

Why Two Approaches for T-AVR

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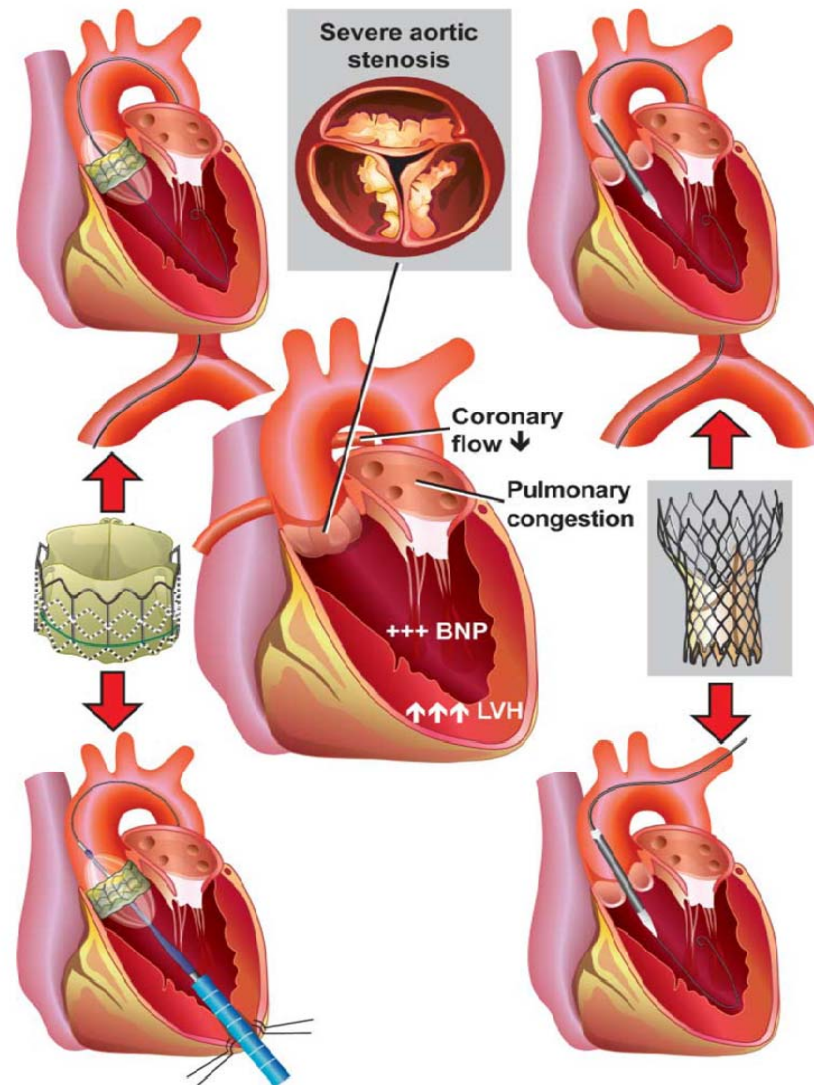
Georgetown University.

Conflict of Interest

Proctor for Edwards Lifesciences

Speaker Bureau St Jude Medical

Currently Available Access



Transfemoral Approach

- **Can be easy and simple**
- **Can have lethal complications**

Sapien Edwards Valve

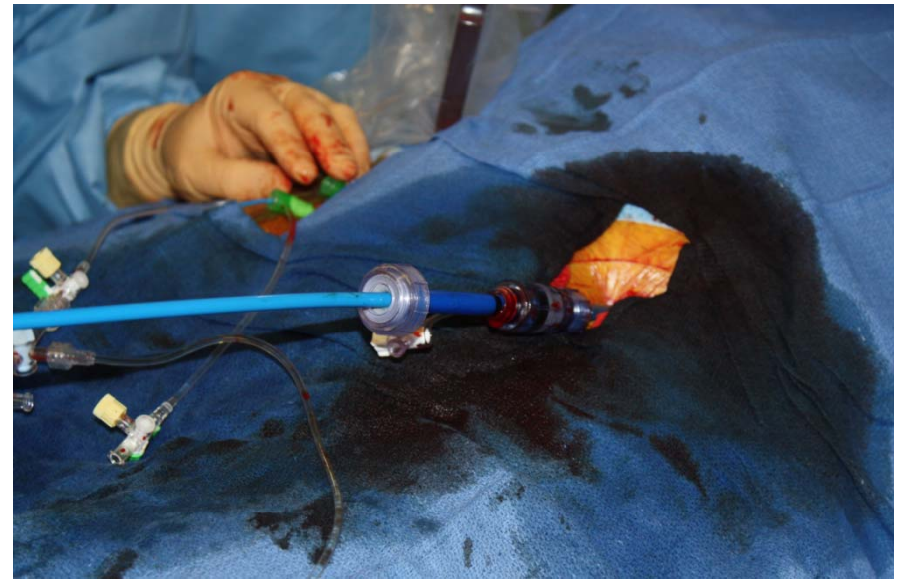
23 mm valve: 22 F Sheath

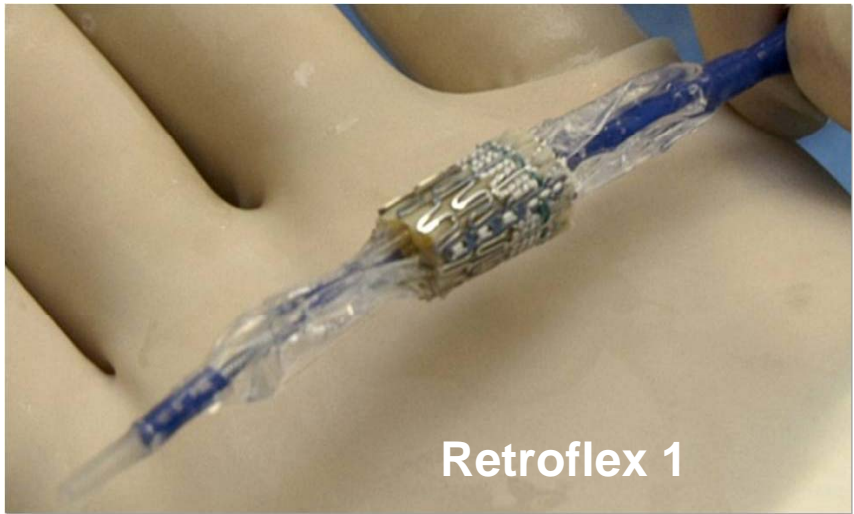
26 mm valve: 24 F sheath

Sapien XT Valve

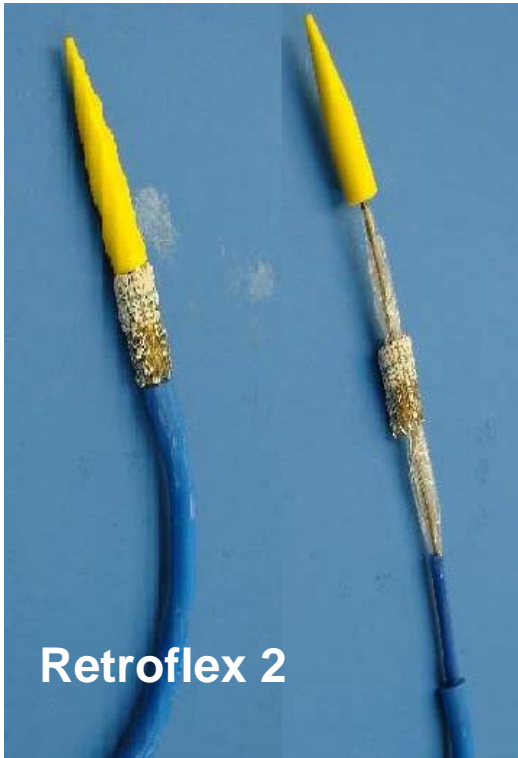
23 mm valve: 18 F Sheath

26 mm valve: 19 F sheath

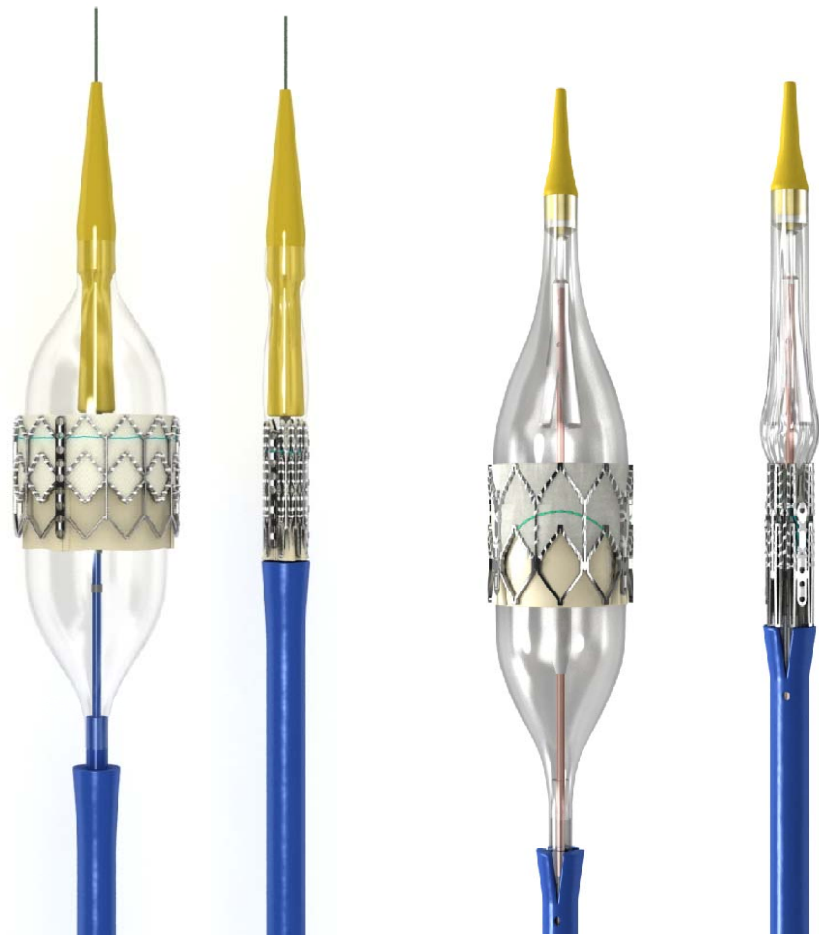




Retroflex 1



Retroflex 2



Retroflex 3

Novaflex



24F 22F 18F

CoreValve

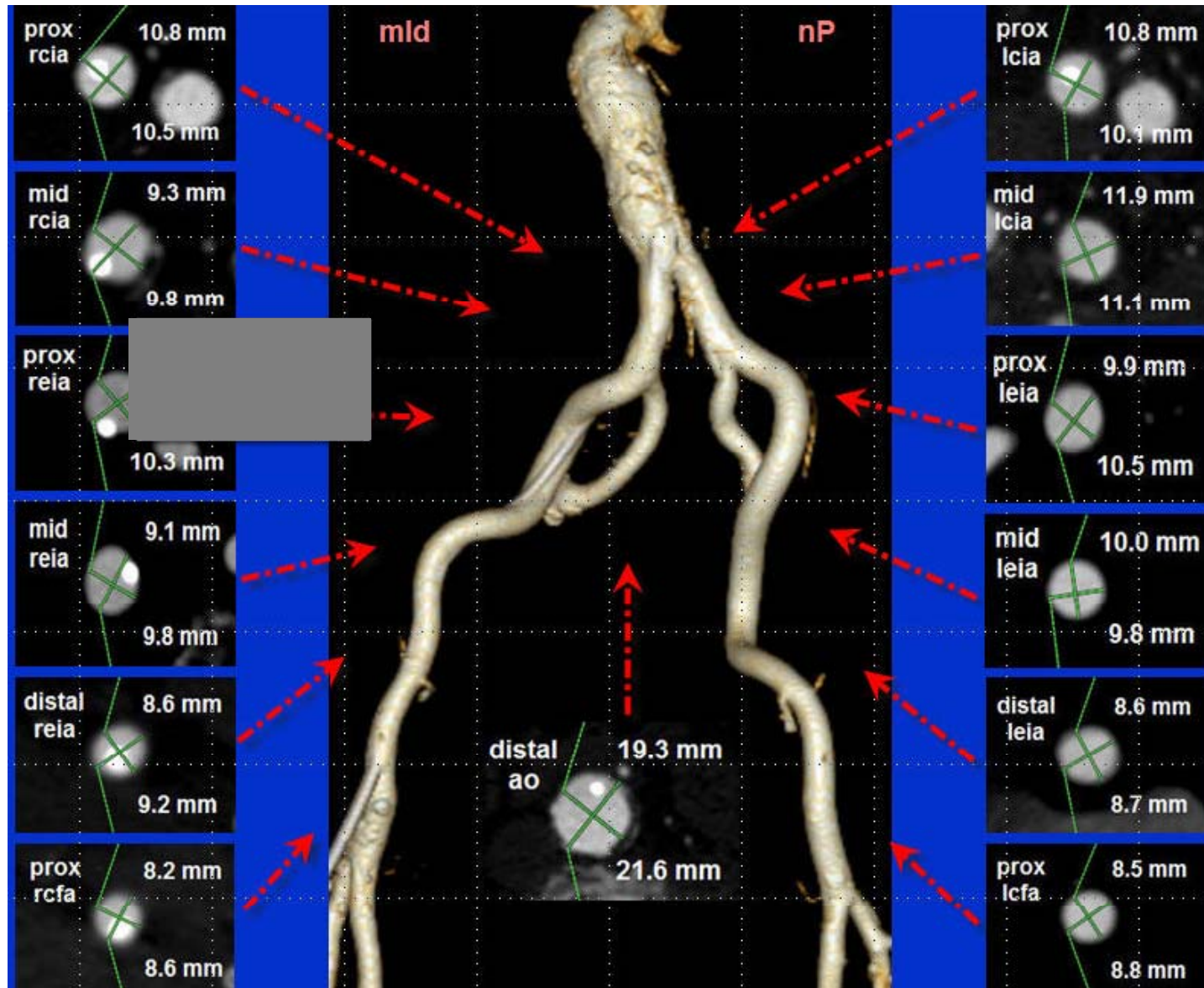
25 F

21 F

18 F

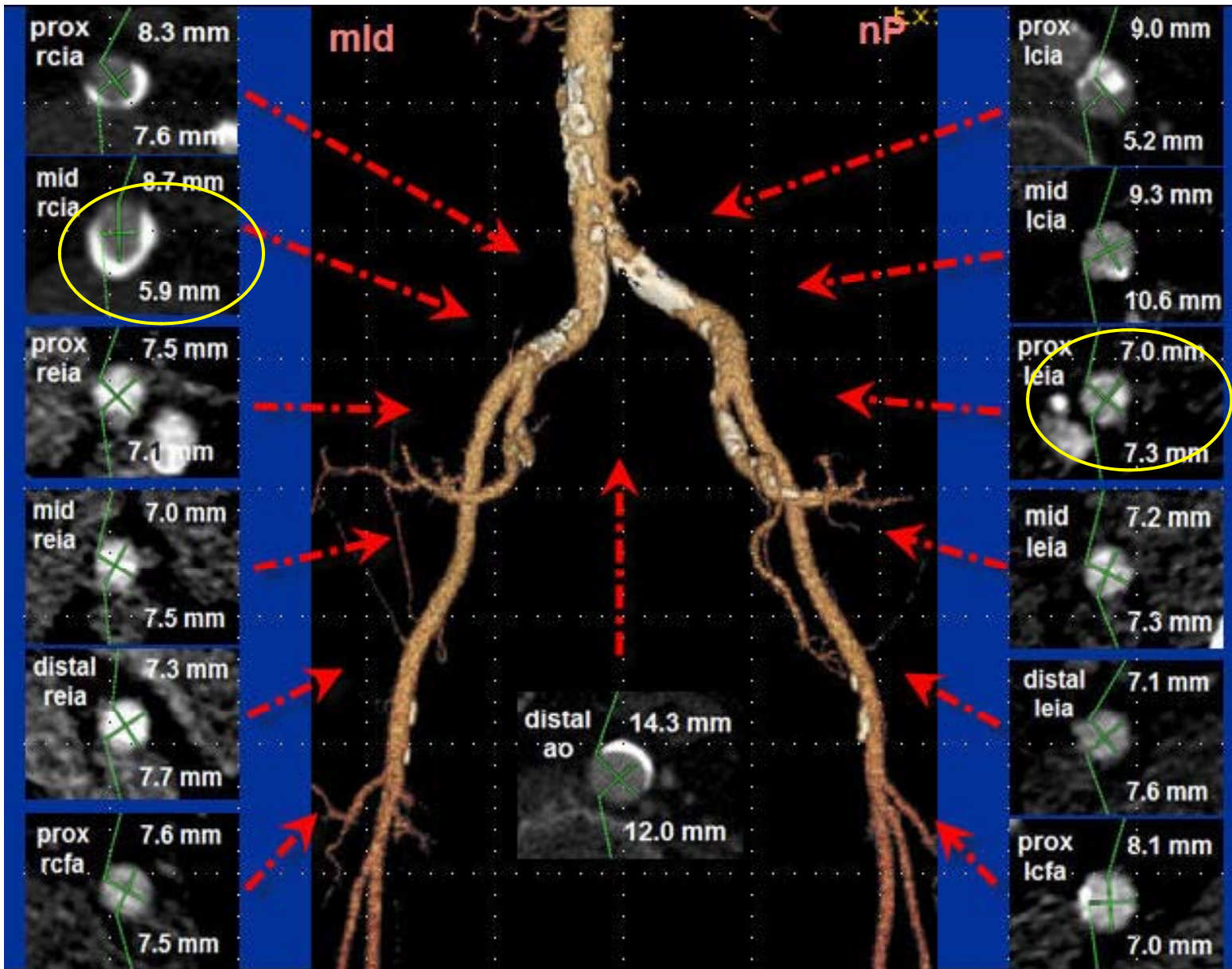


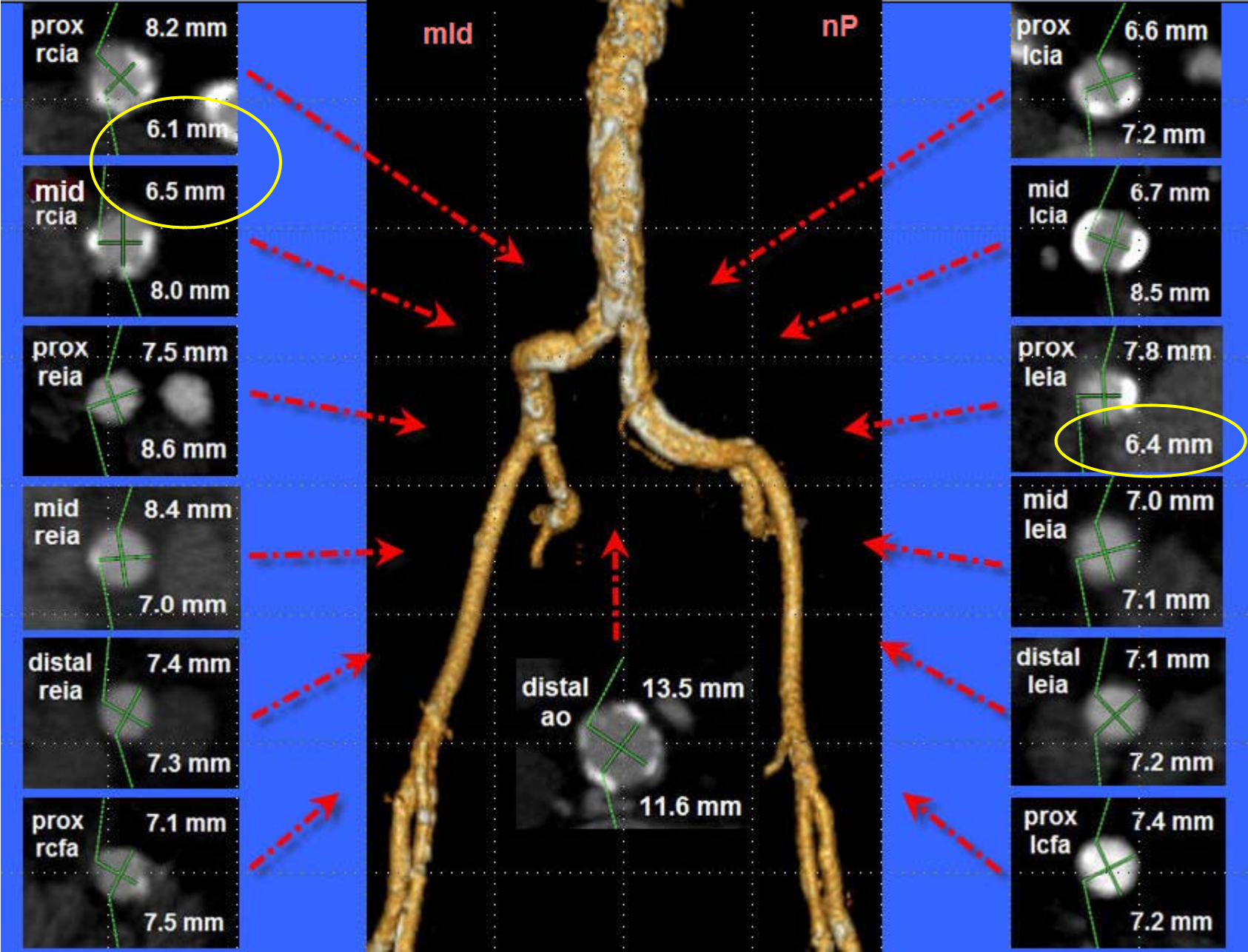
High quality Iliac Imaging Indispensable



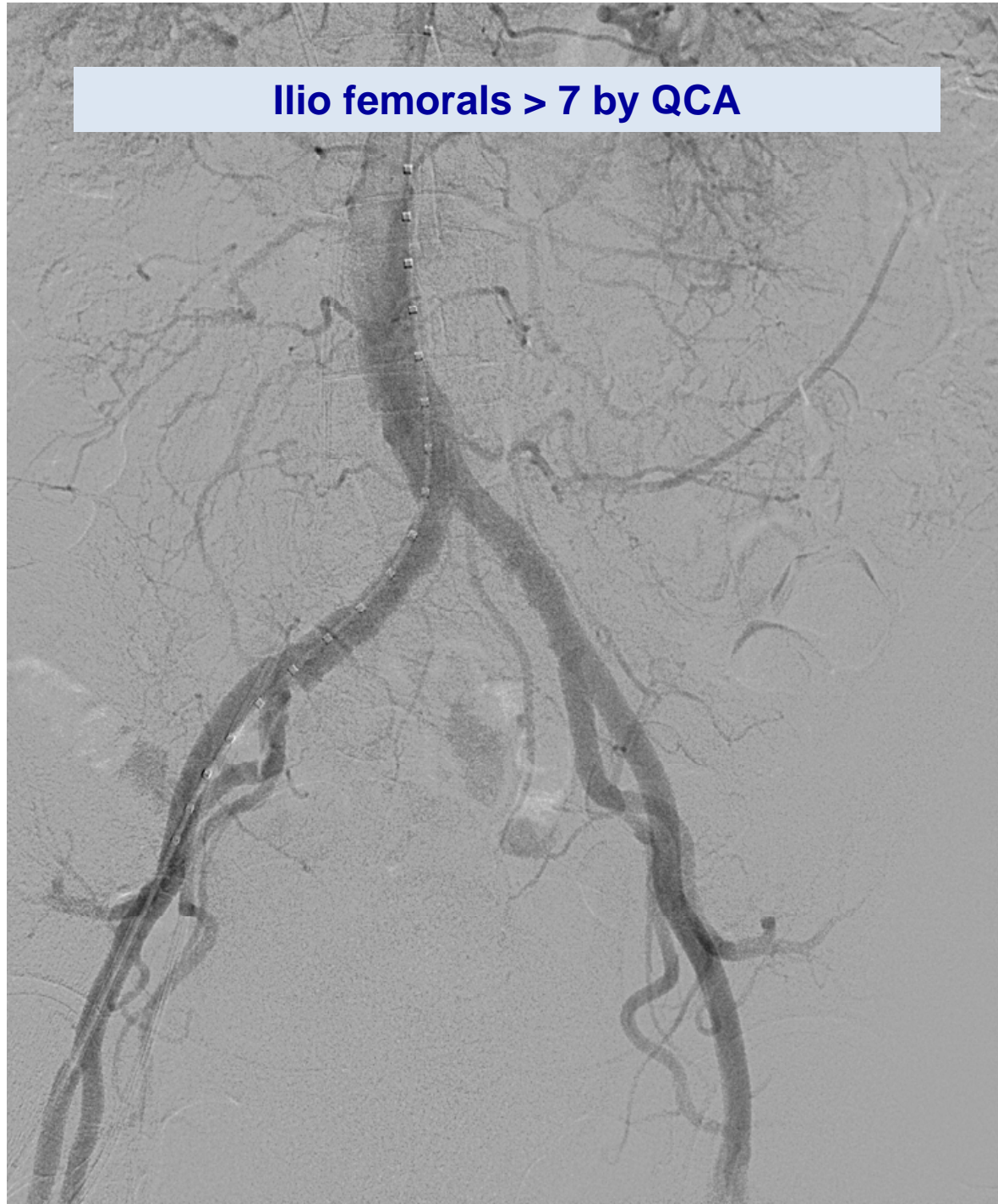
4F direct iliac injection for CT. JACC Imaging 2009;2:1404-11

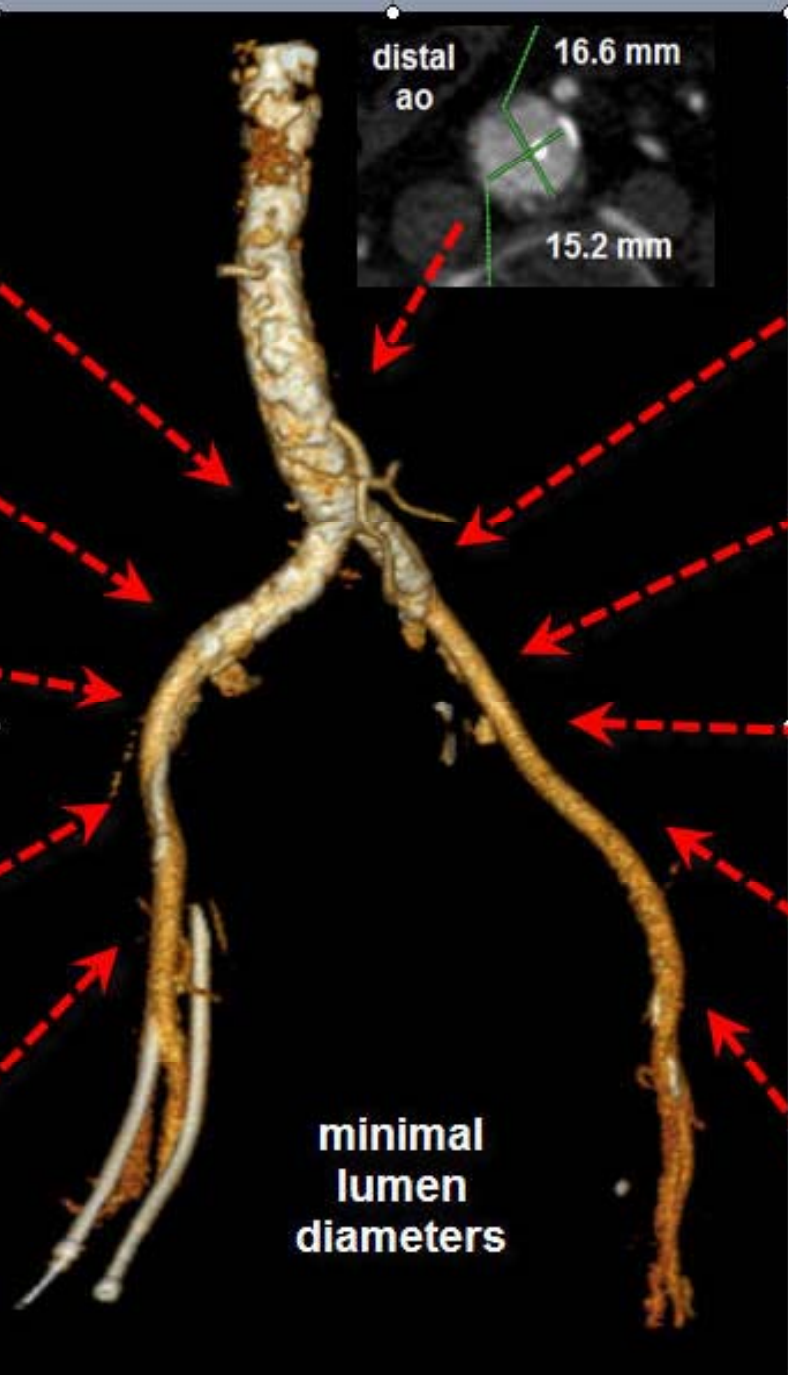
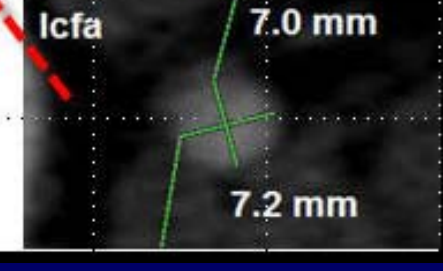
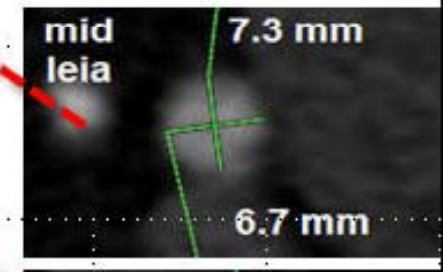
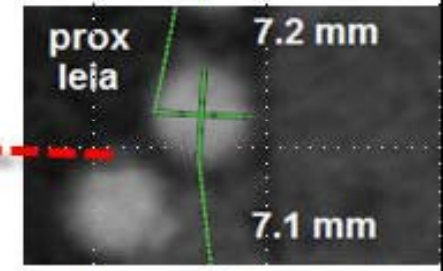
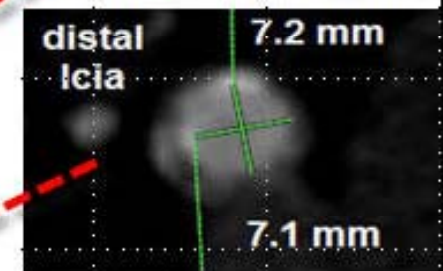
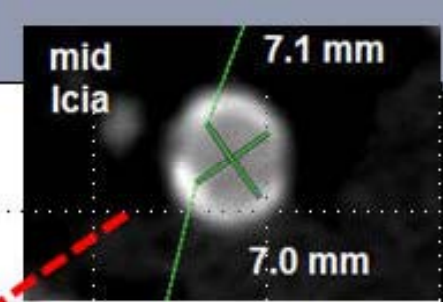
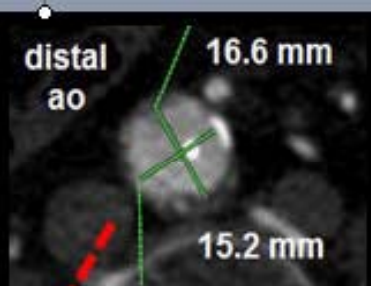
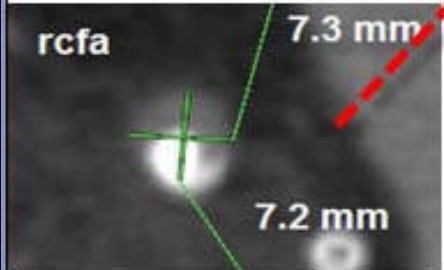
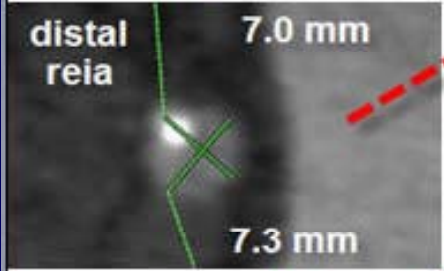
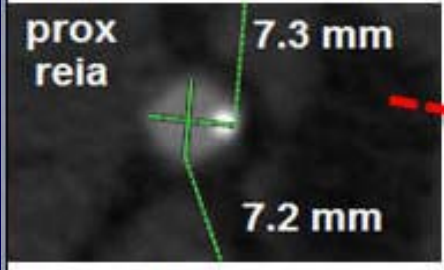
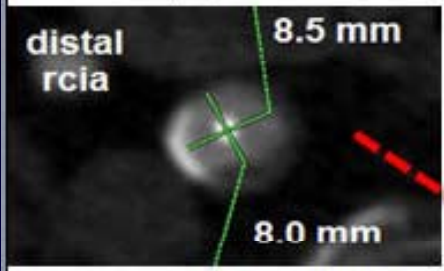
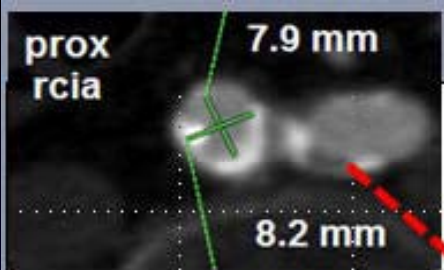
But not all iliacs can accommodate the large delivery sheaths



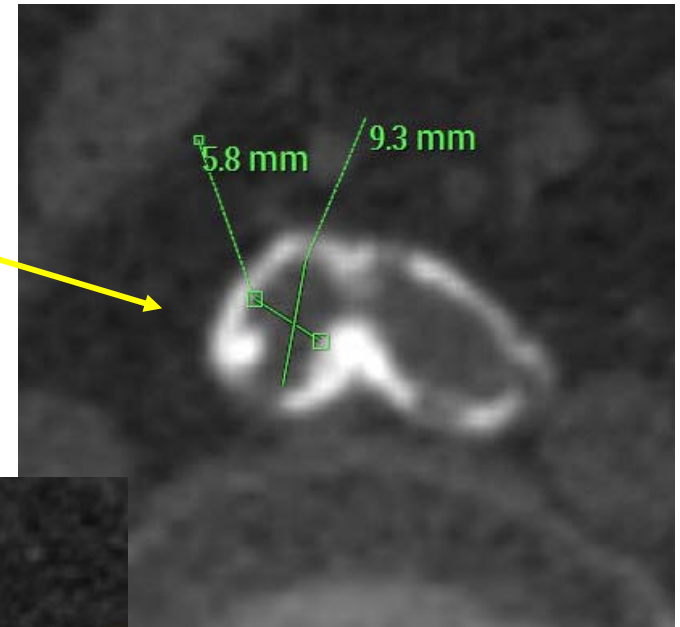


Ilio femorals > 7 by QCA

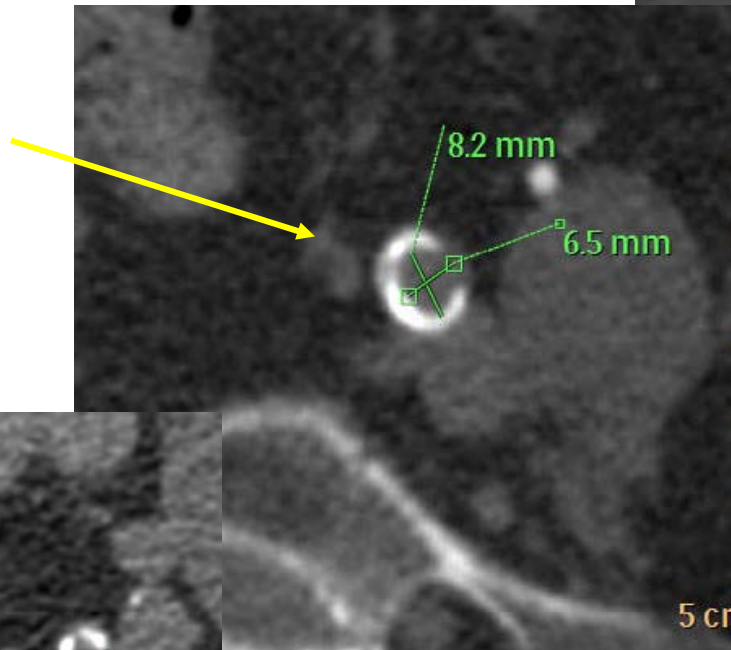




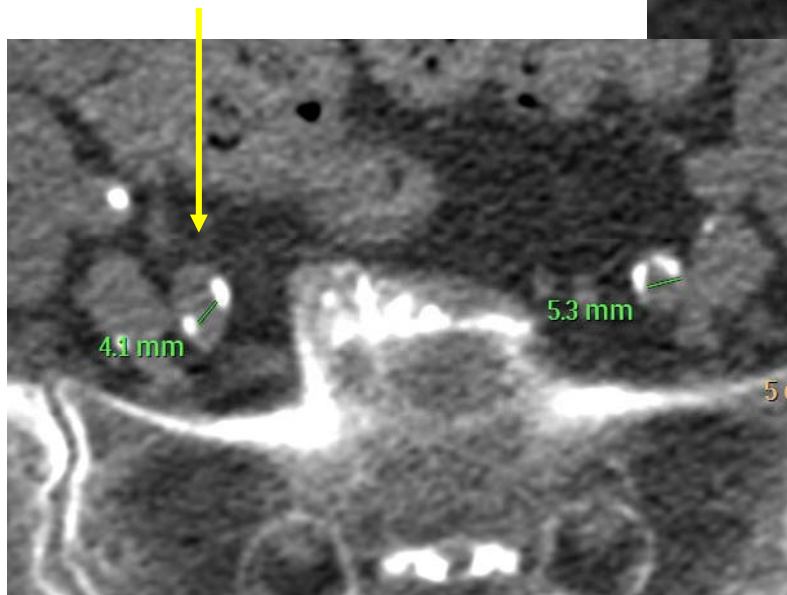
Ostium of right common iliac



Left external iliac



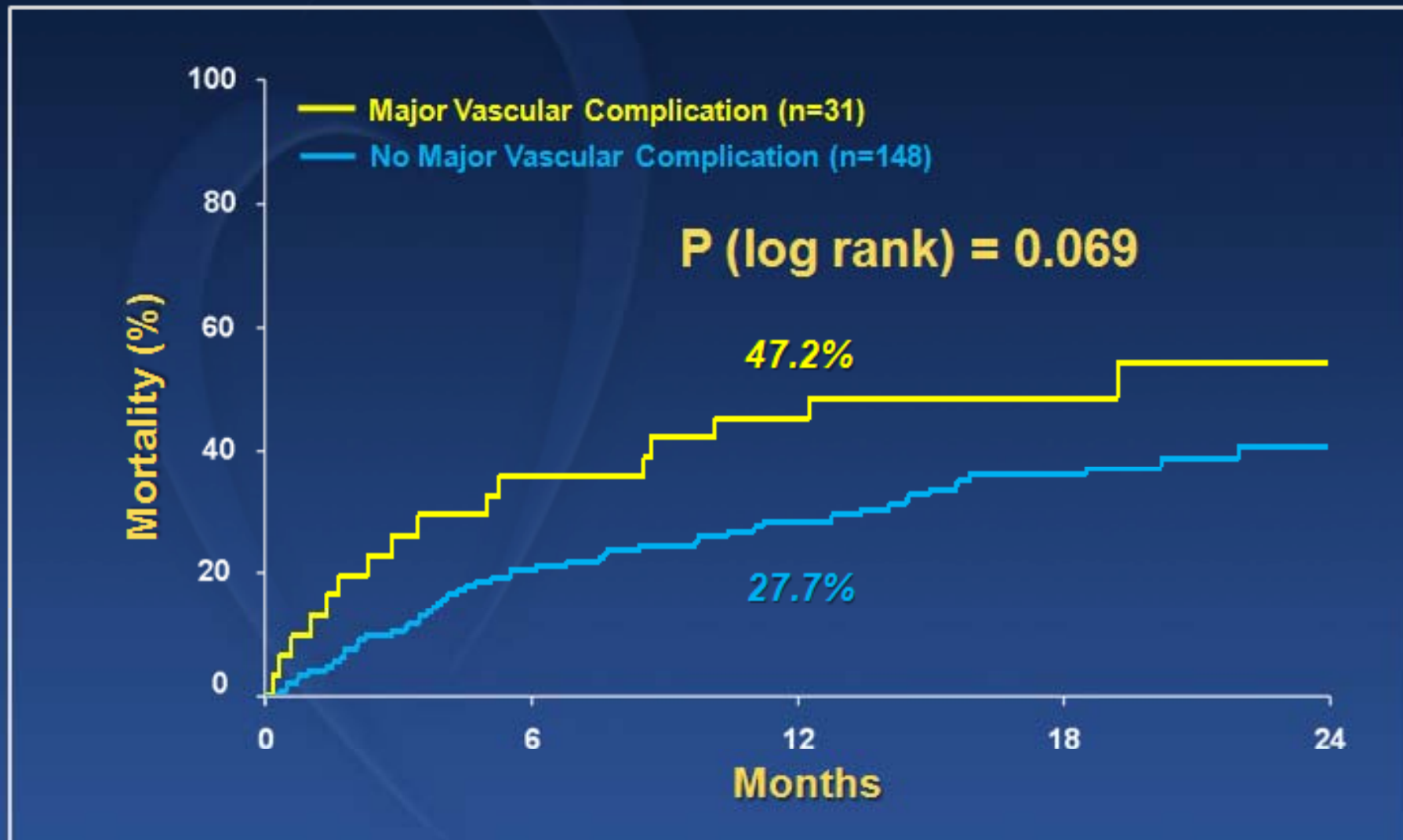
Right external iliac



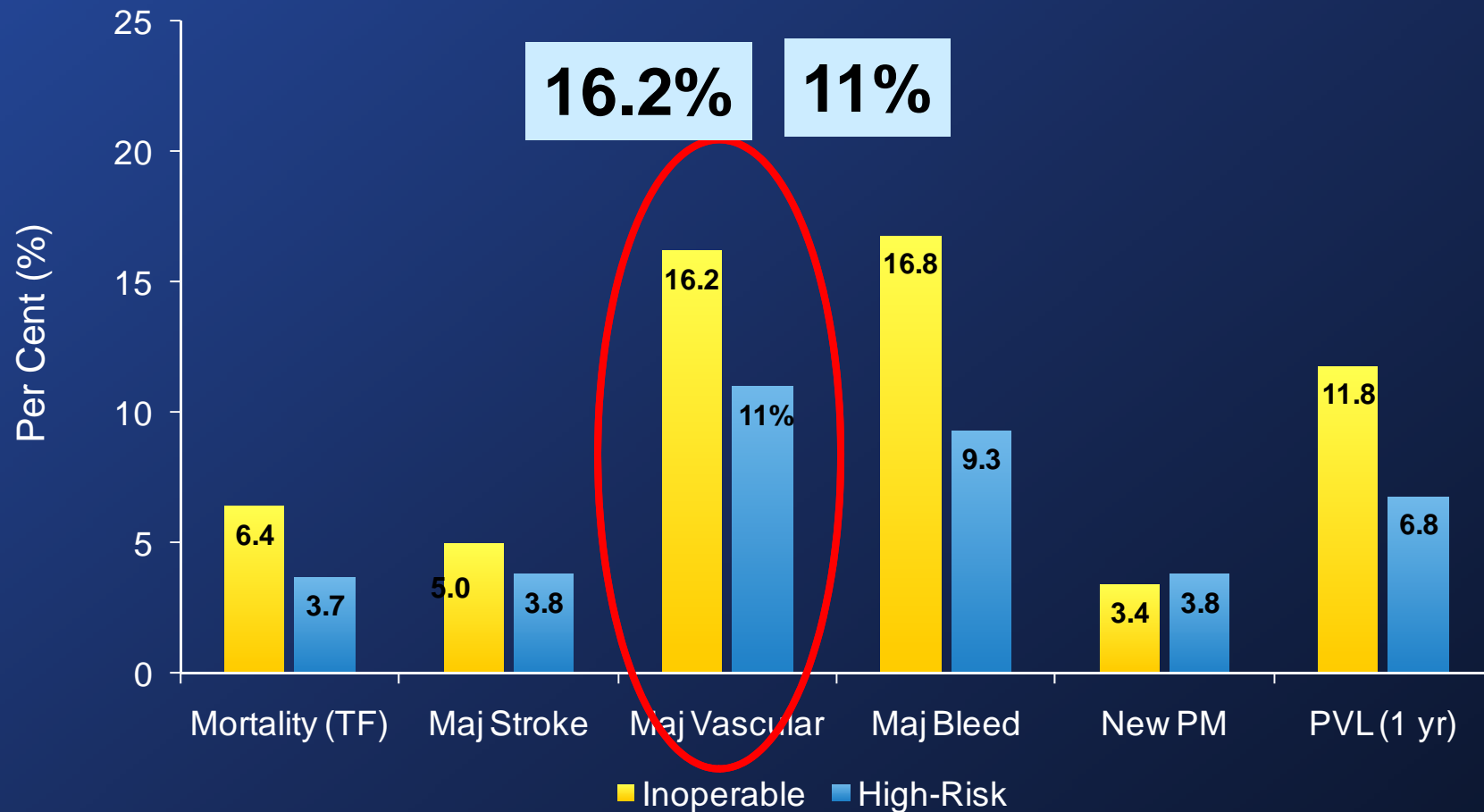
Not good for TF approach

Mortality vs. Major Vasc Complics

TAVI patients



PARTNER Comparison of Outcomes High-Risk (A) vs. Inoperable Patients (B).



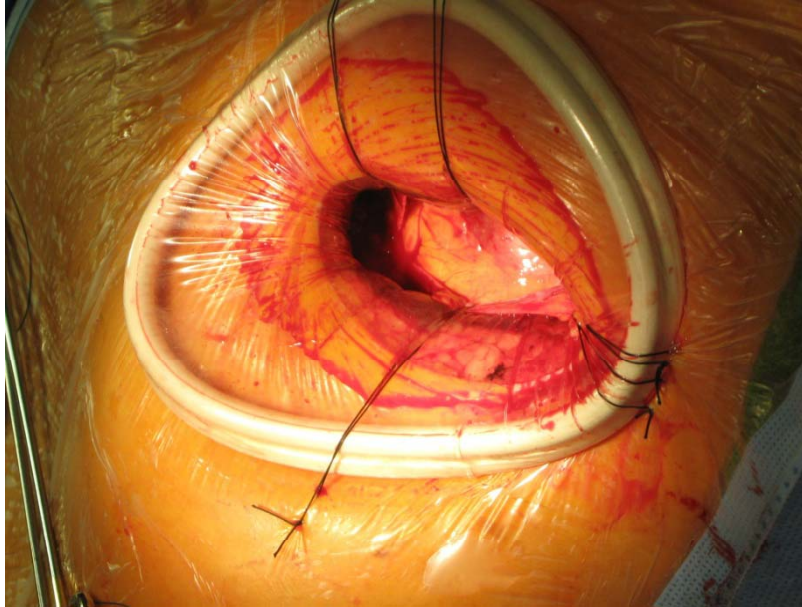
Femoral Access

Significant “danger” if iliac dimensions and morphology less than adequate.

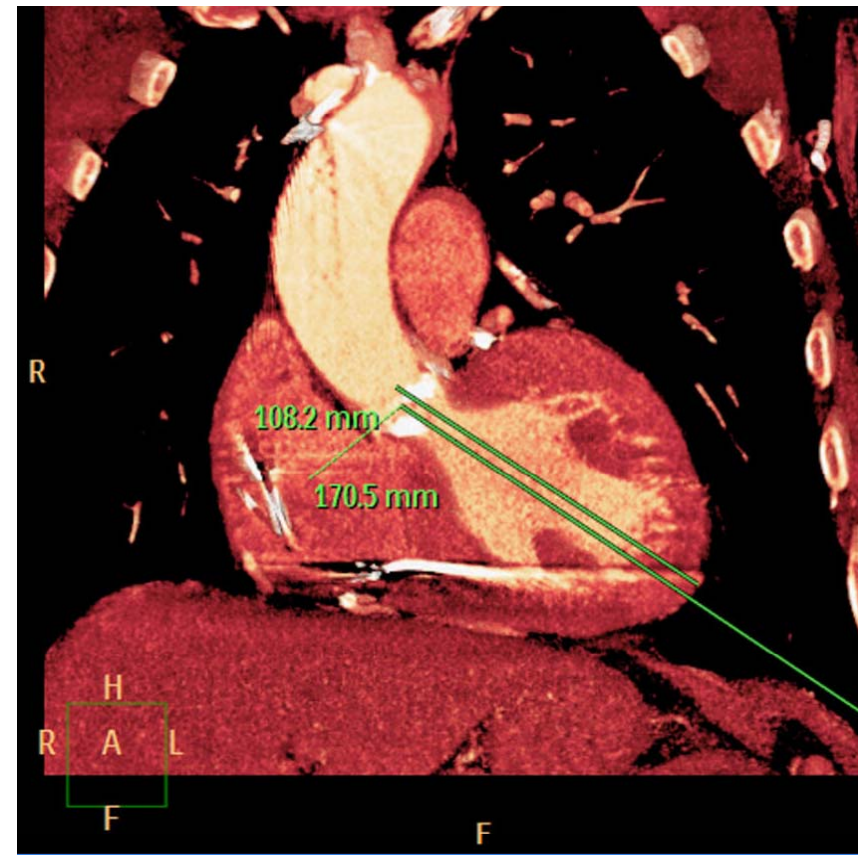
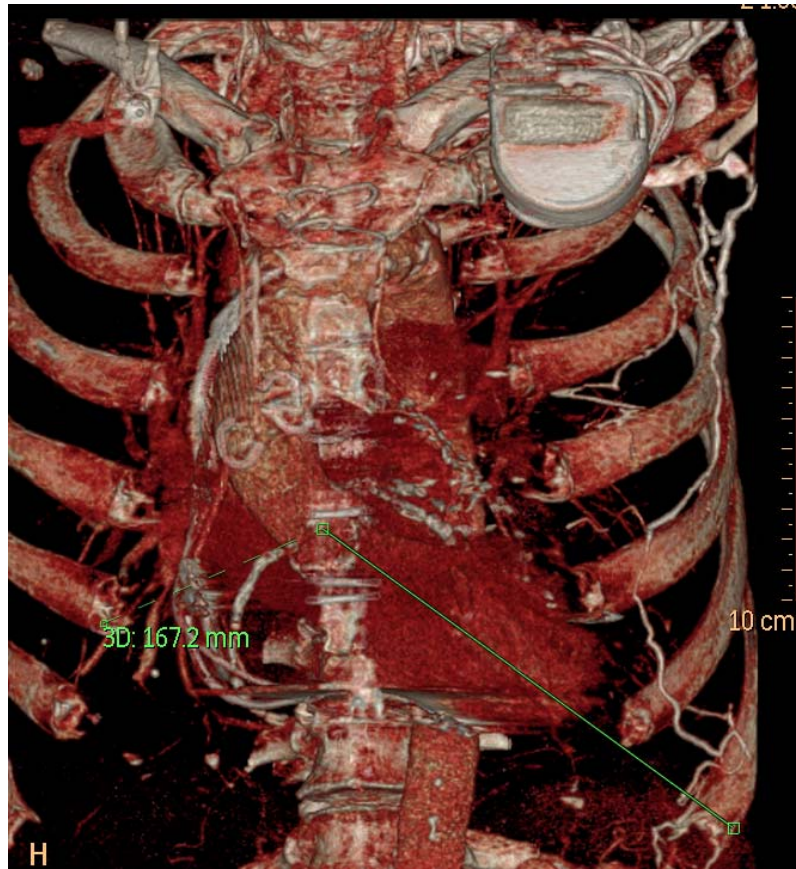
A alternative access route to be considered..

Trans Apical Approach

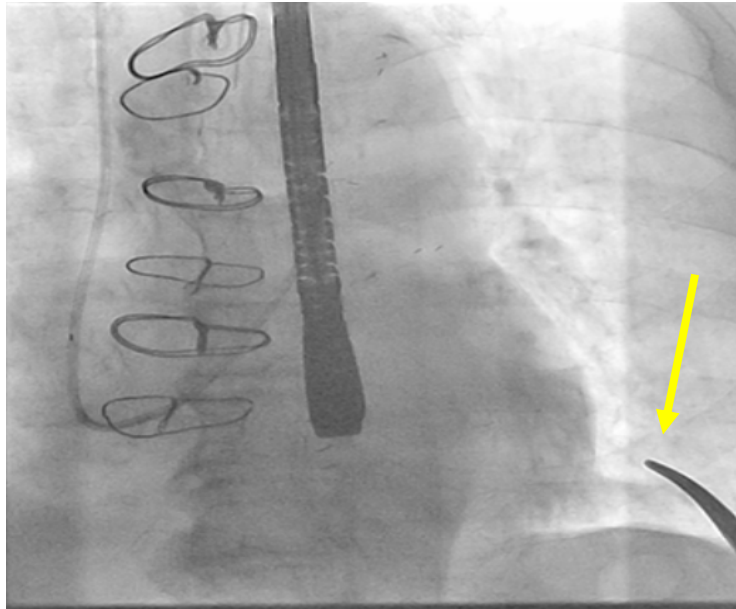
- **Excellent choice for those with:**
 - **No femoral access**
 - **High risk femoral access**



Planning TA TAVI with CT



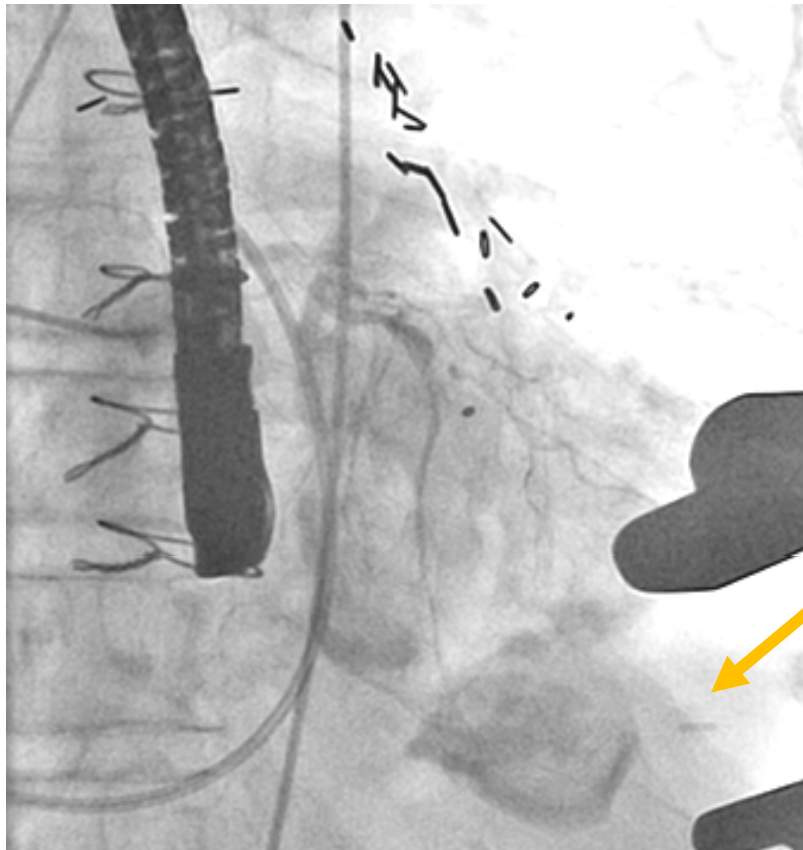
Choosing the site for skin incision



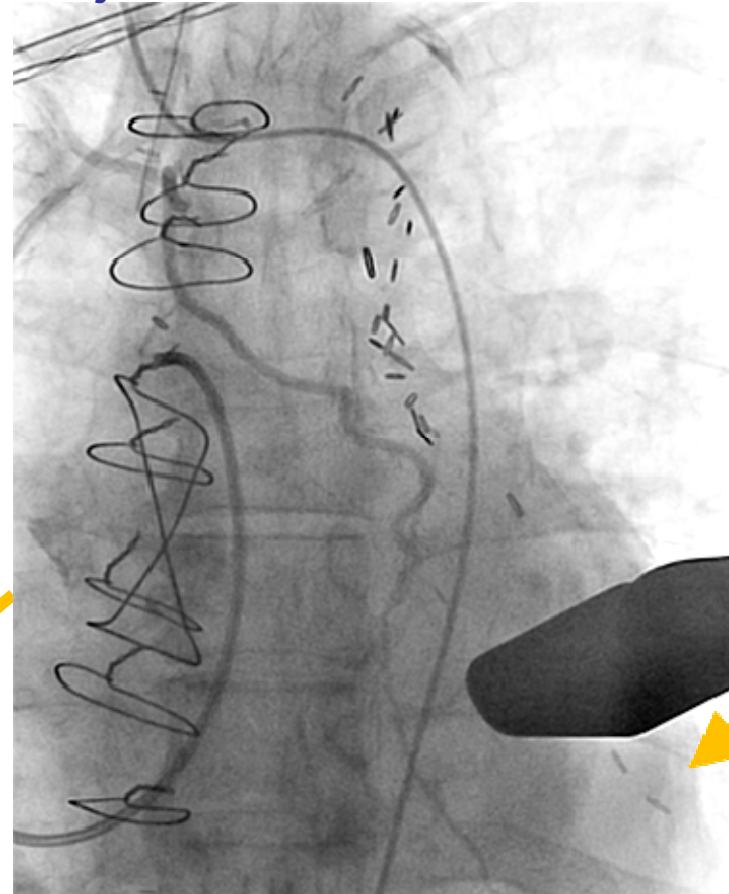
**Place hemostat at
apex under
Fluoro guidance**

Choosing the optimal site for Apical Entry in Re-do Patients

Injection in native LAD

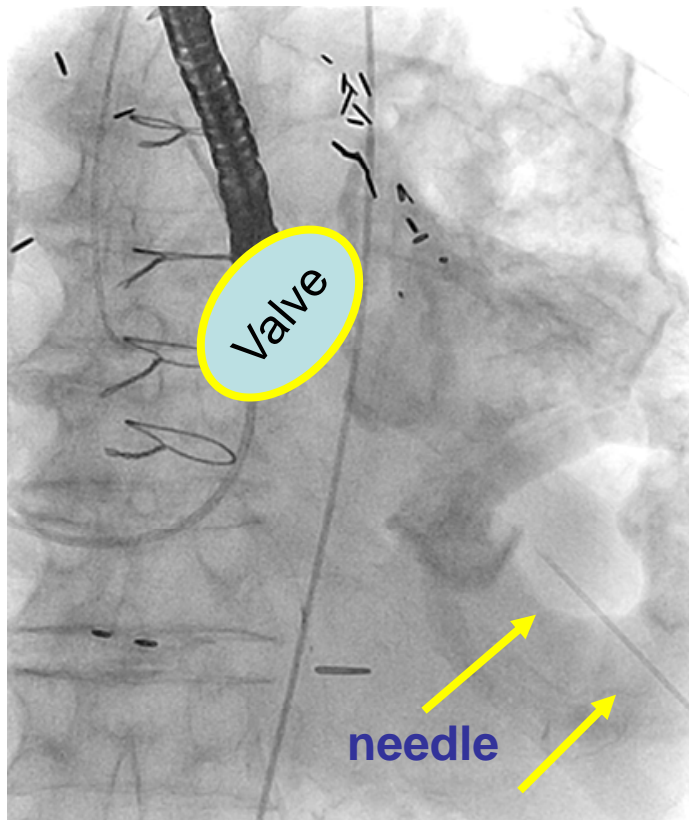


Injection in RIMA to see LAD

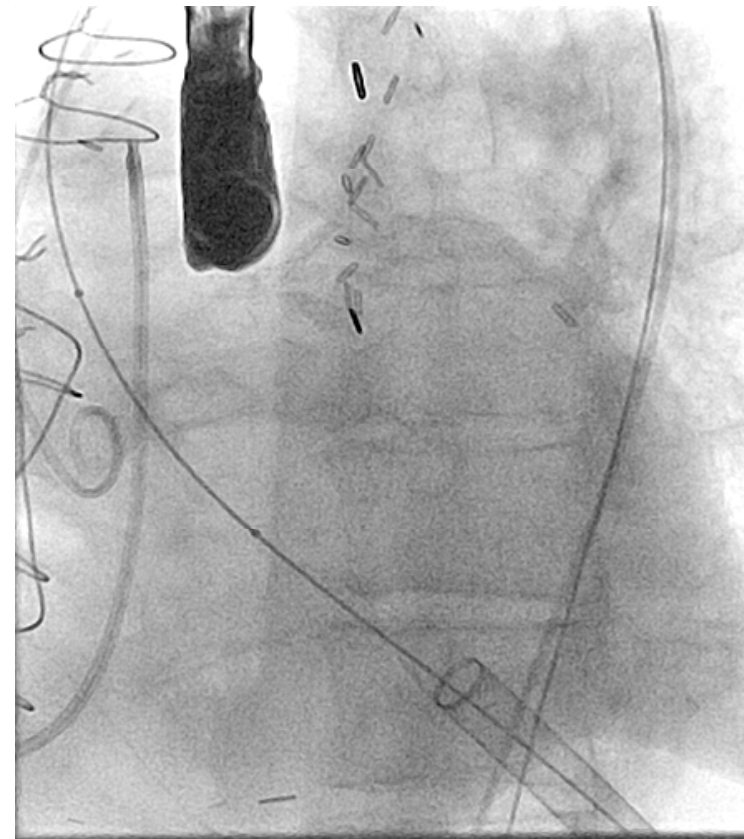


Optimal Needle Puncture is Performed under Fluoroscopy

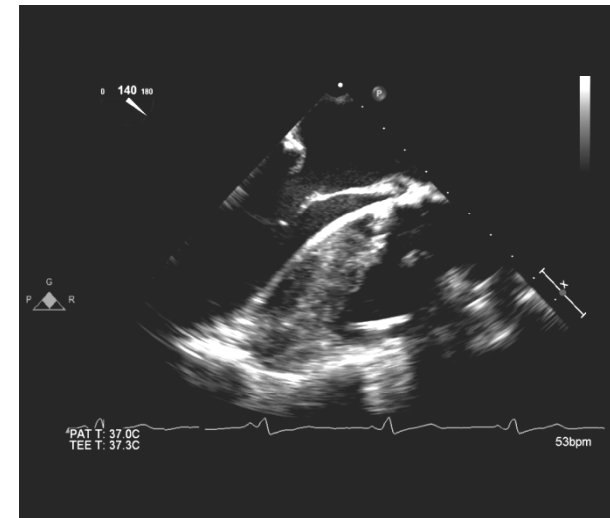
Needle is pointed towards valve



It makes access to valve very direct, without impinging on MV apparatus



Echo confirms the wire has no MV engagement



Is there less CVA with TA Access ?

**Existing Data shows
no significant difference
in Stroke rate
for transfemoral and transapical approaches.**

Trans Apical T-AVR at WHC

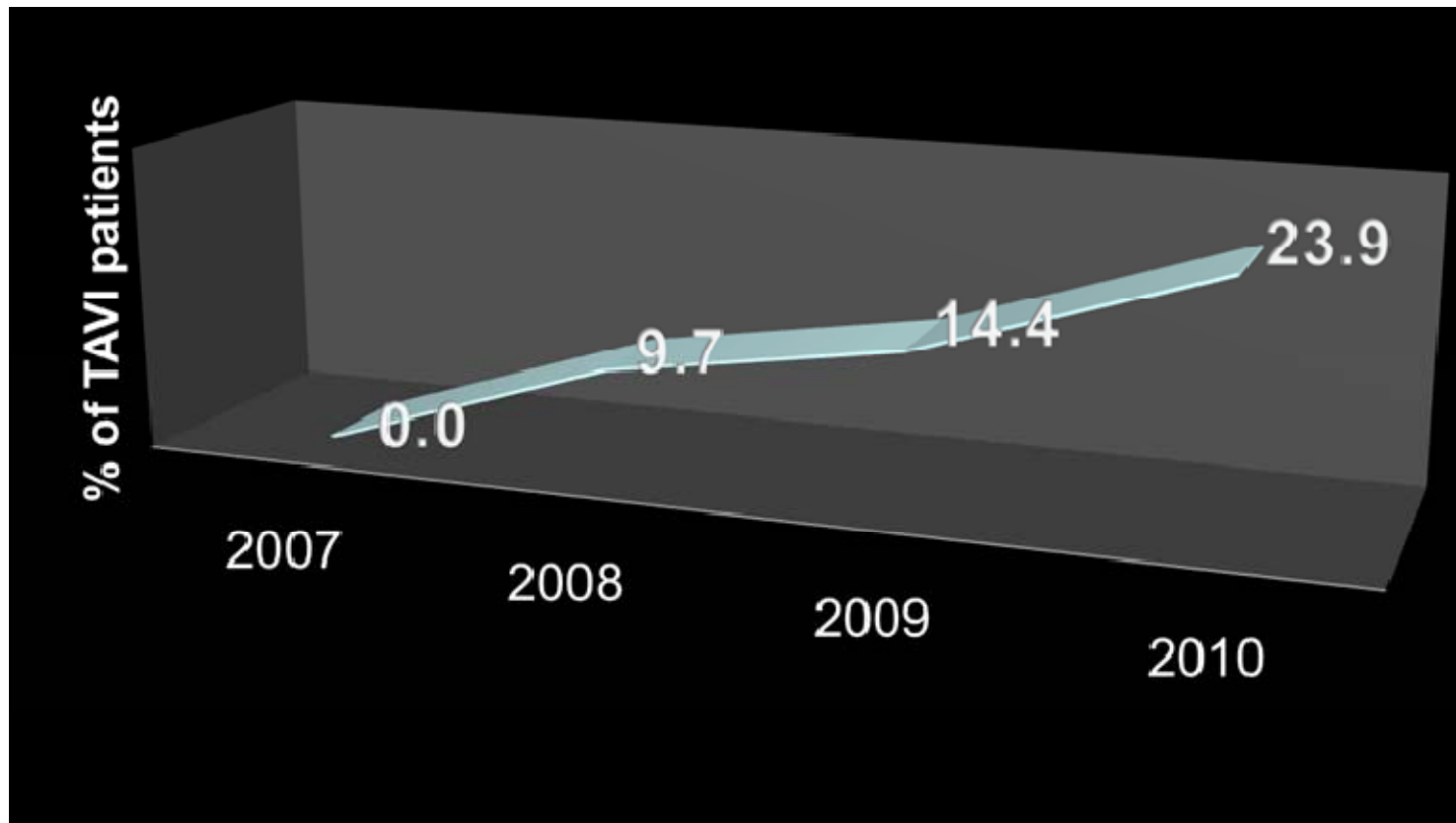
- **20% TA in the 2009.**
 - ✓ **16% vascular complications**
- **50-60% TA in 2011**
 - ✓ **0% vascular complication**

Subclavian Access.

For patients with:

- Poor TF access.
- Not good candidates for TA:
 - Very low EF
 - Marked LVH
 - Thoracic deformity
 - Severe lung disease
- CoreValve with poor femoral access

Subclavian Access. Italian Registry.



Subclavian Access

Bypasses the aortic arch.

Better control of valve positioning than TF.

Direct closure by surgeon.

Avoids apical trauma.

Avoids general anesthesia and chest tubes.

Faster recovery than TA

Trans Aortic Access

Small thoracotomy.

Direct puncture of ascending aorta.

Limited experience with this approach.

Conclusions

- **The team performing Transcutaneous AVR needs to have experience with several access routes, to maximize success and safety.**
- **Newer devices and technology may alter the proportion of each access route.**

The end