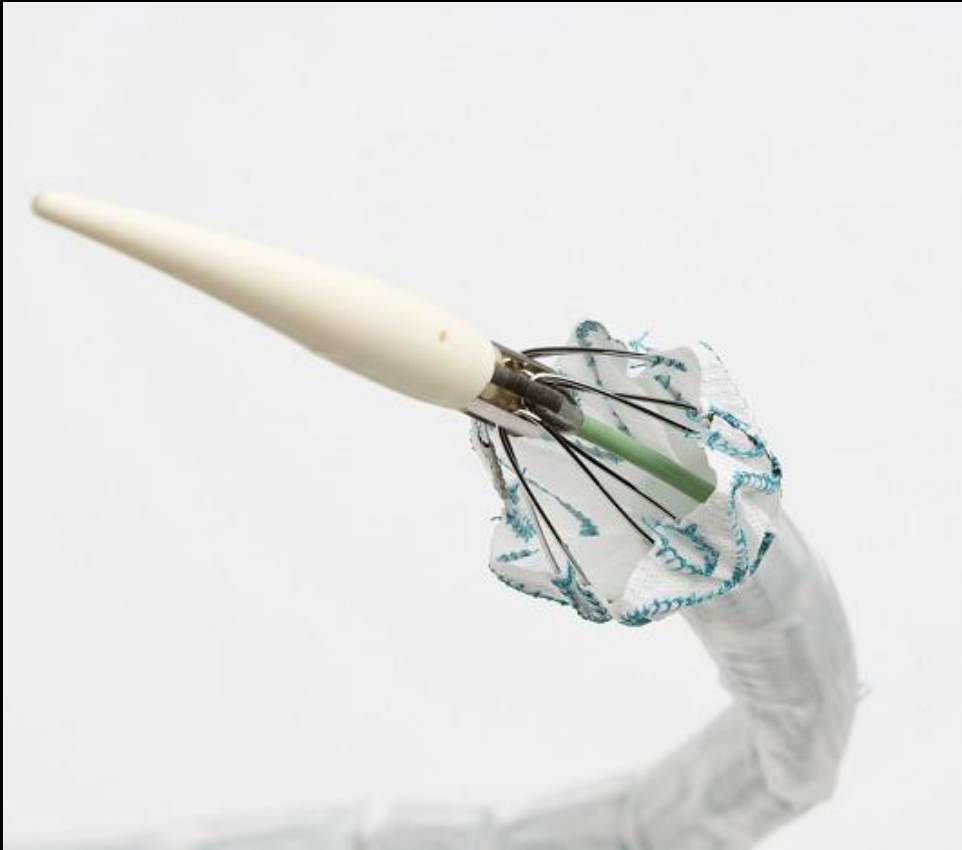
Abdominal devices:

- Stentgraft diameter – too small (max. 36mm)
- Applicator – too short (65cm)
  - ...for femoral approach

# Ihnken et al, Stanford, JCTS 2004



# Dedicated device Gen1: Clasped, covered apices



- Diam 45-50mm
- Length 50-80mm
- Applicator 90+40cm

# Ascending EVAR with proximally clasped device

- 64 yr male patient
- Pseudoaneurysm after ascending replacement
- Severe sternal complication after first surgery
- Redo surgery vs. Stentgraft ?



AKI

BOLTI

BOLTON MAIN BODY DEVICE 46-42MM/46MM

T  
Ac

**day 0**



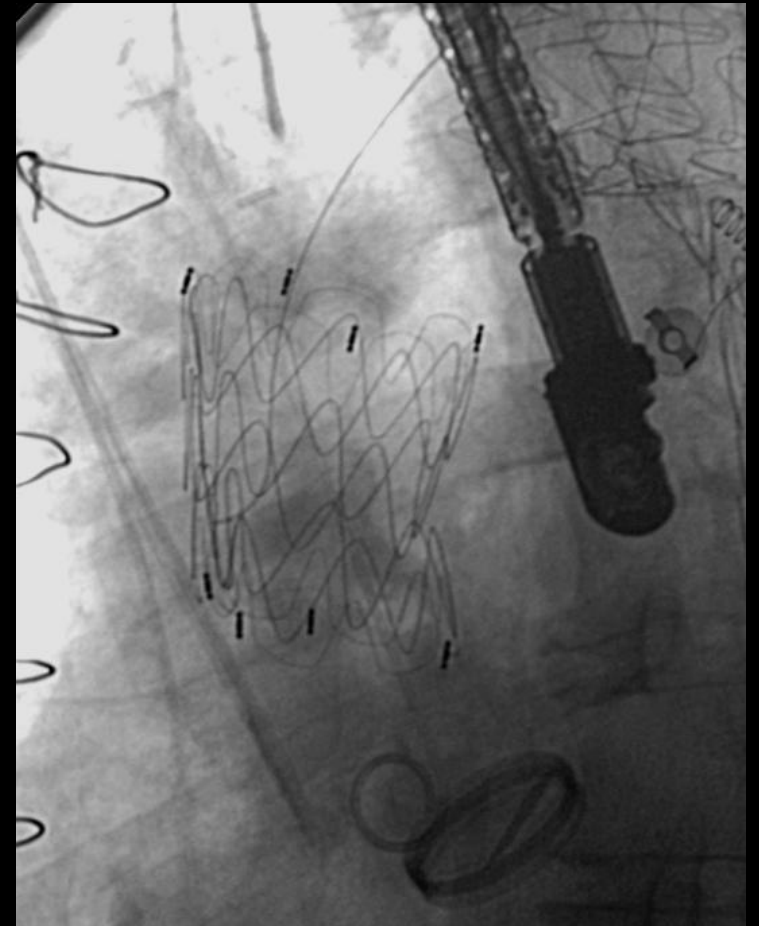
**day 5**



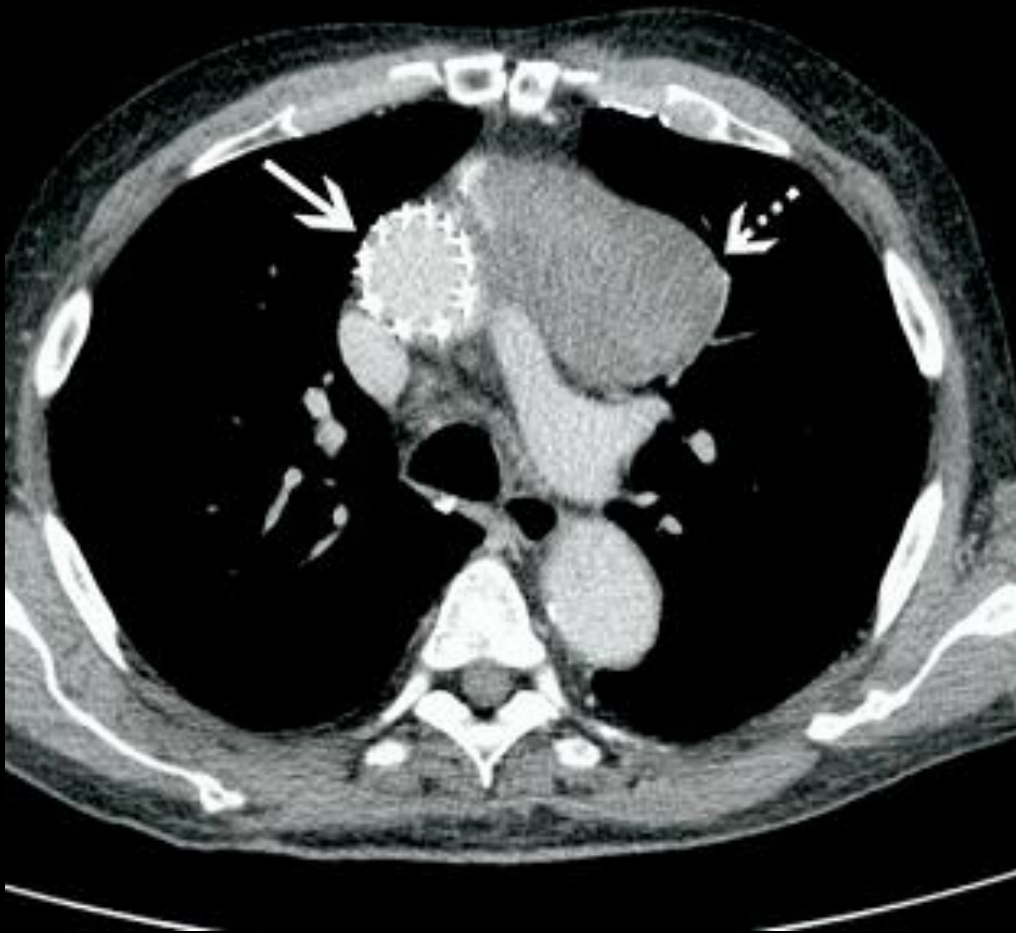


# Limitation

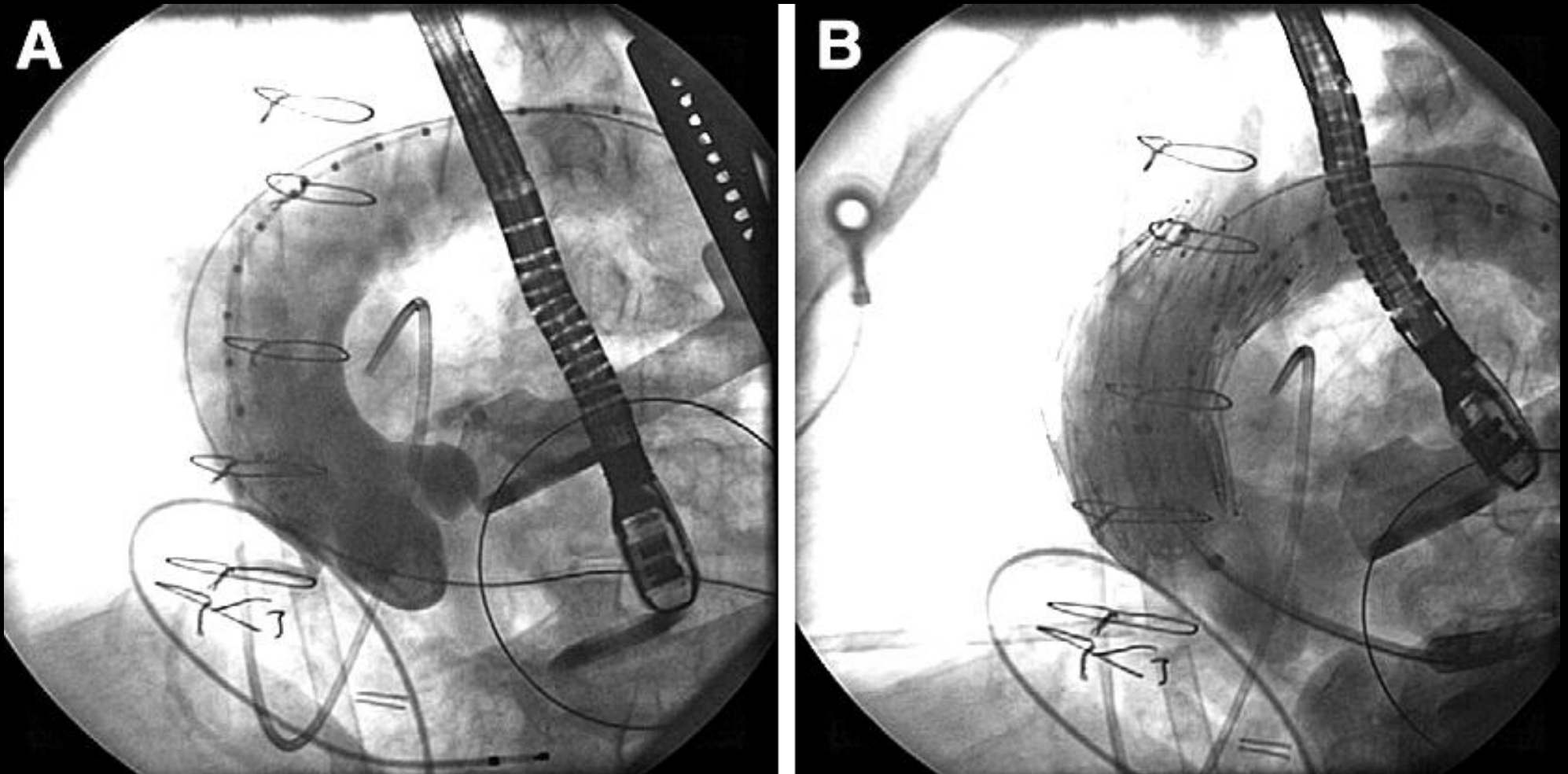
- Suitable anatomy very rare
- Dangerous deployment  
inner end moving forward,  
toward left coronary

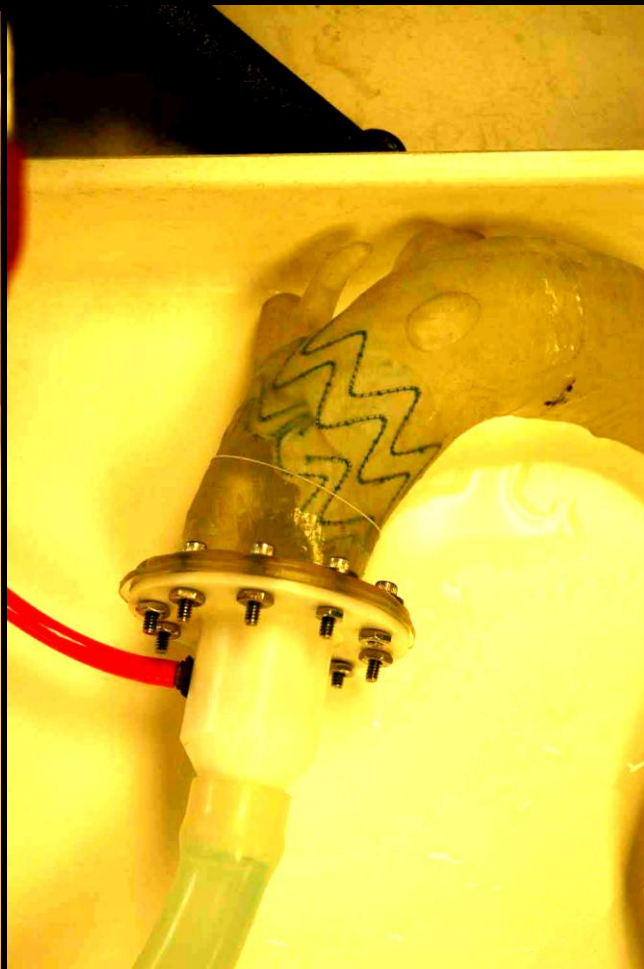


# Coscas et al, Paris, JCTS 2007



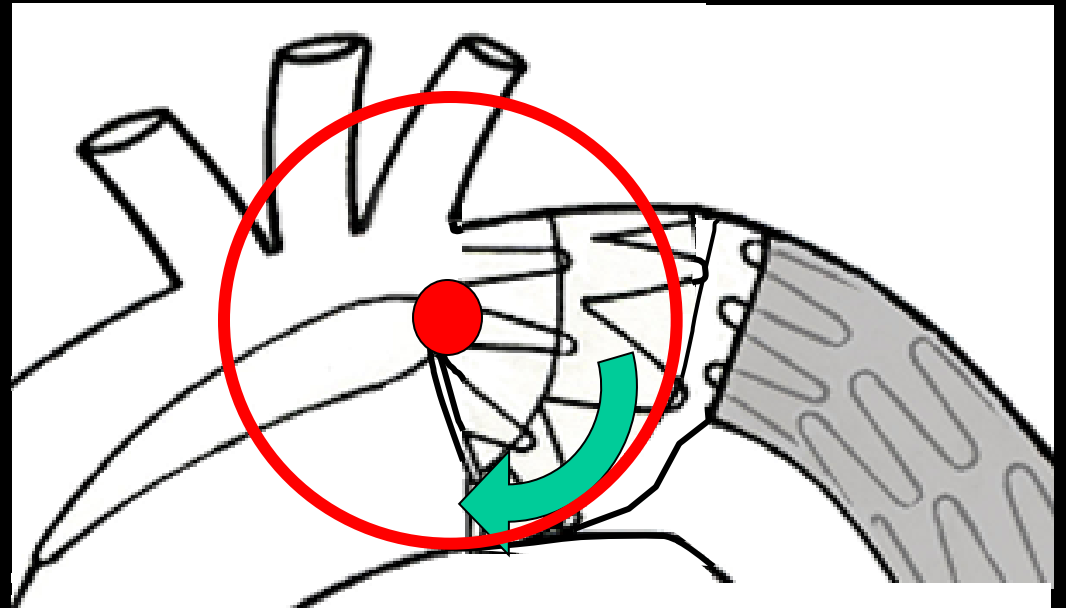
# Szeto et al, UPenn, ATS 2010





# “obliquity”

- Definition
  - Forward movement of inner device part
- Mechanism
  - in large diameters
  - in curved sites

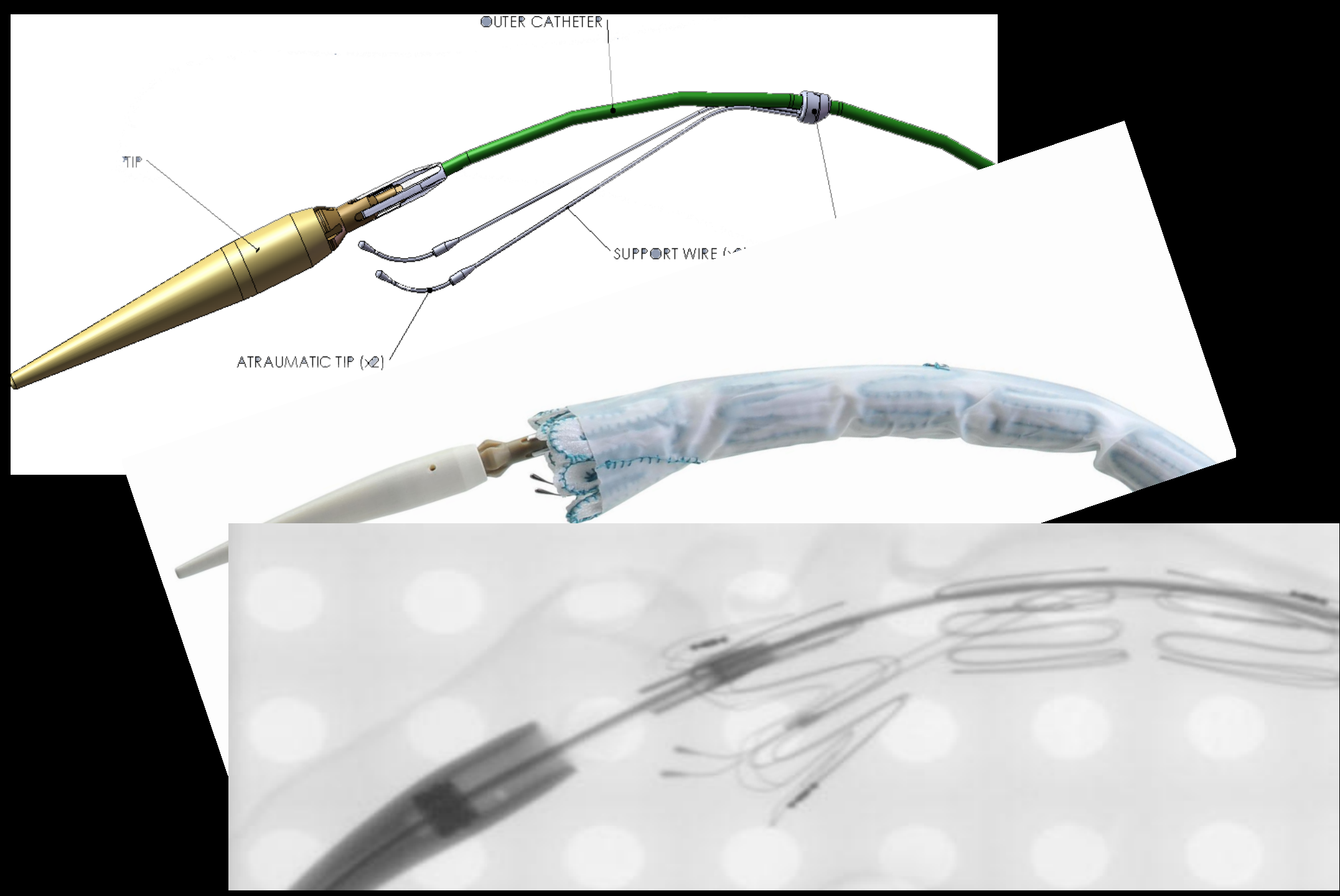


# Solution...

- If neither proximally nor unclashed devices work...
- Inner and outer curvature need different attachment mechanisms

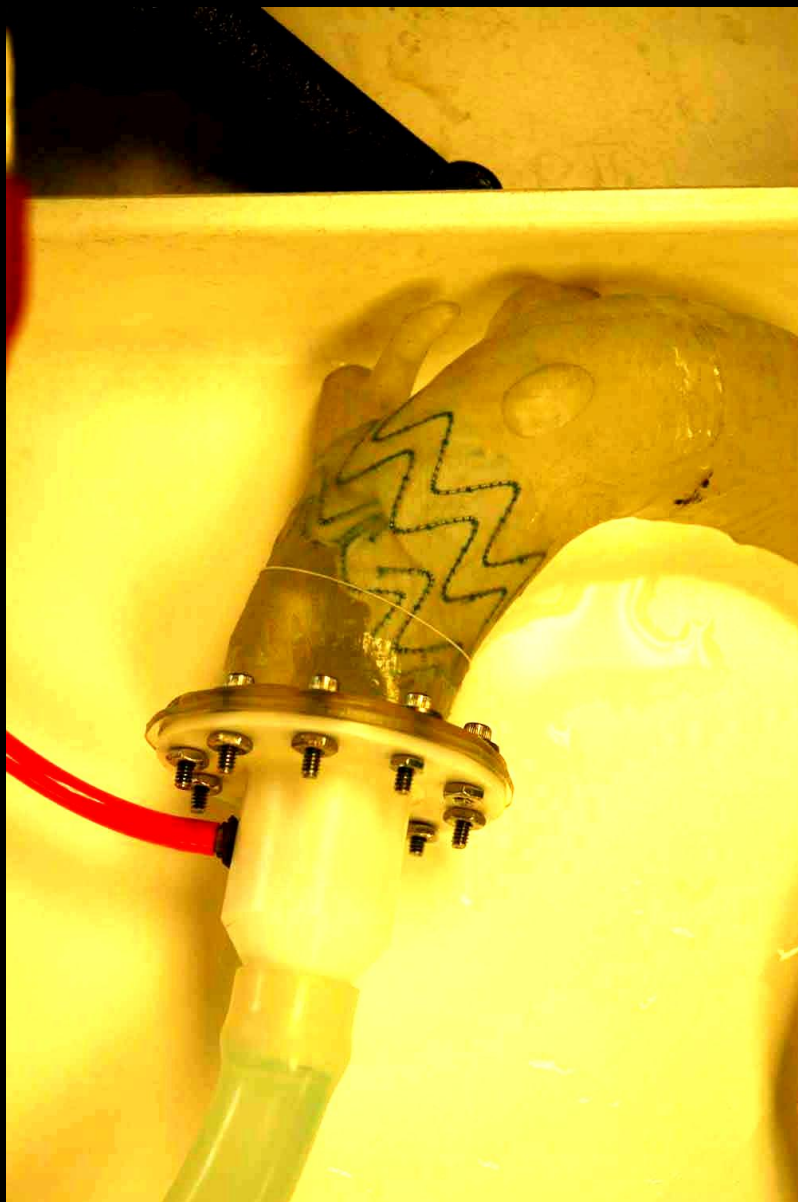








# 1st Gen

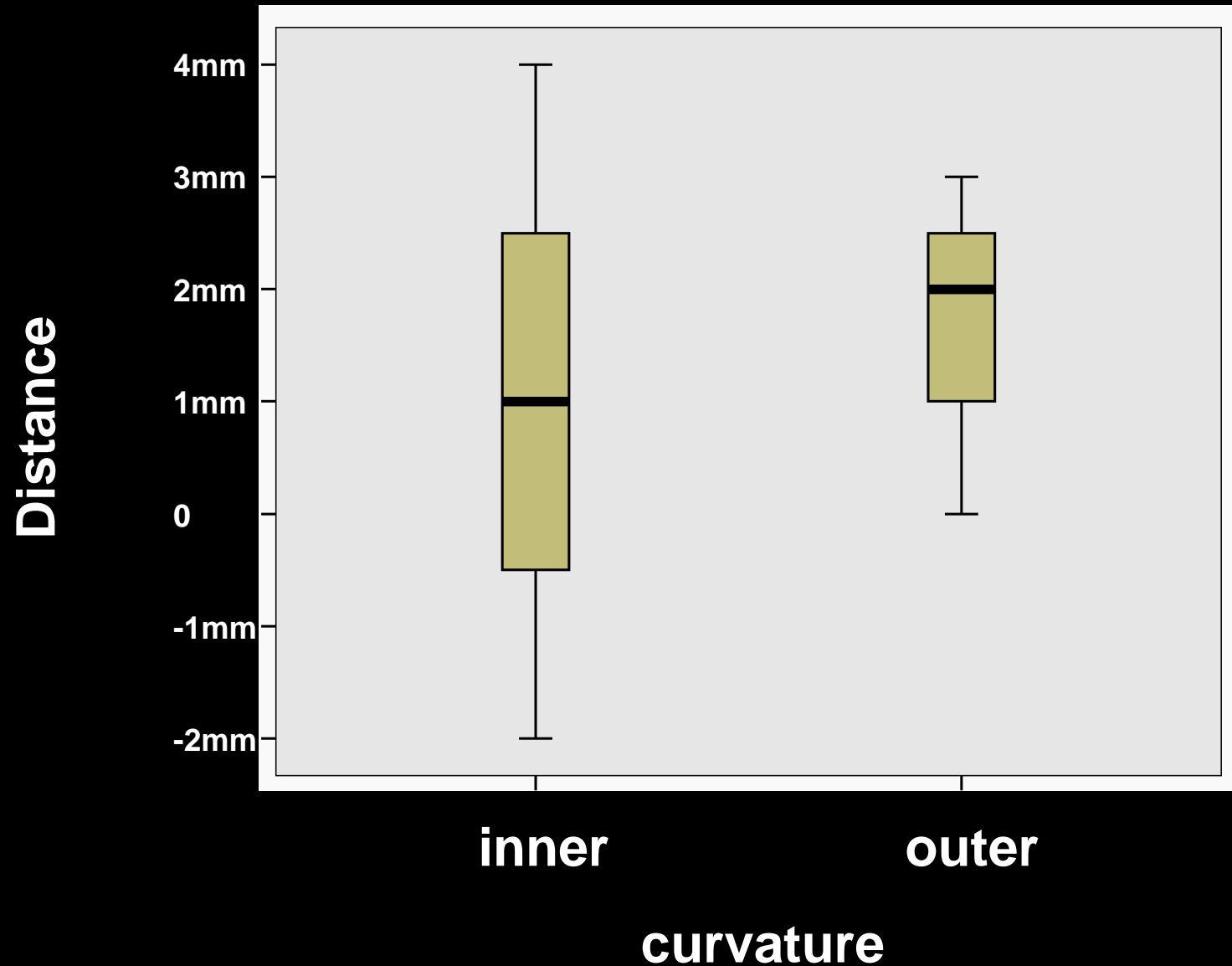


# 2nd Gen





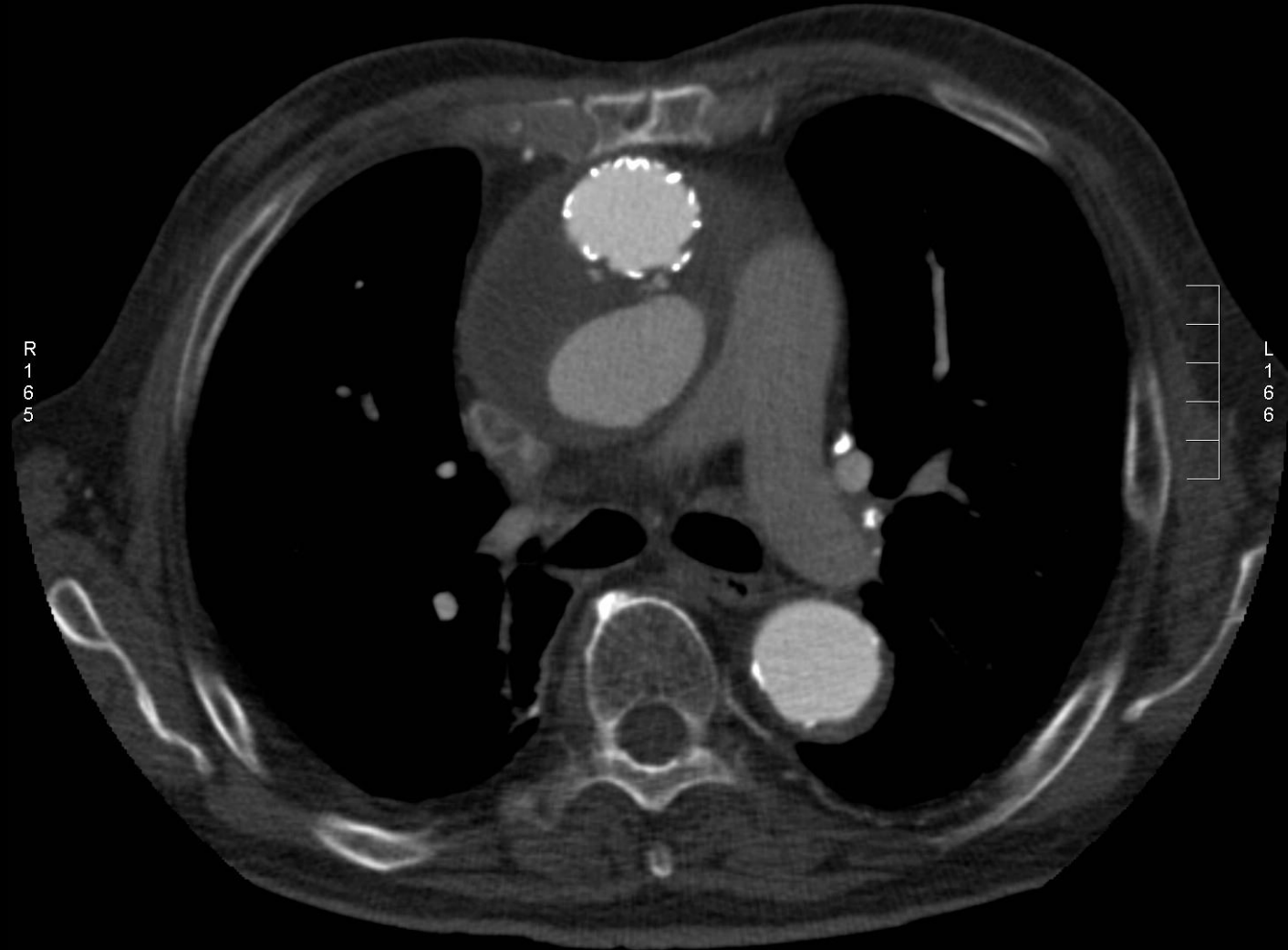
# Deployment accuracy



R

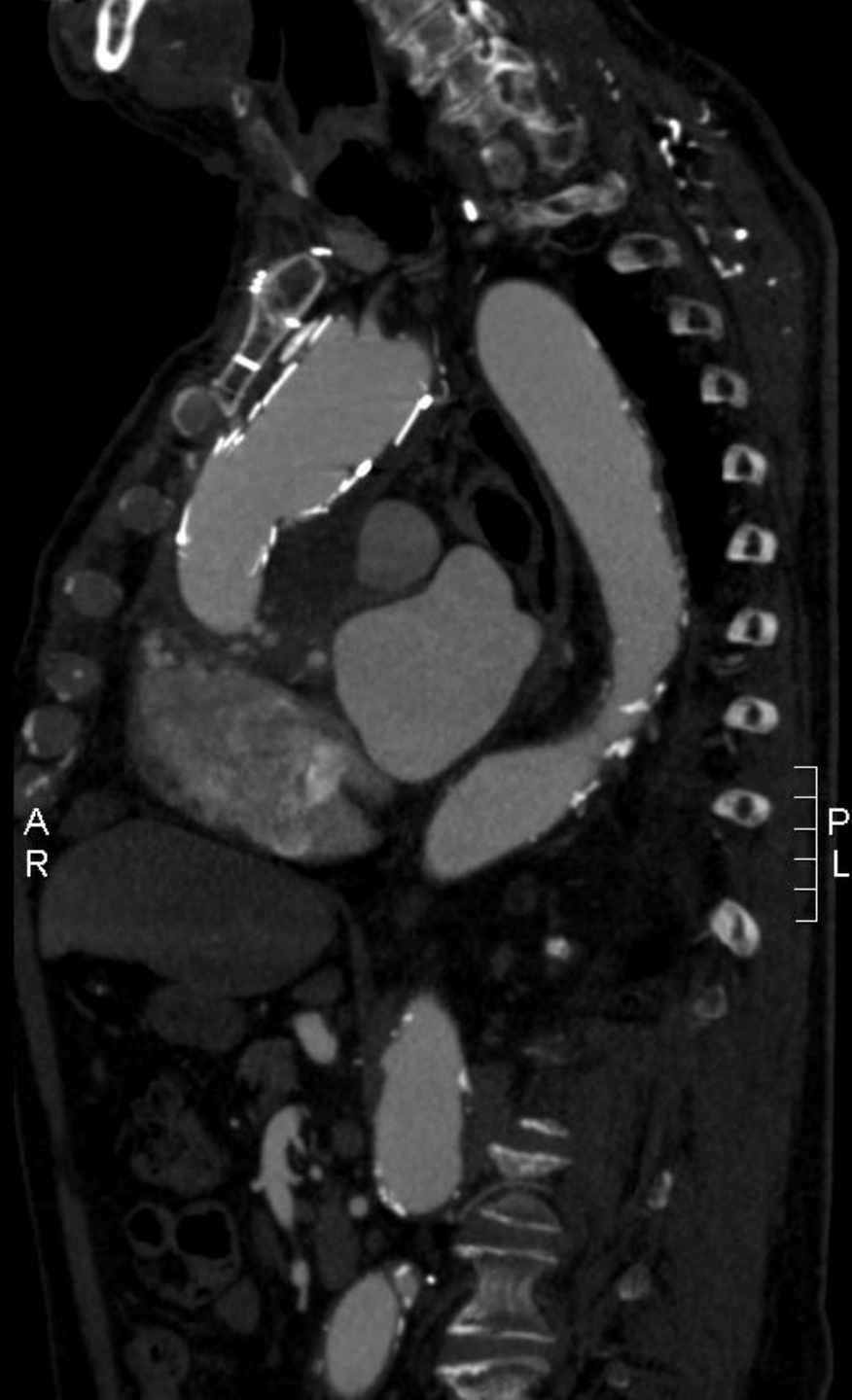
A335

Fi



A3

110/5/C  
F



# Conclusion

Device:

- Different attachment modes on outer / inner curvature
- Reliable deployment perpendicular to aortic axis
- Even in low-radius curvature
- Femoral approach feasible (safest?)
- Already included in current product line (NBS)



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## 8th VIENNA INTERDISCIPLINARY SYMPOSIUM ON AORTIC REPAIR

April, 2013

VIENNA, AUSTRIA

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