

# **VORTEC NONSUTURED TELESCOPING ANASTOMOMIC TECHNIQUE**



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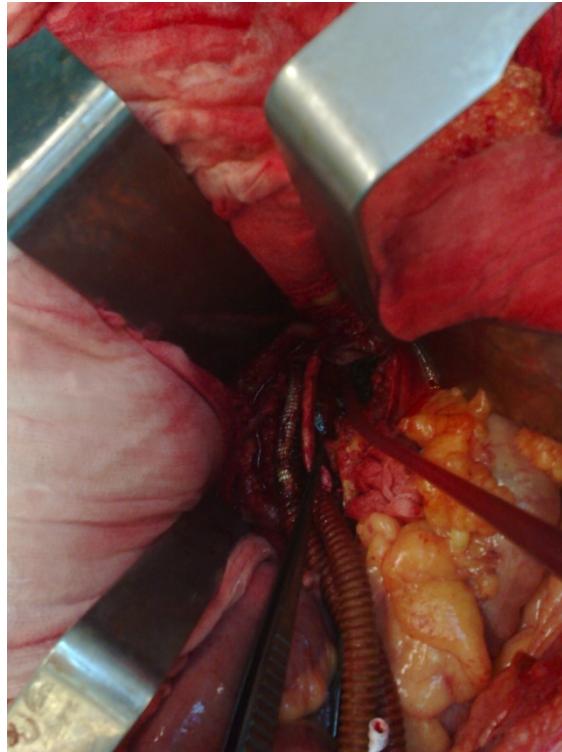
MD, FETCS, FEBVS

# Challenges in vascular surgery

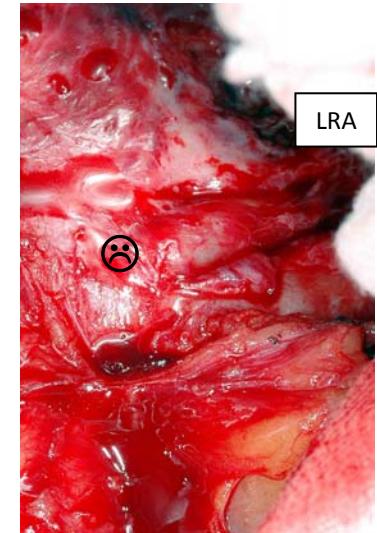
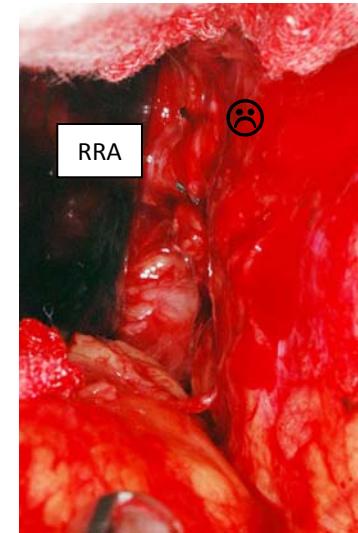
Anatomical remodelling



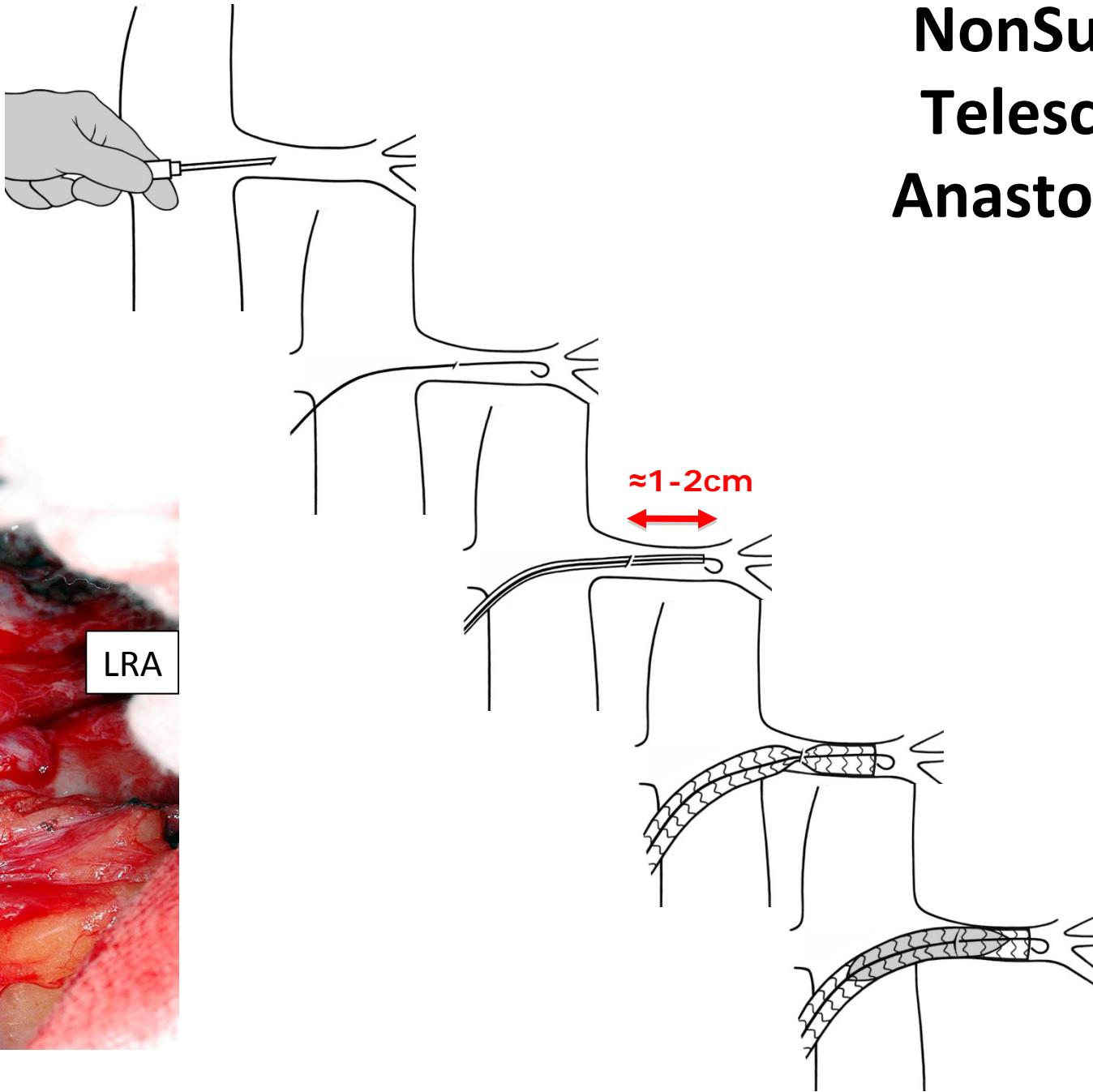
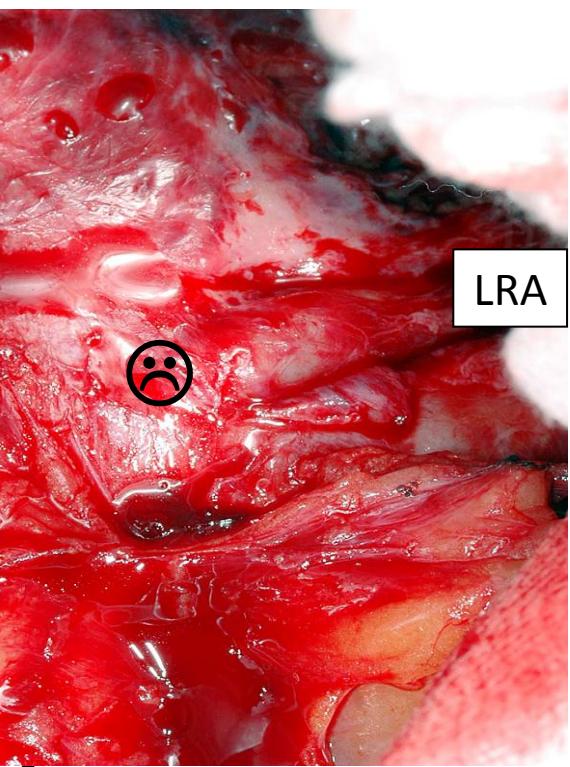
Difficult access

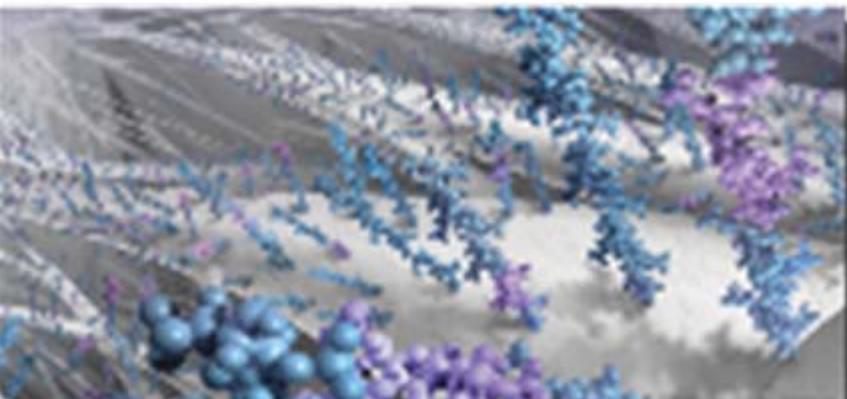


Scare tissue

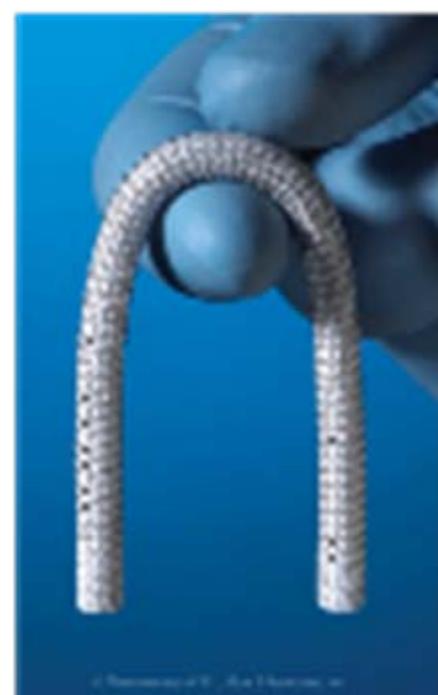


# NonSutured Telescoping Anastomosis

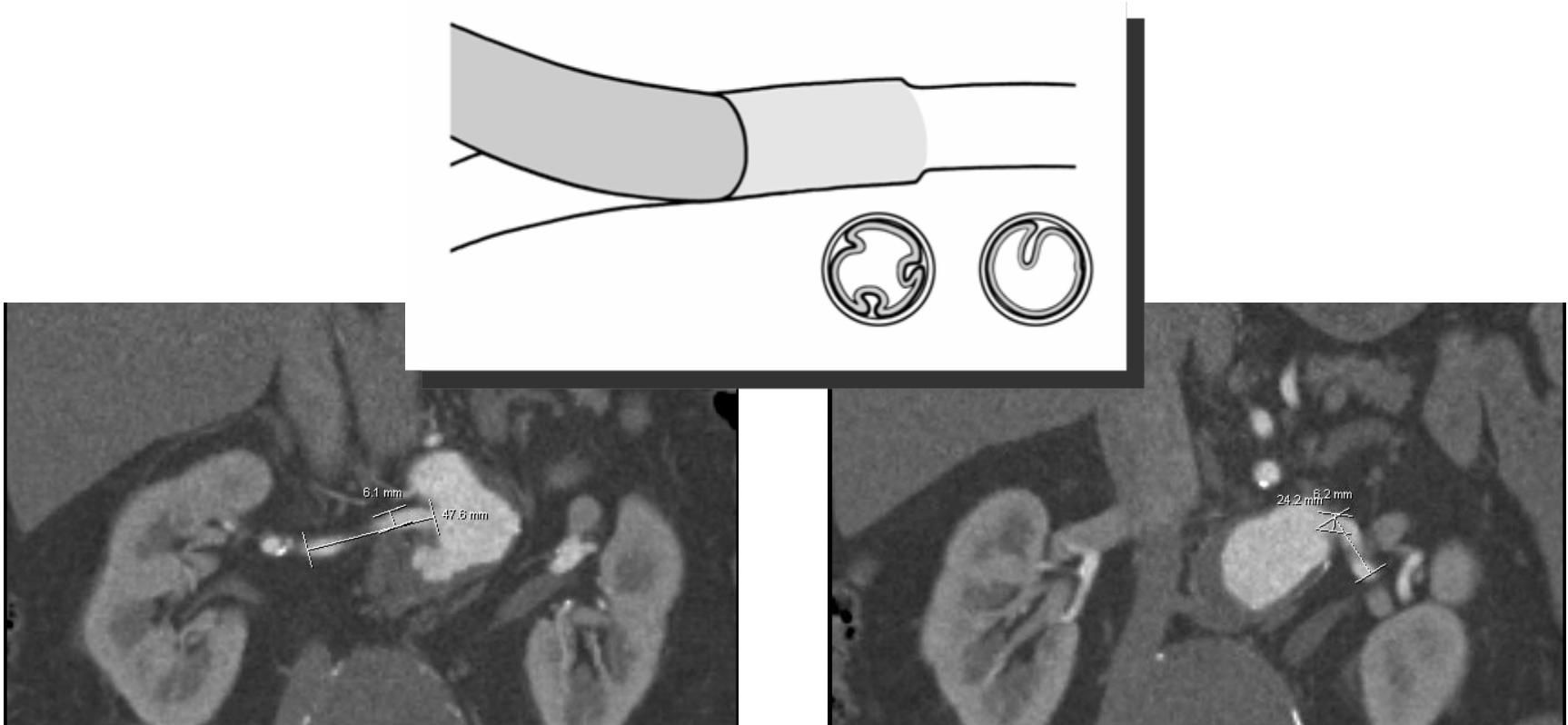




- Low-profile
- Flexible
- Anti-thrombotic coating
  - (Propaten®)

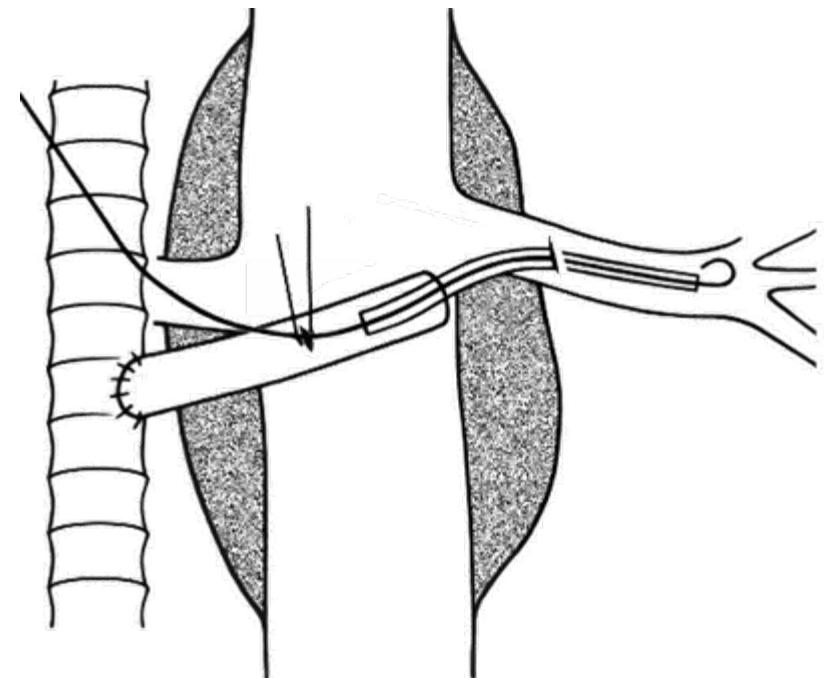
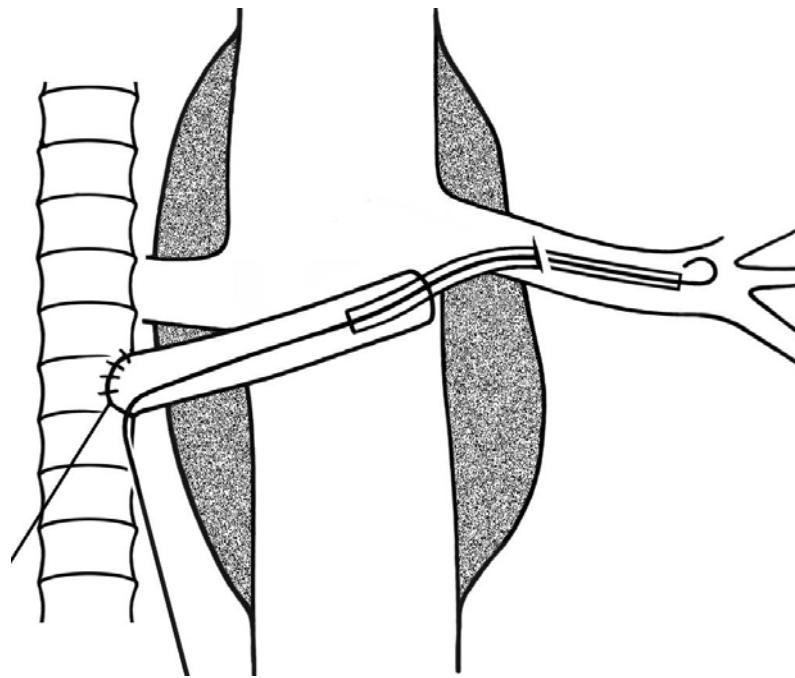


# Methods

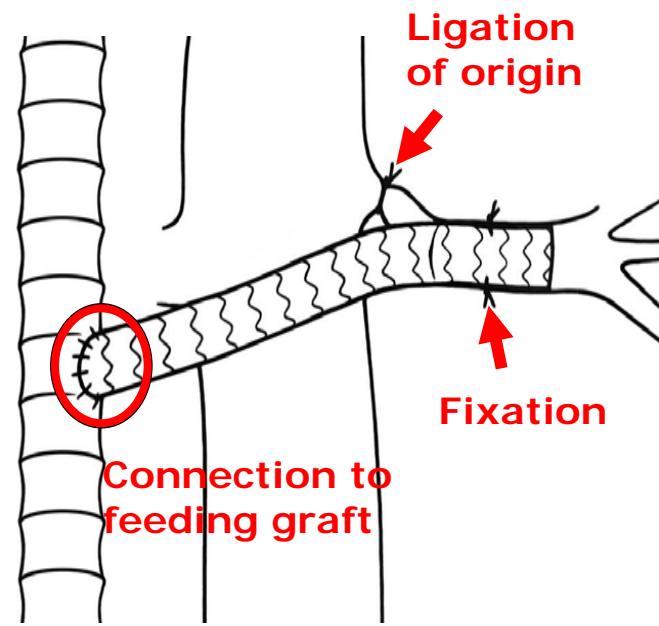


<b>Viabahn</b> (2.5cm-5cm-10cm-15cm)	<b>Target vessel</b>
5mm	4.0mm - 4.7mm
6mm	4.8mm – 5.5mm
7mm	5.6mm – 6.5mm
8mm	6.6mm – 7.5mm

# Methods

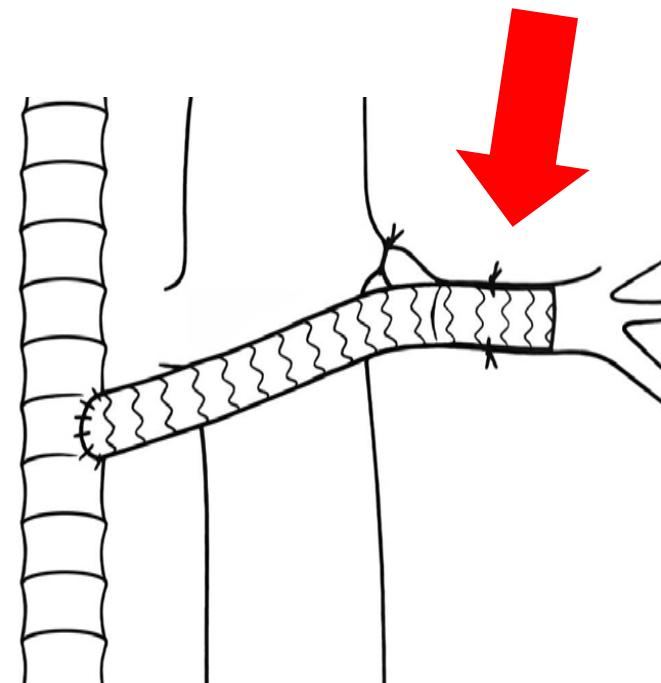


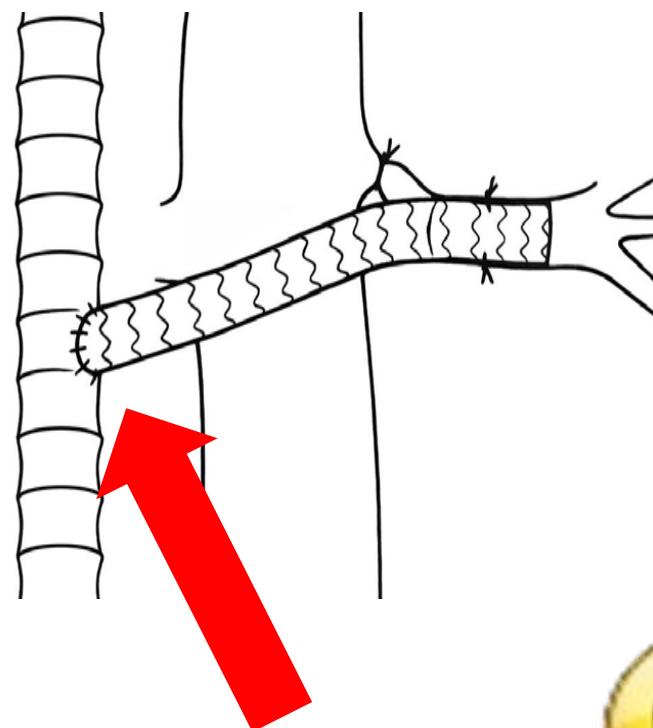
<b>Viabahn</b> (2.5cm-5cm-10cm-15cm)	<b>Interposition graft</b>
5mm	5mm
6mm	5mm
7mm	6mm
8mm	7mm





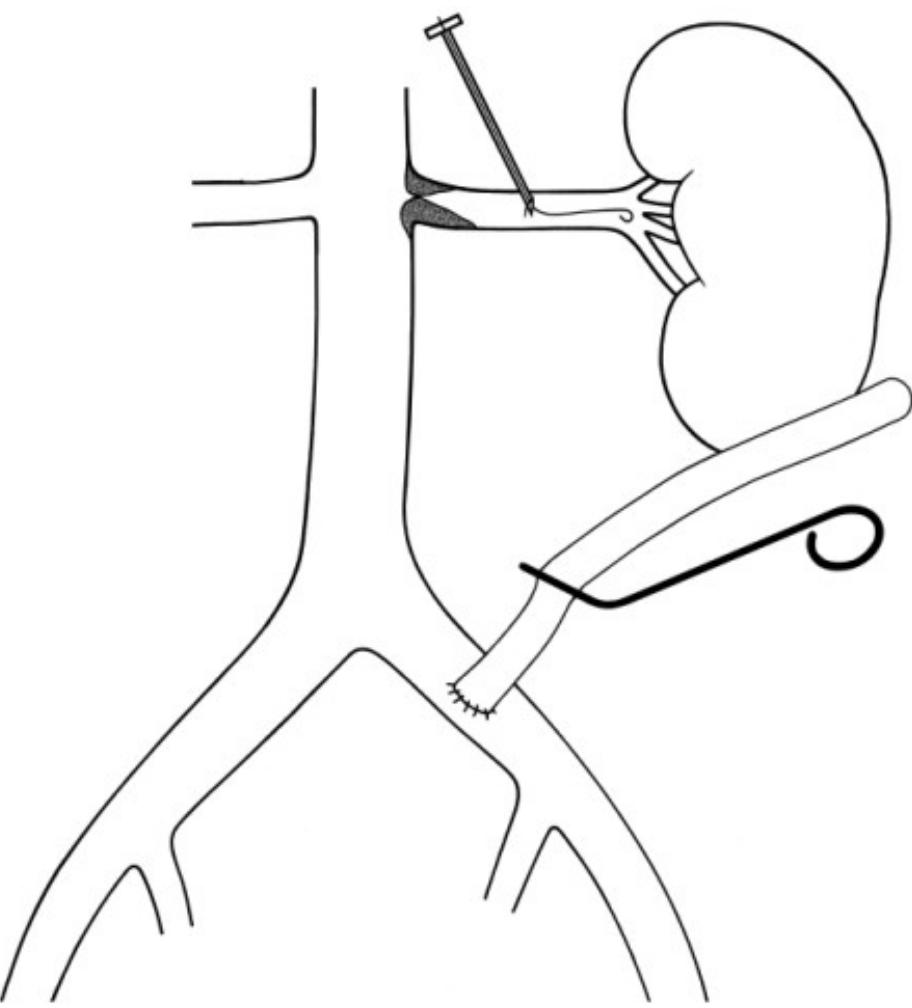
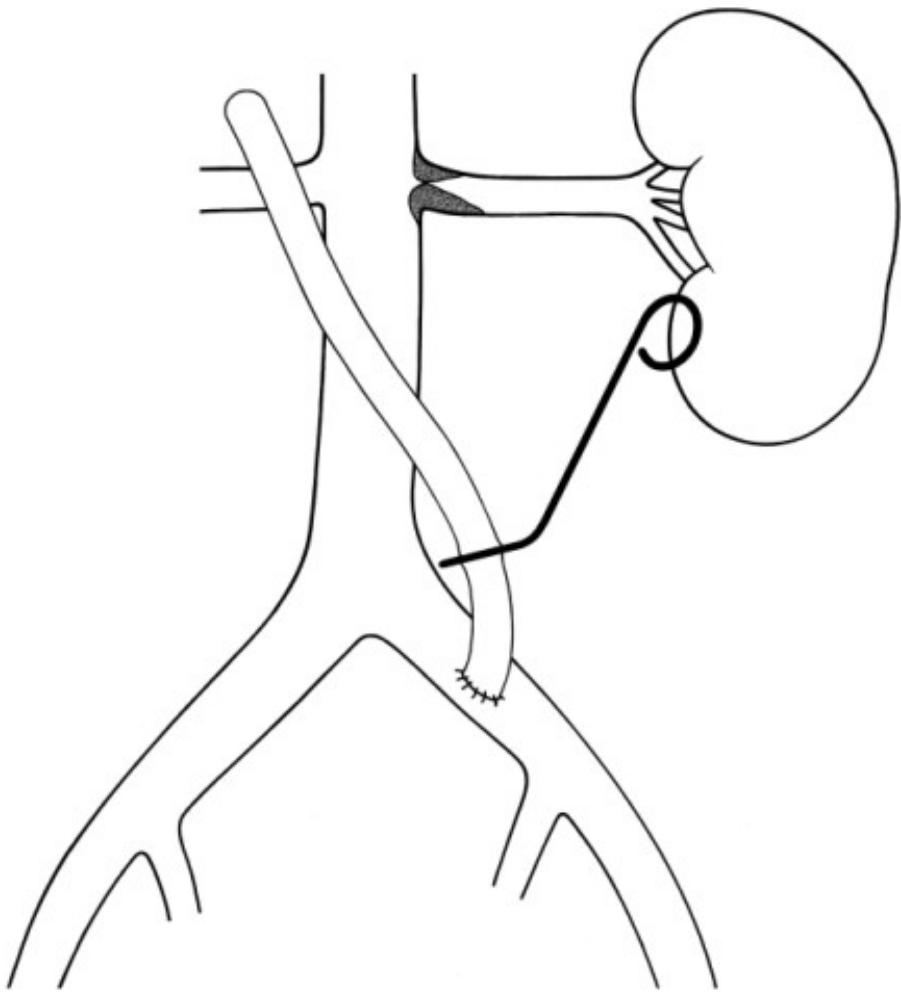
Tool to perform challenging  
branch anastomosis

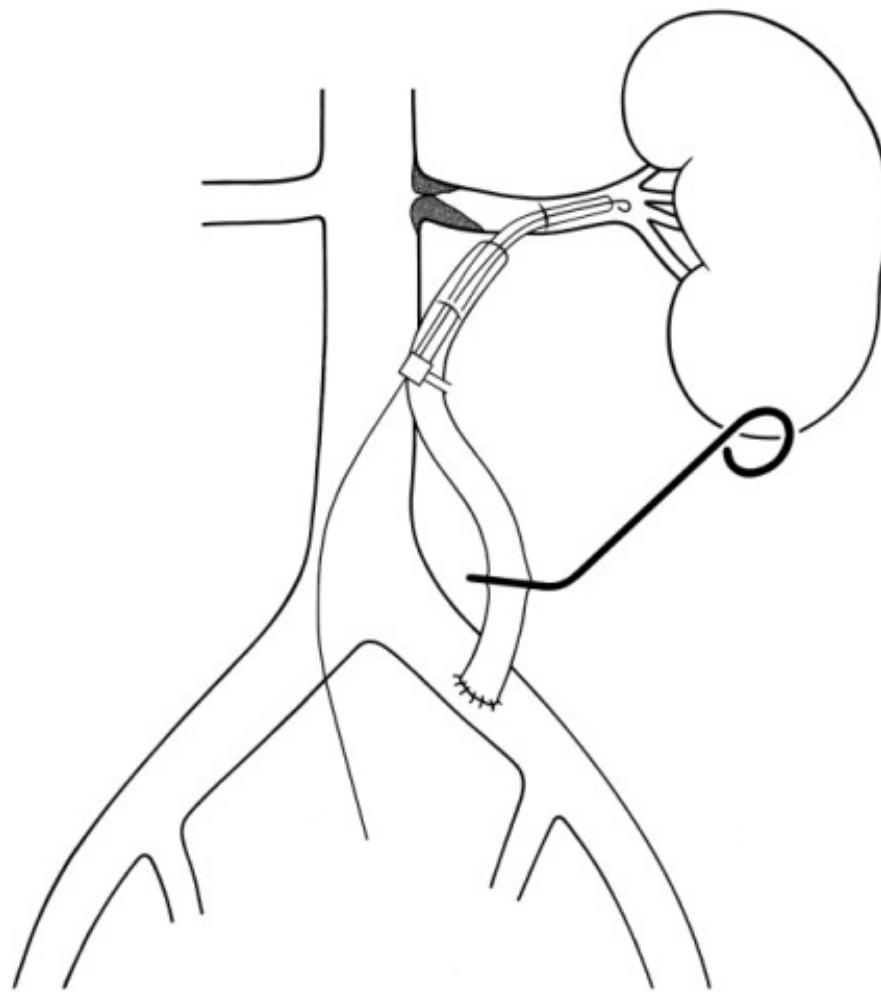
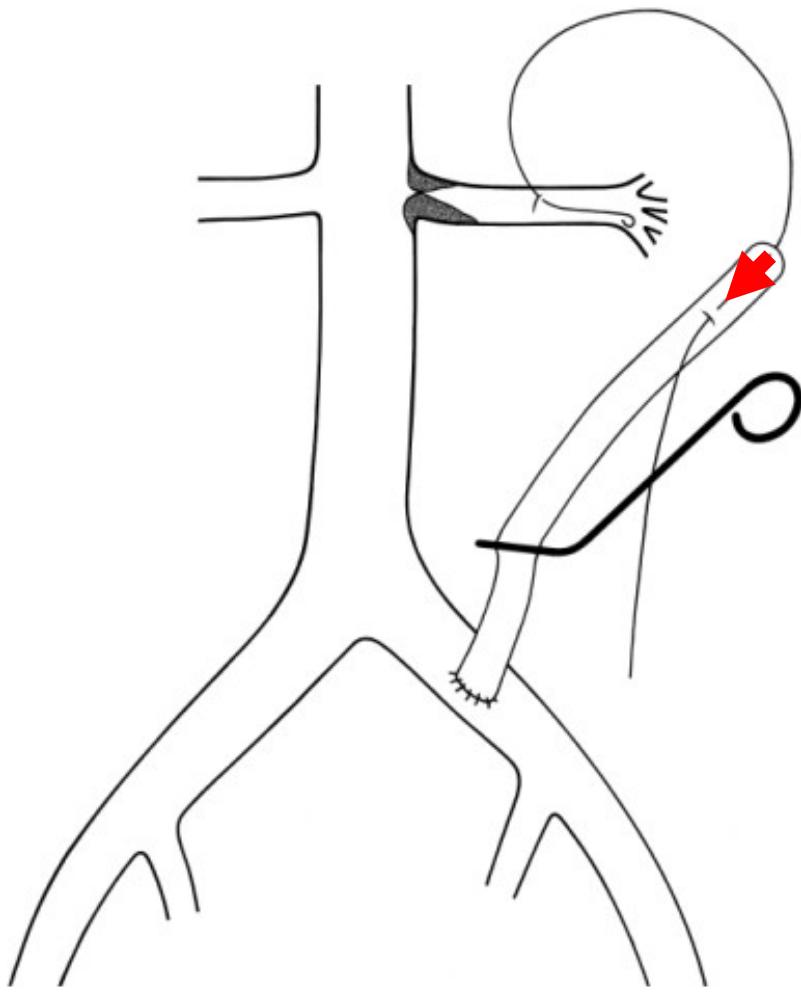


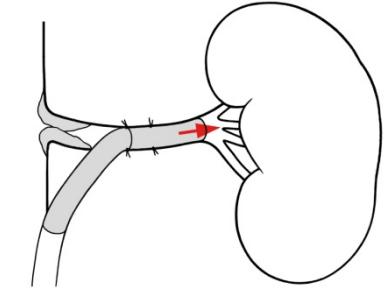
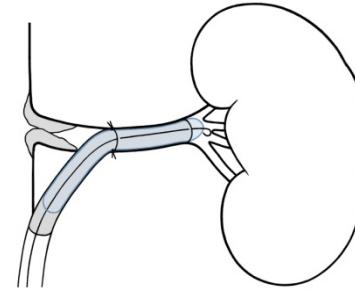
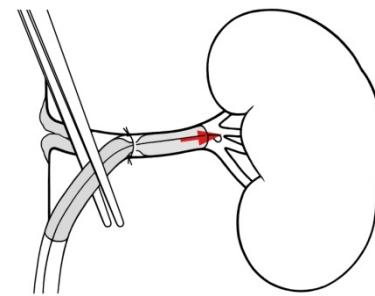
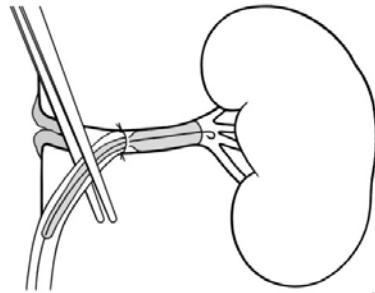
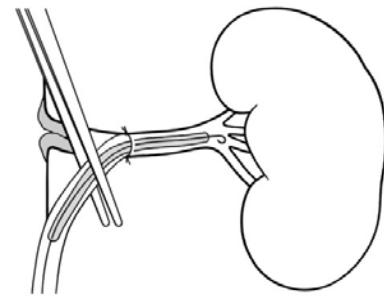


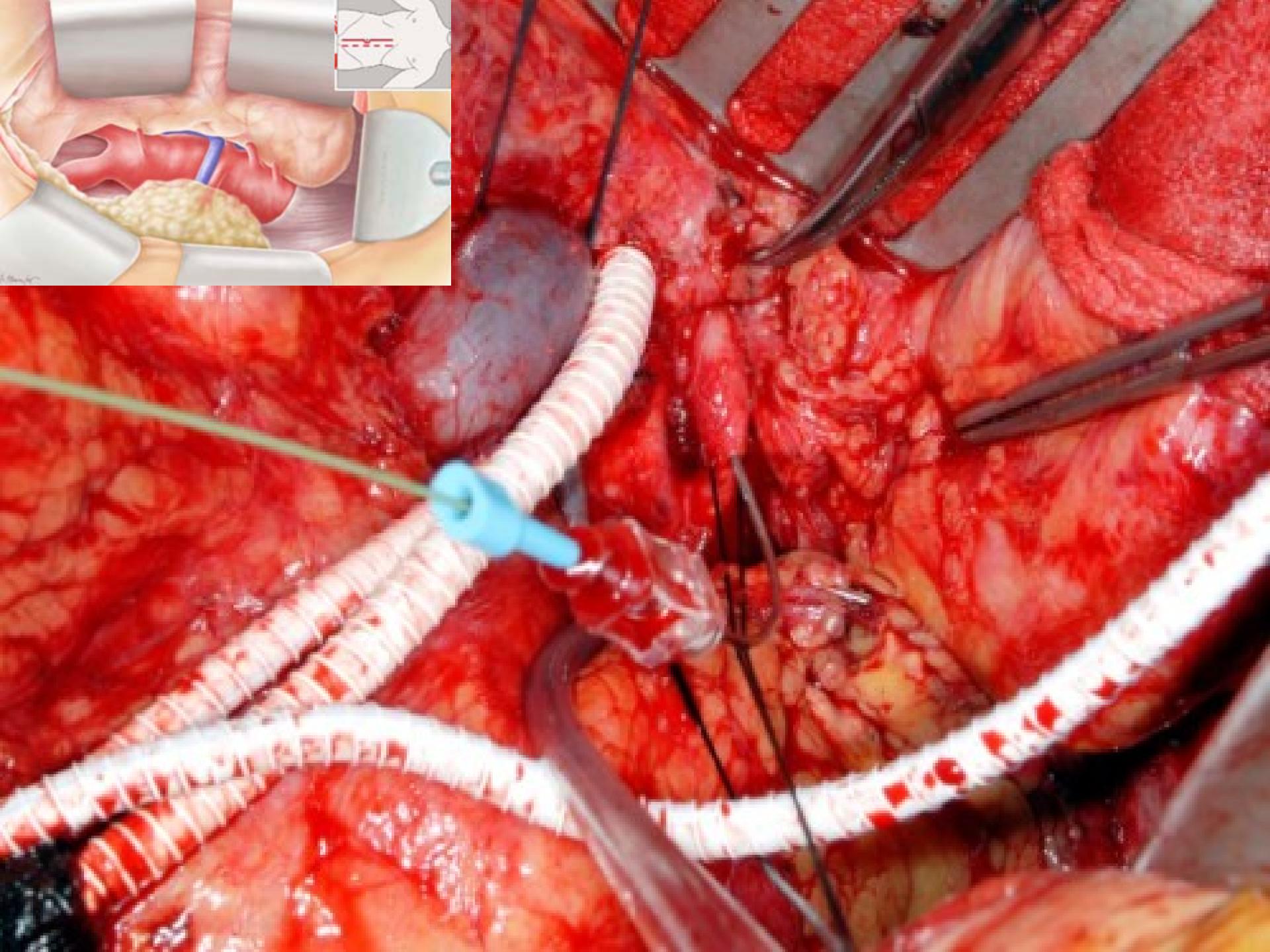
Ischemia time during  
proximal anastomosis





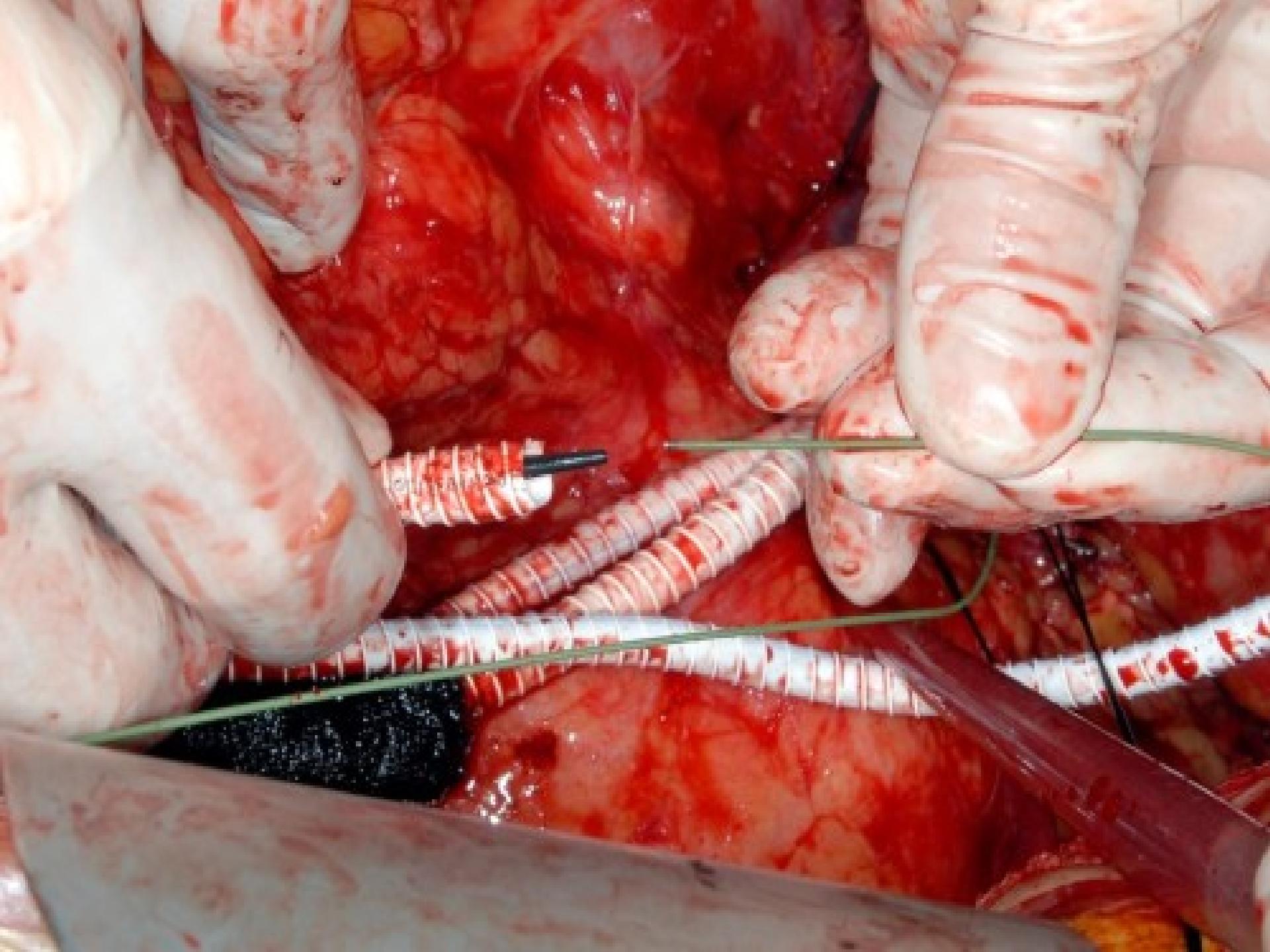


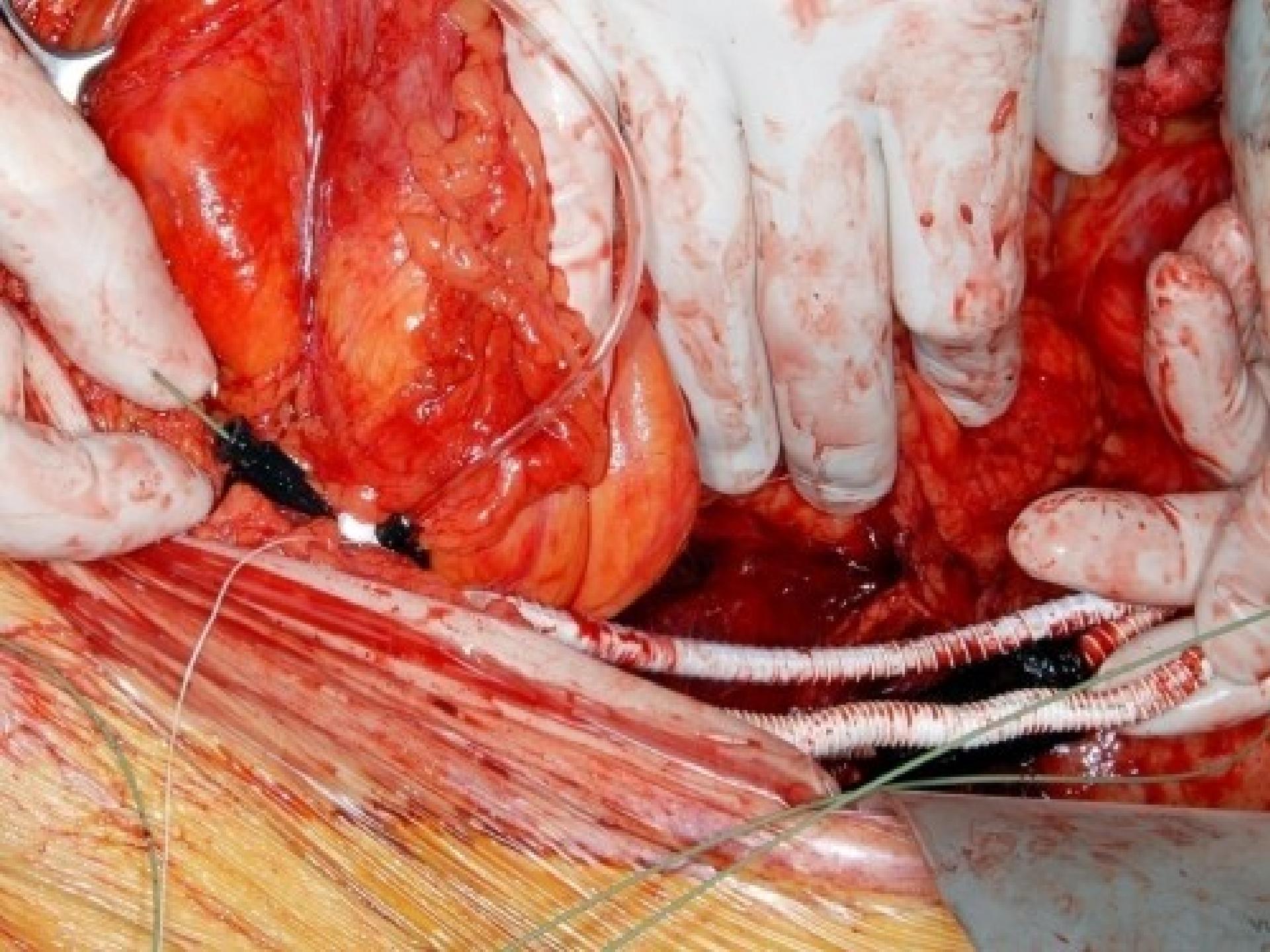


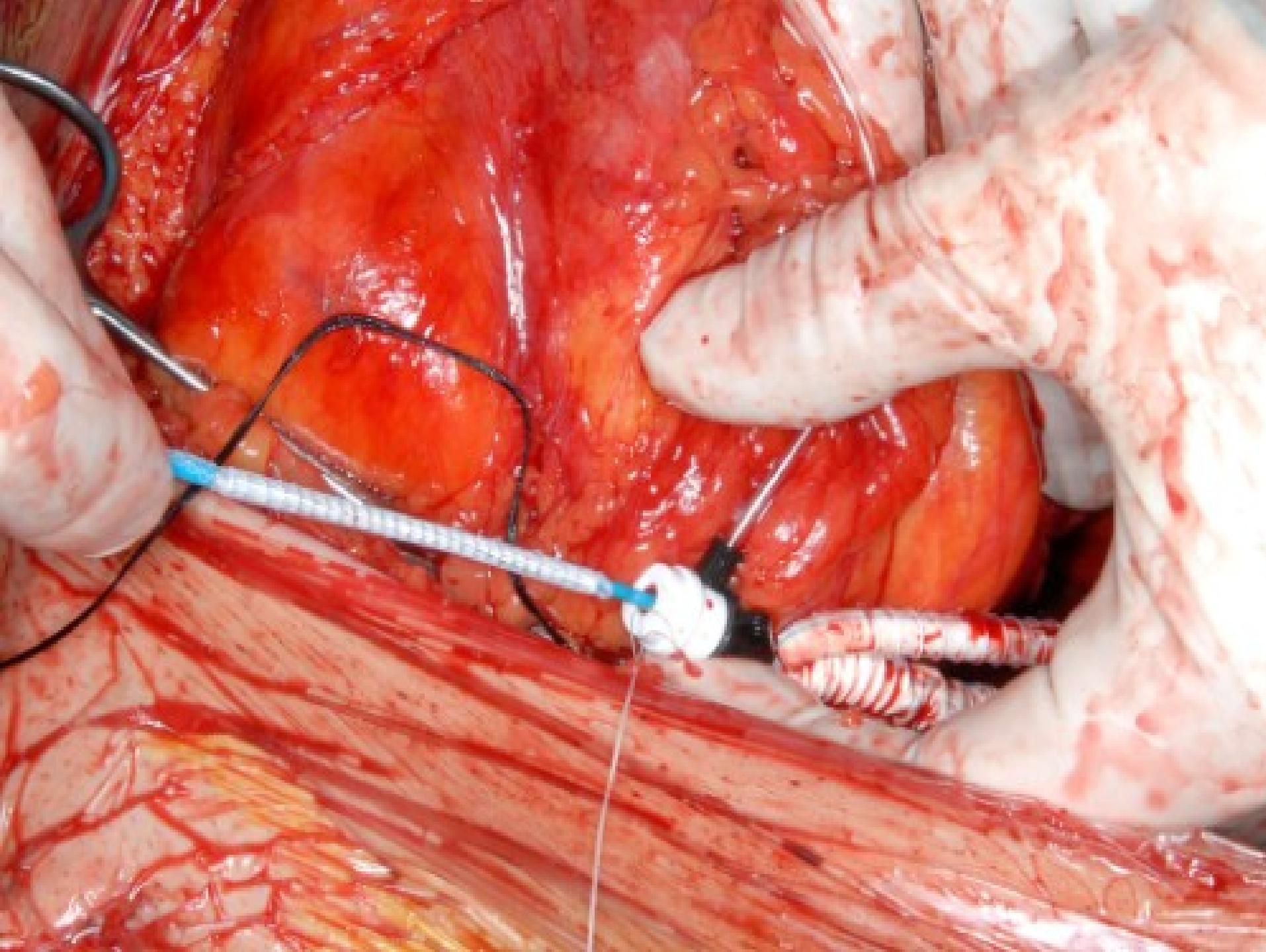


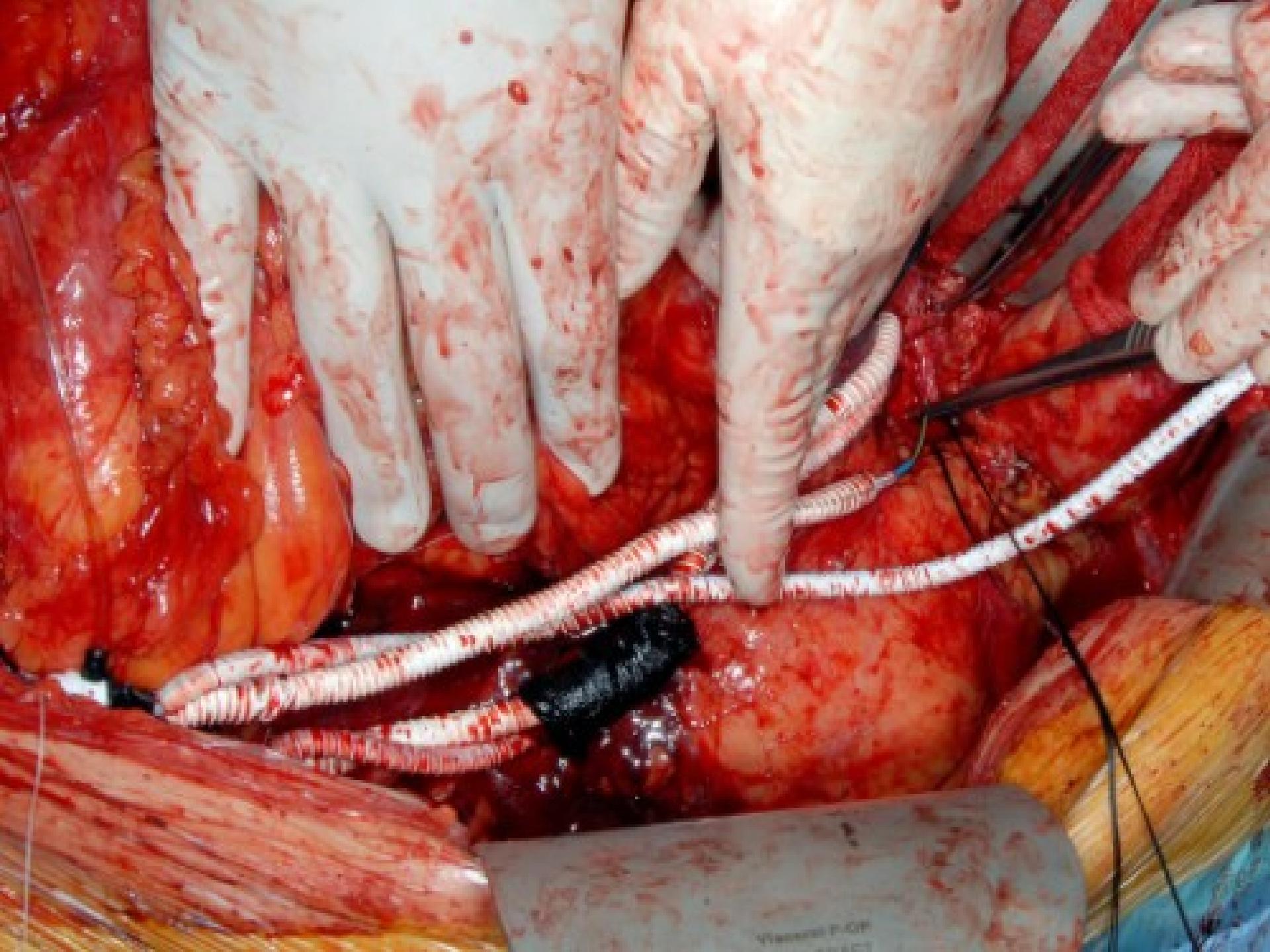
Whittier Chop  
Omn-Tract  
3773  
Pine

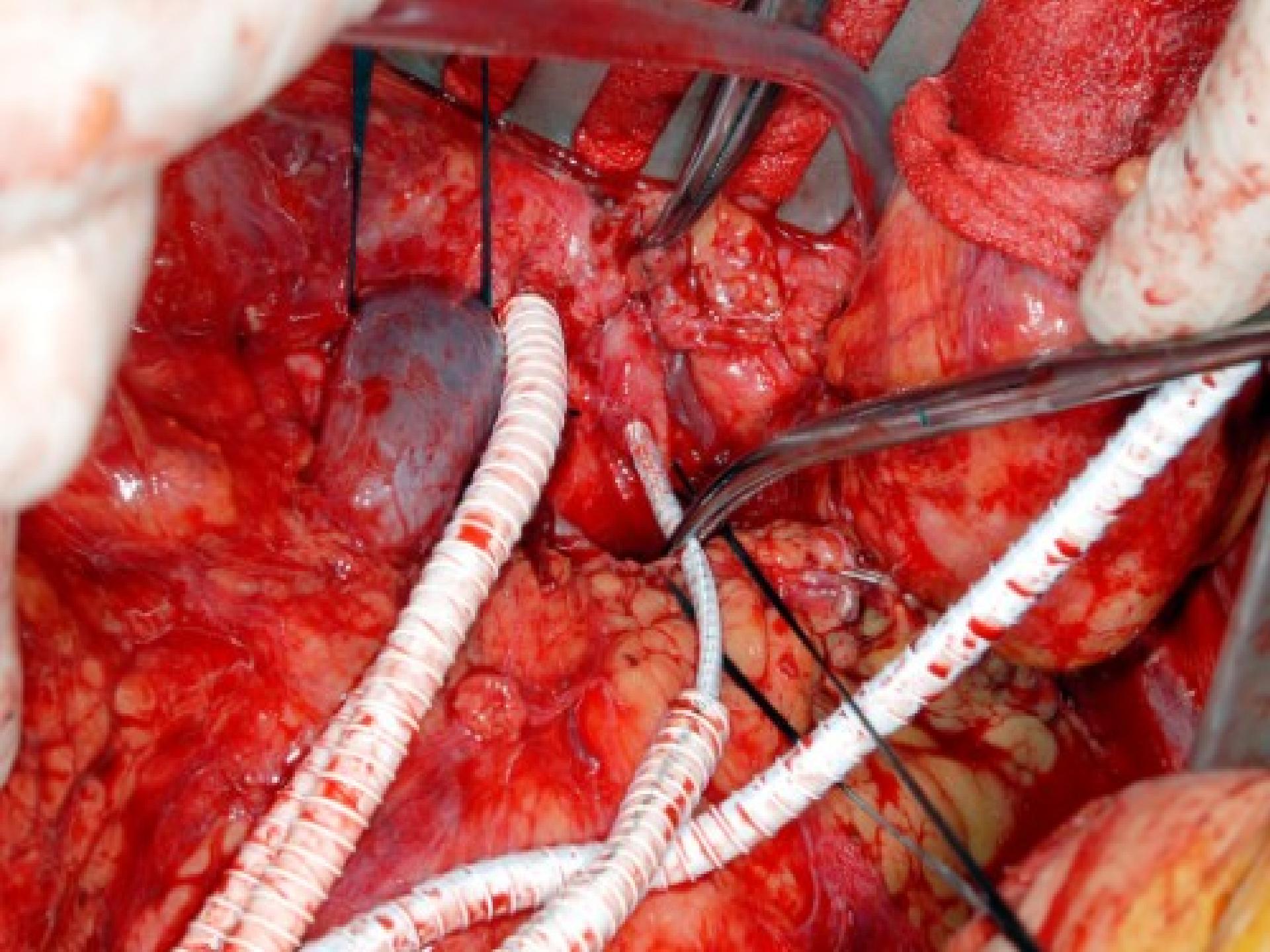


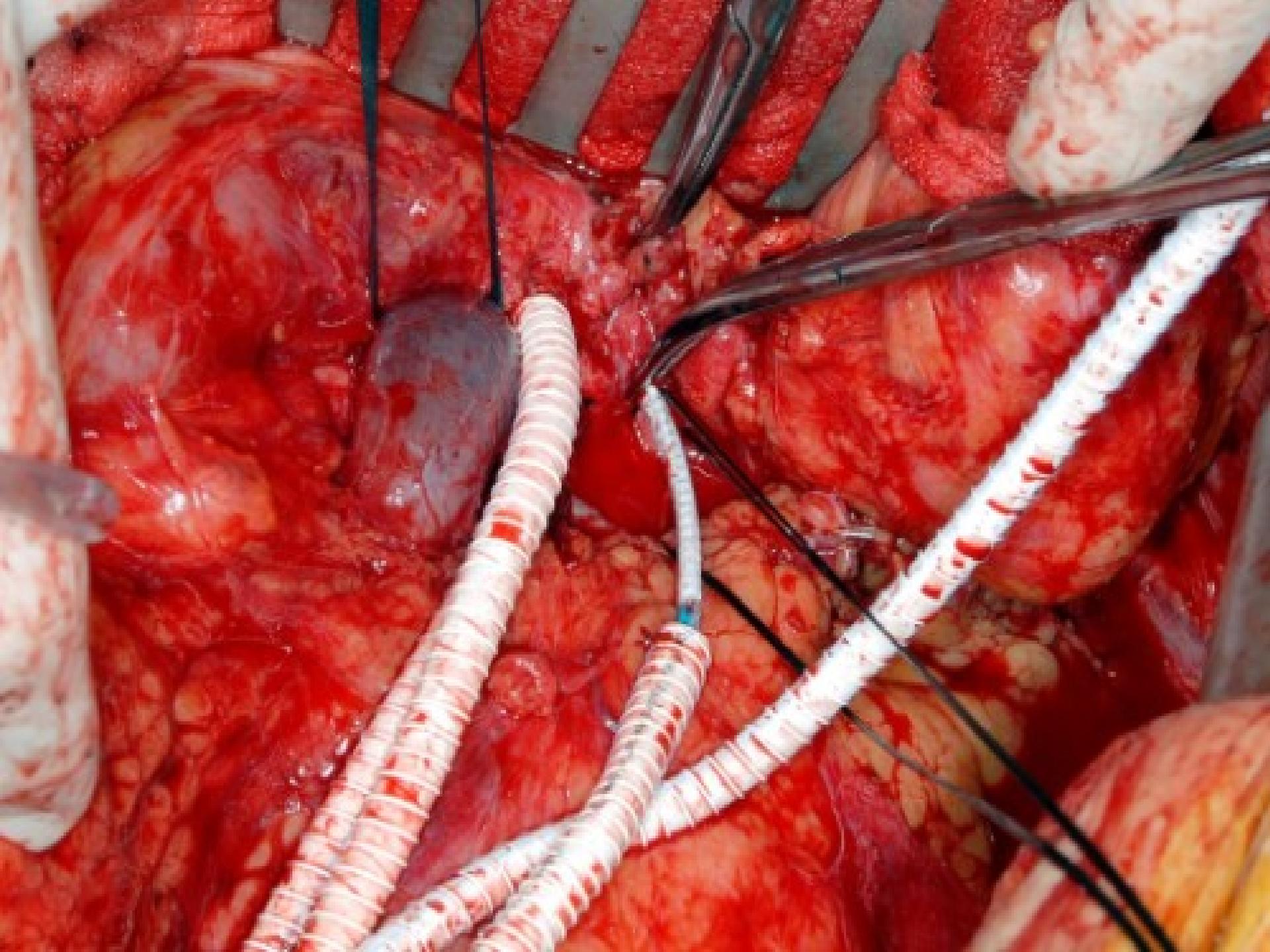


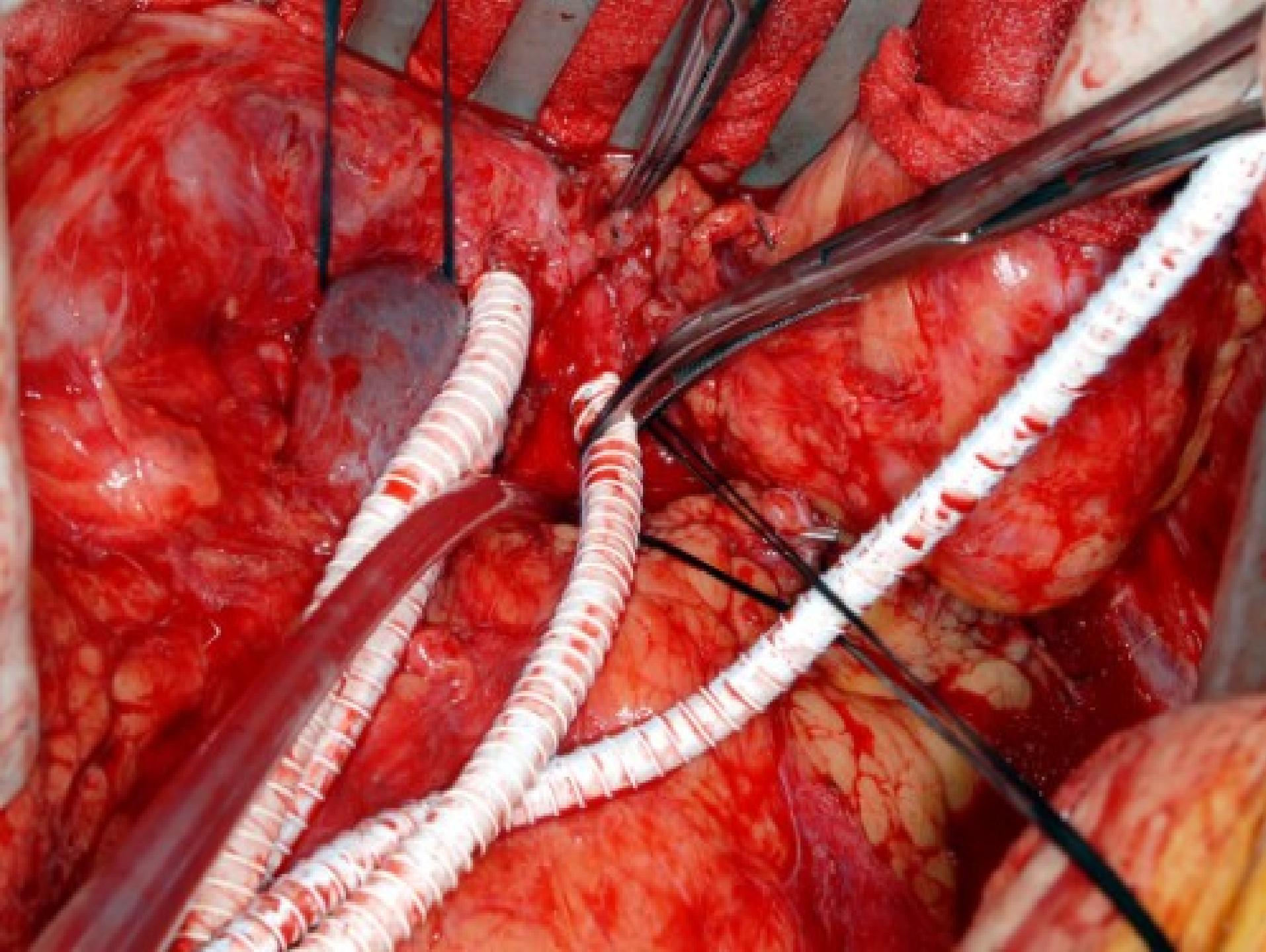


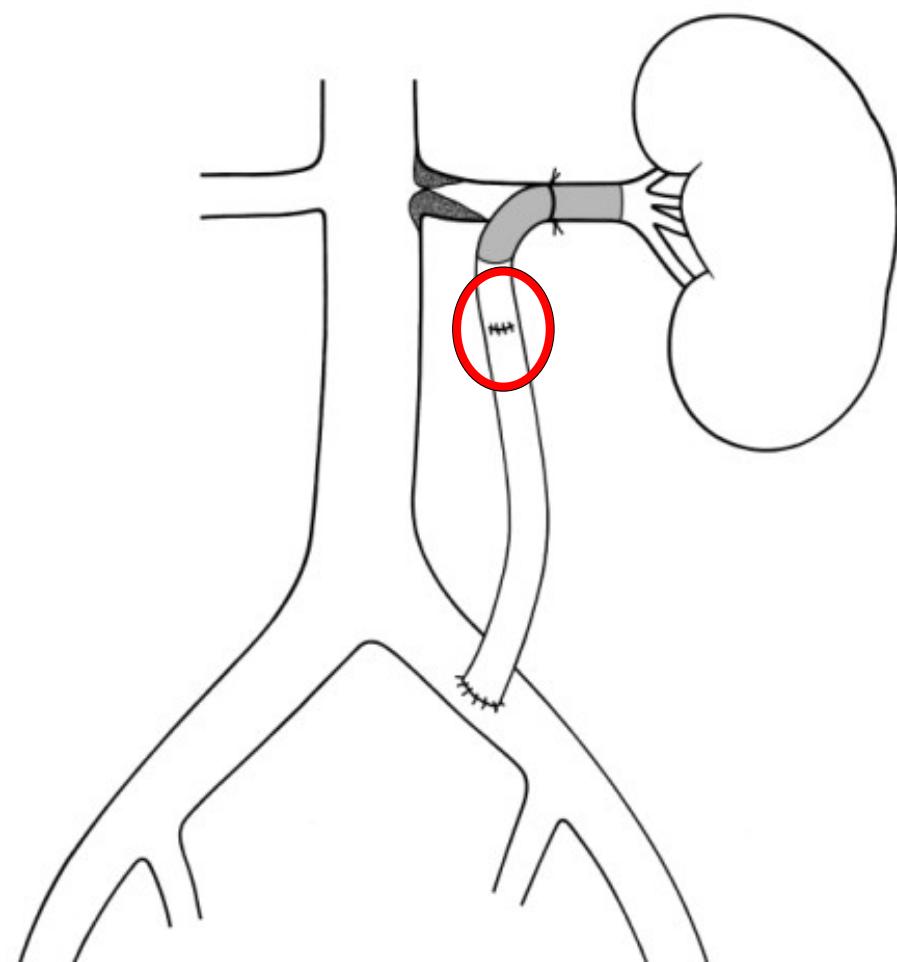
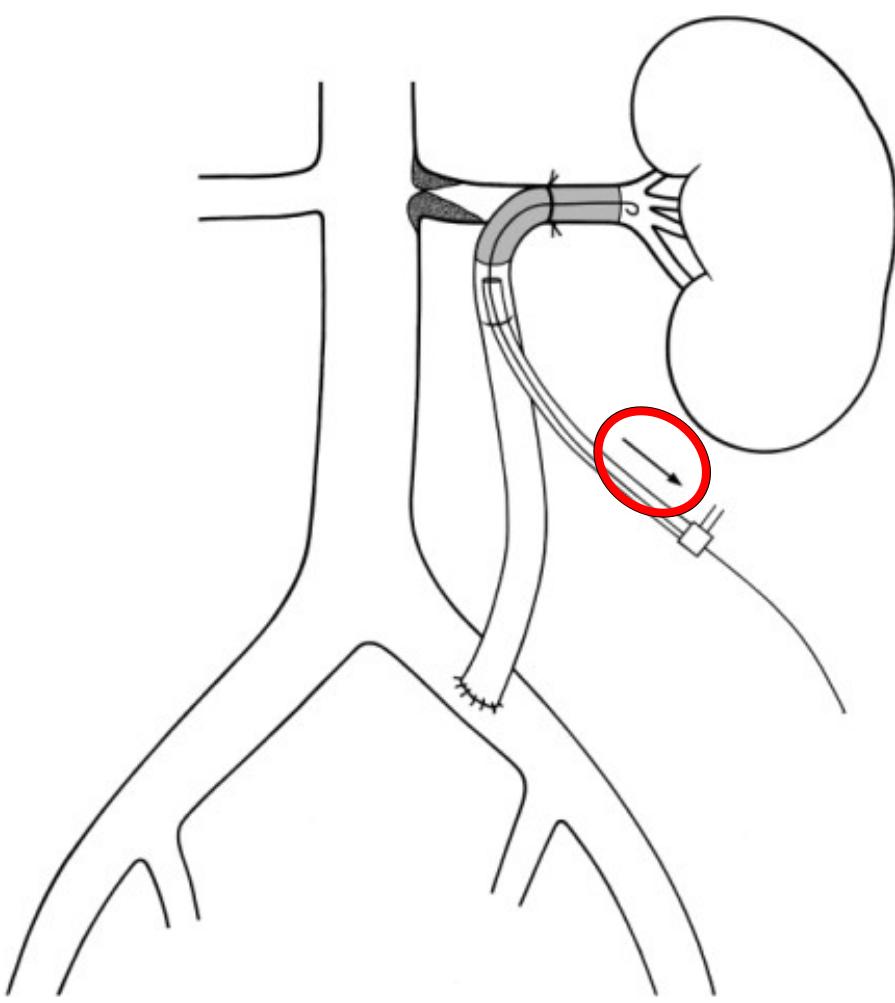


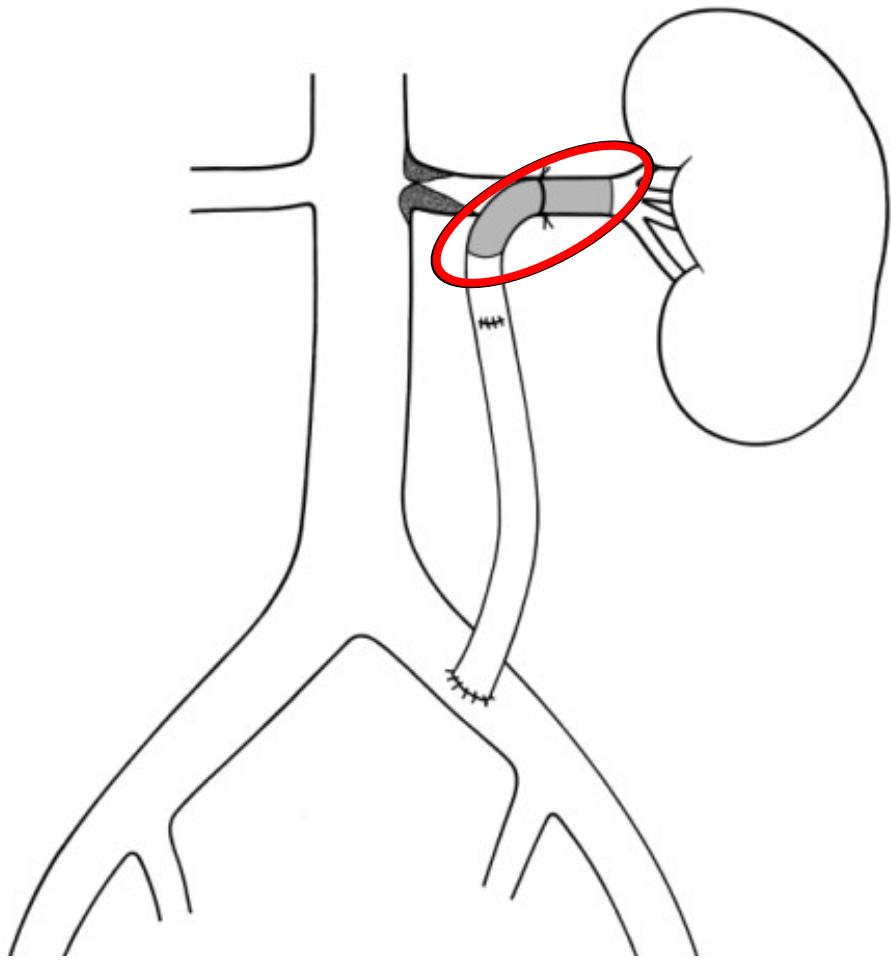






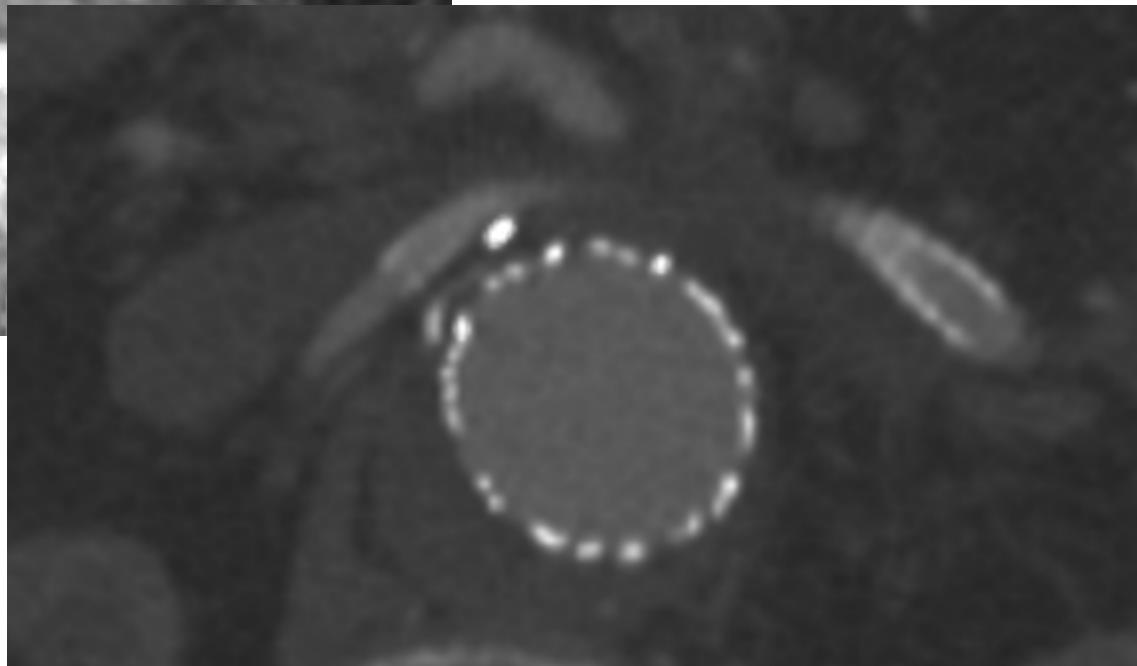
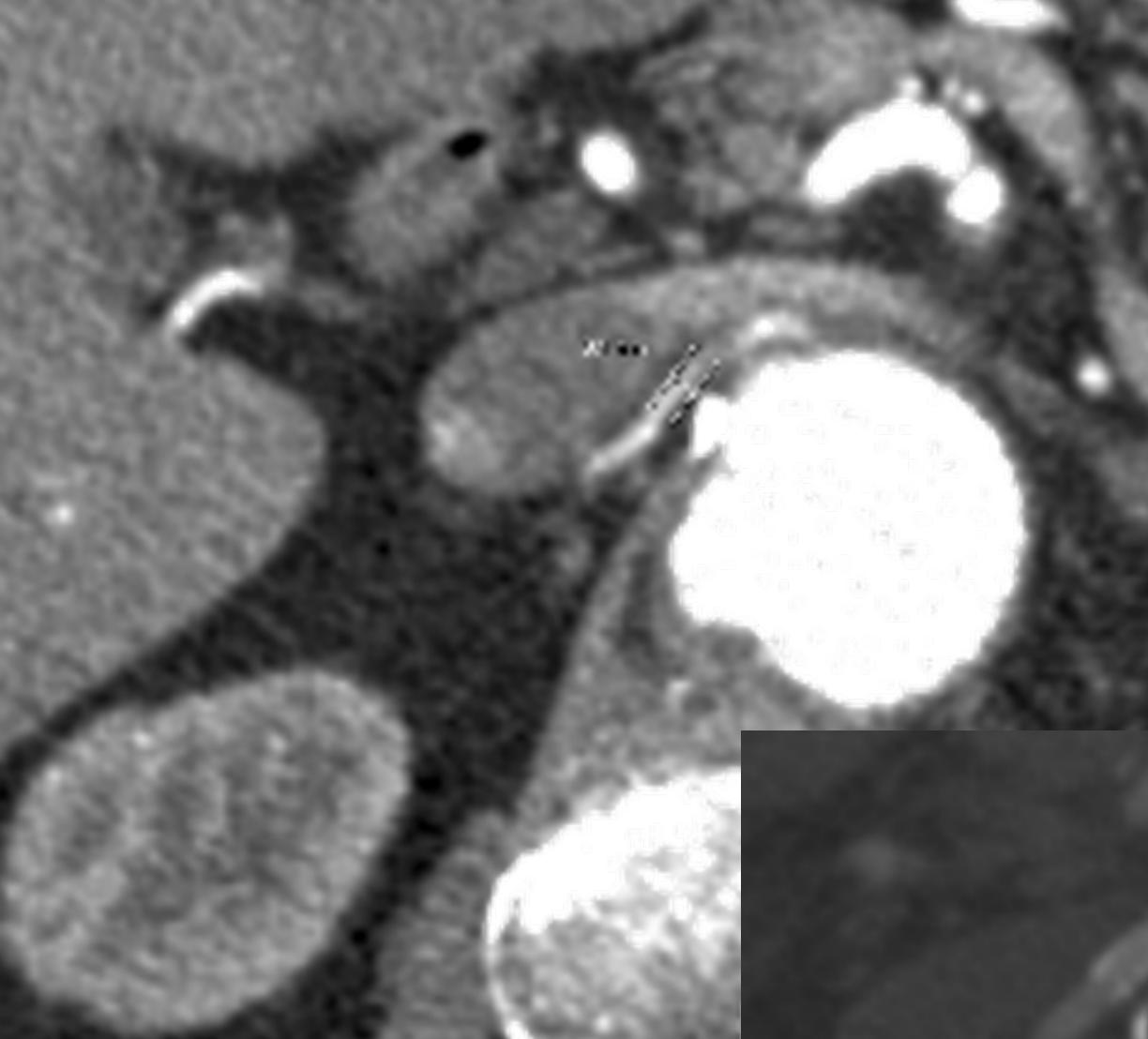




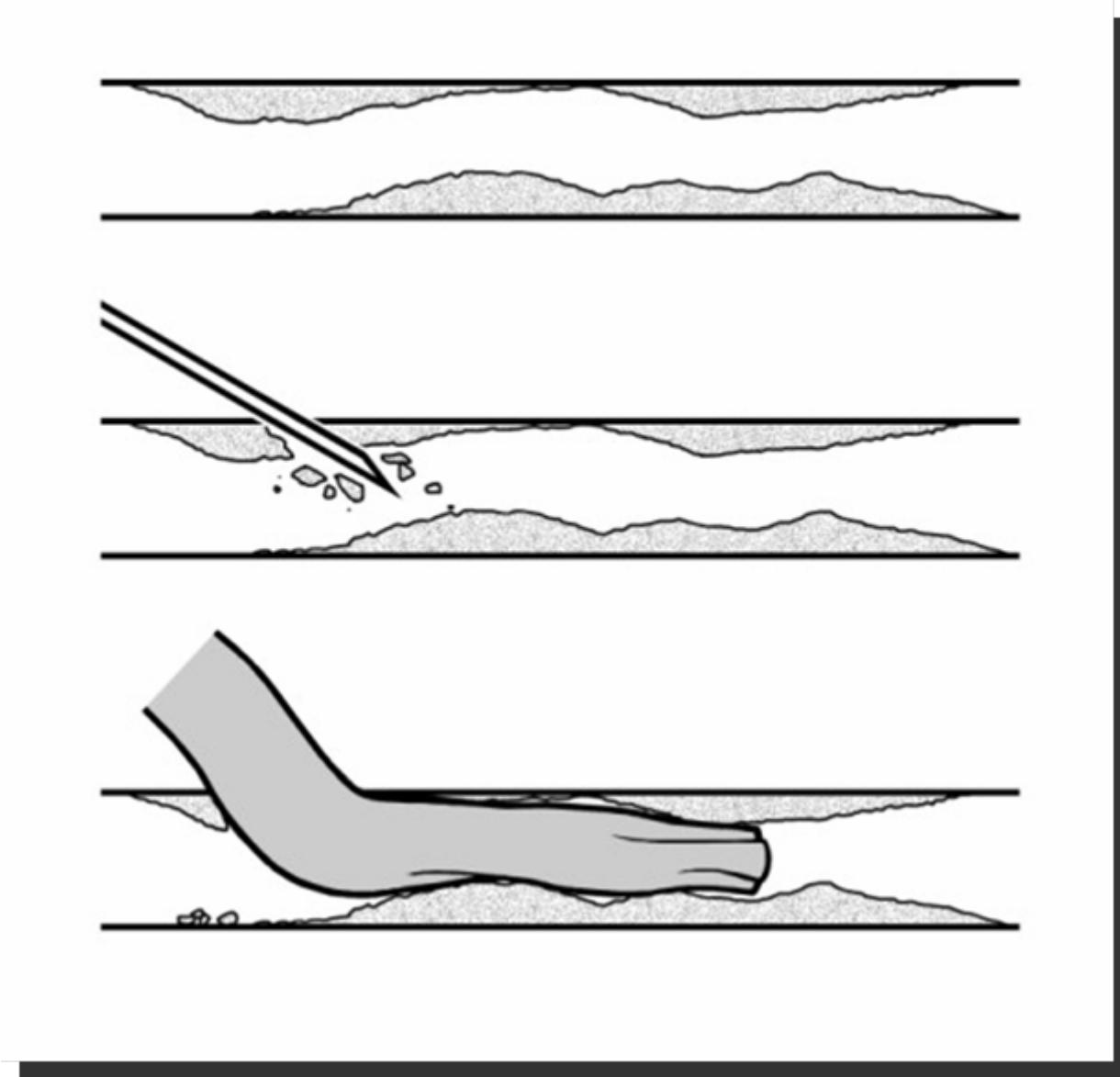


**Speedy tool to perform challenging  
branch anastomosis  
within less  
than 1' of ischemia time**

# Limitations



# Limitations

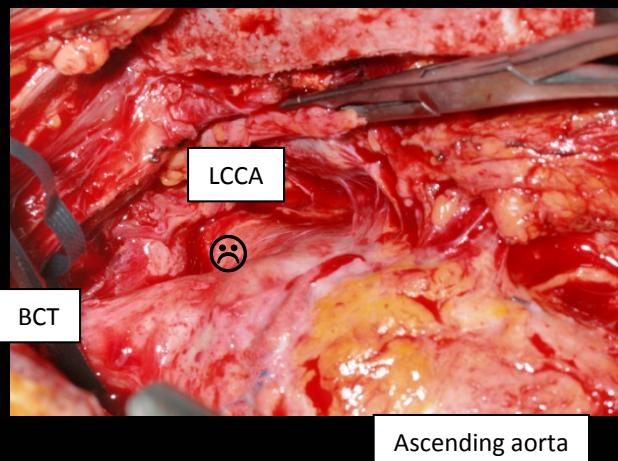
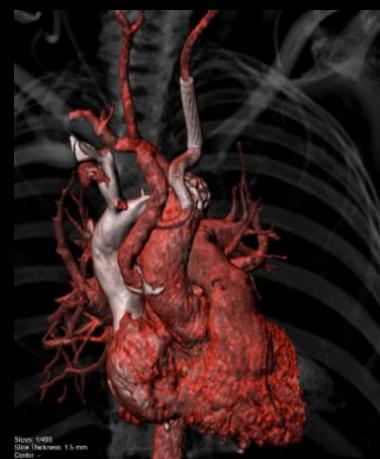
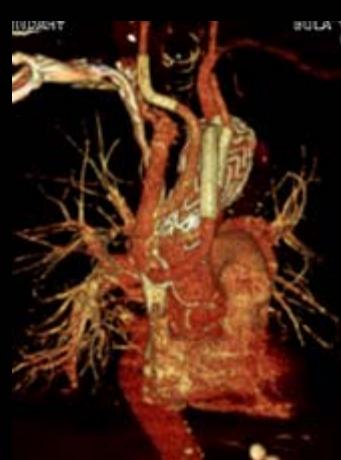


# Results

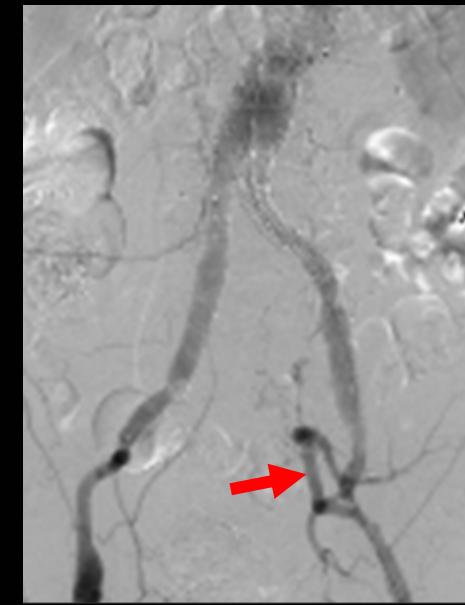
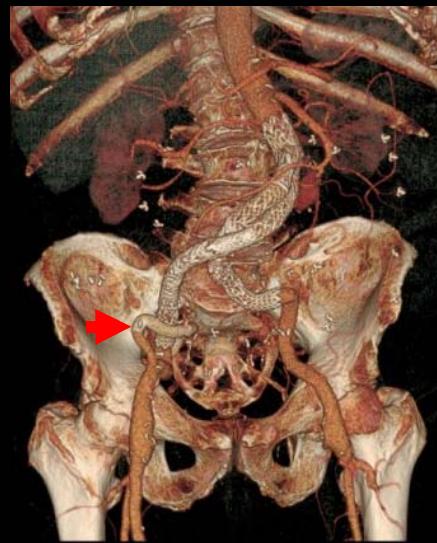
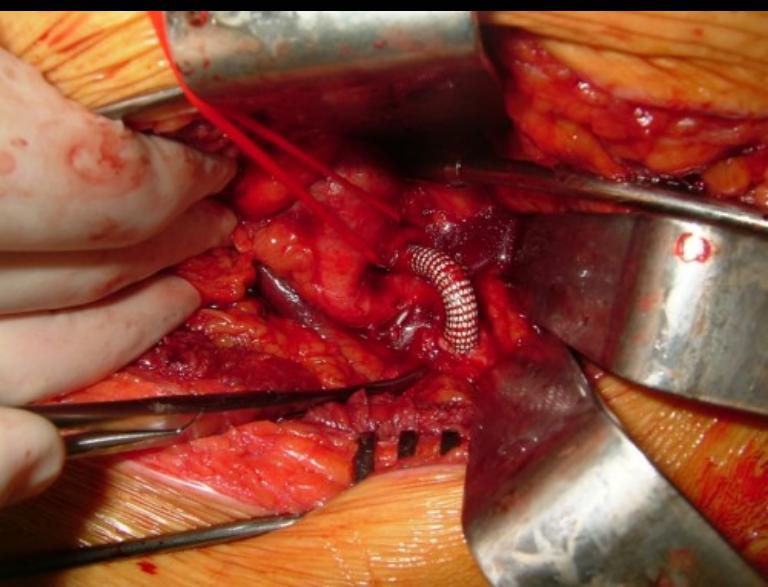
- ✓ 2002-2010
- ✓ 5 surgeons
- ✓ **Aortic branch revascularisation**
  - renovisceral (162)



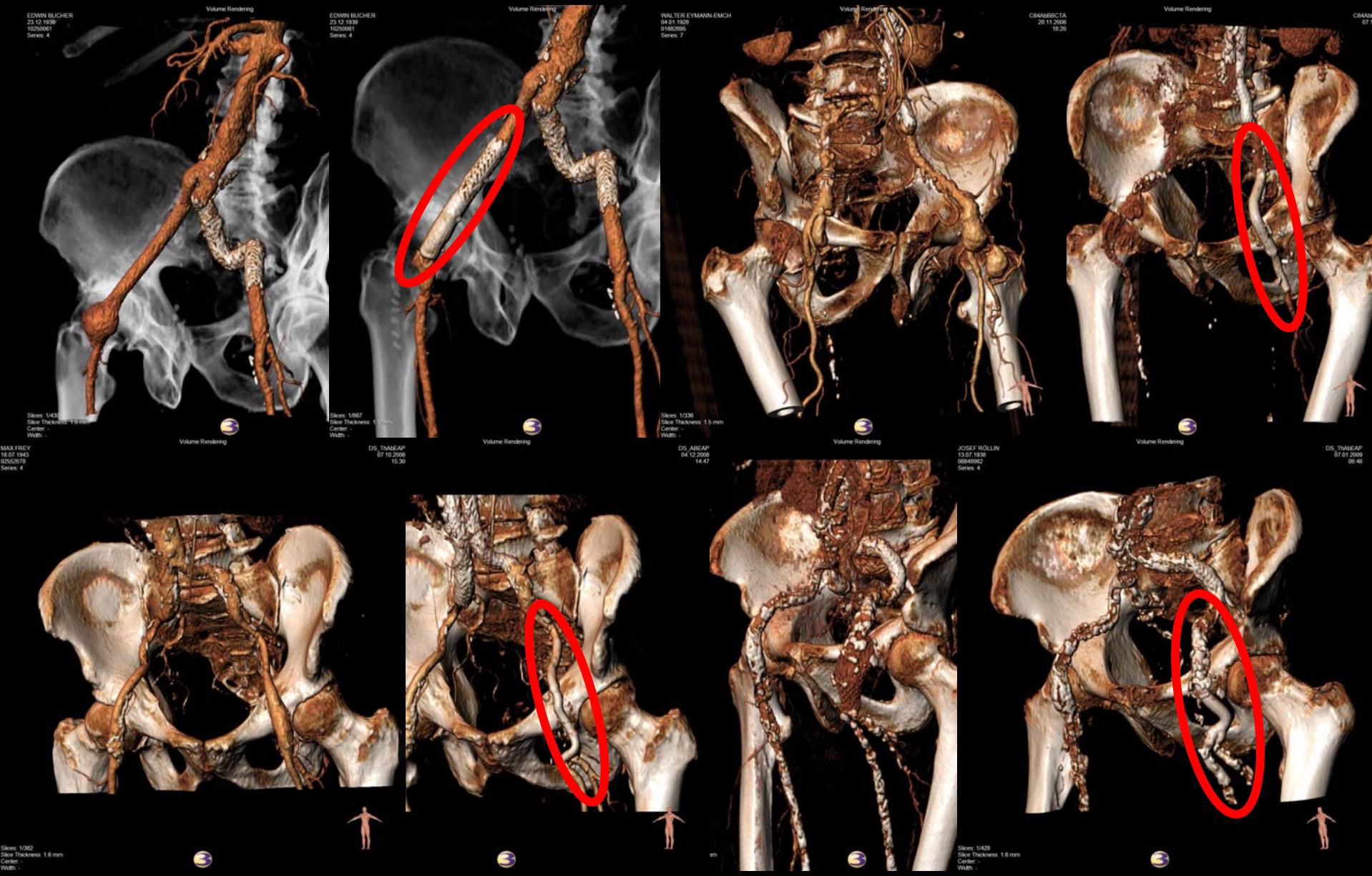
# Arch vessels (63)



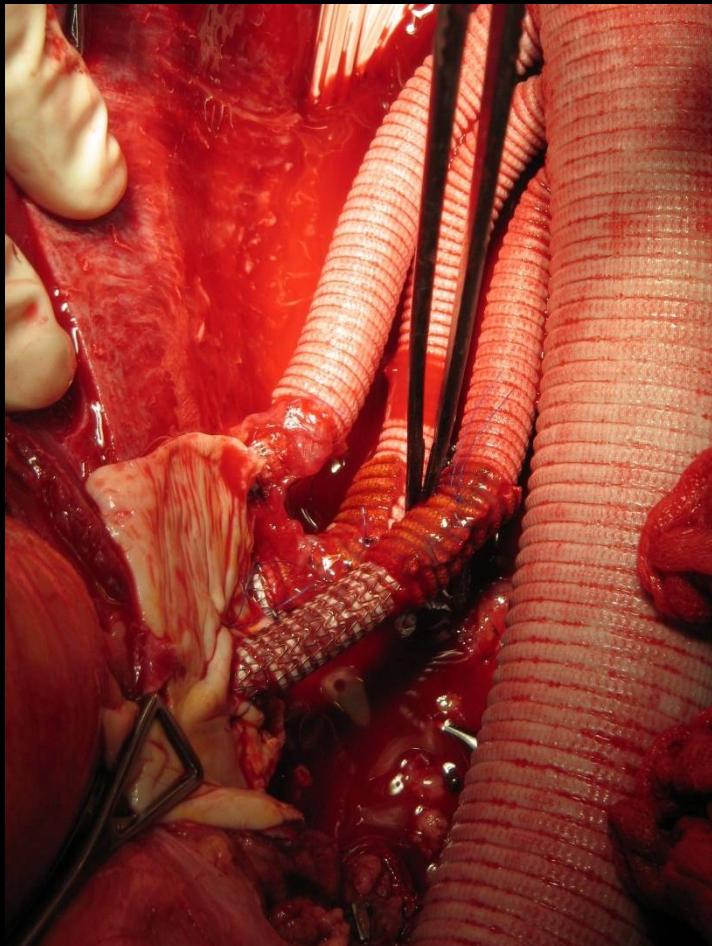
# Hypogastric artery (48)



# Iliofemoral Aneurysms (6)



NSTA  
Endoaortic (5)





# Results

- ✓ 2002-2010
- ✓ 5 surgeons
- ✓ **Aortic branch revascularisation**
  - renovisceral (162)
  - supraaortic (63)
  - iliac (48) or femoral (6)

# Results

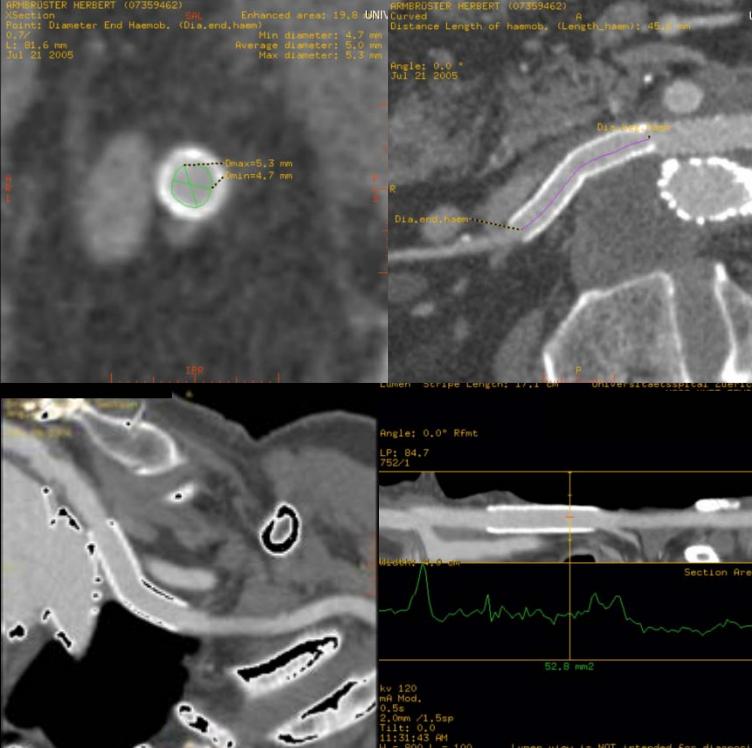
- ✓ 2002-2010
- ✓ 5 surgeons
- ✓ **279 aortic branches**
  - Immediate technical success (98%)
  - Overall mean ischemia time (< 4')

Patency rate

30-day (94%)

Long-term (91%)

# Follow-up



Point Name	Mean (mm)	Min (mm)	Max (mm)	Area (mm²)
Dia.prox.hae	9.6 ± 1.1	8.9 ± 1.1	10.3 ± 1.1	72.3 ± 17.3
Dia.beg.haem	4.5 ± 1.1	4.3 ± 1.1	4.6 ± 1.1	15.6 ± 8.5
Dia.mid.haem	4.7 ± 1.0	4.6 ± 1.0	4.9 ± 1.0	17.7 ± 8.0
Dia.end.haem	5.0 ± 1.0	4.7 ± 1.0	5.3 ± 1.0	19.8 ± 8.3
Dia.dist.hae	4.1 ± 1.0	3.9 ± 1.0	4.3 ± 1.0	13.1 ± 7.2

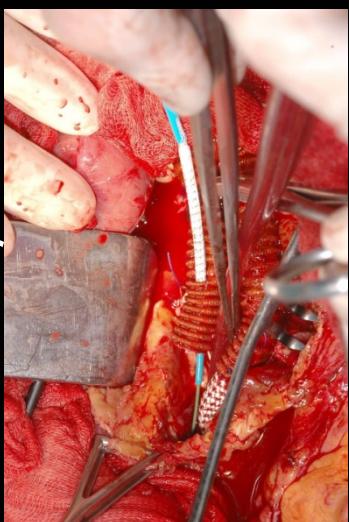
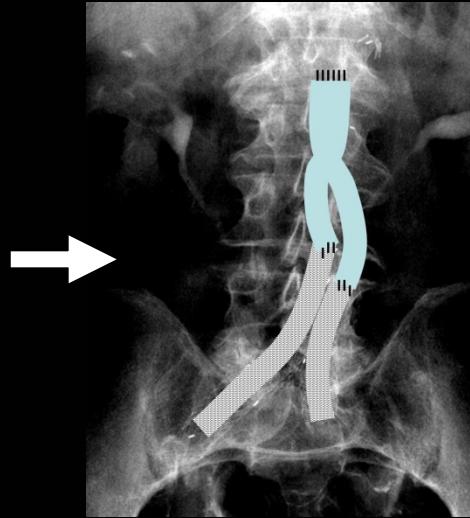
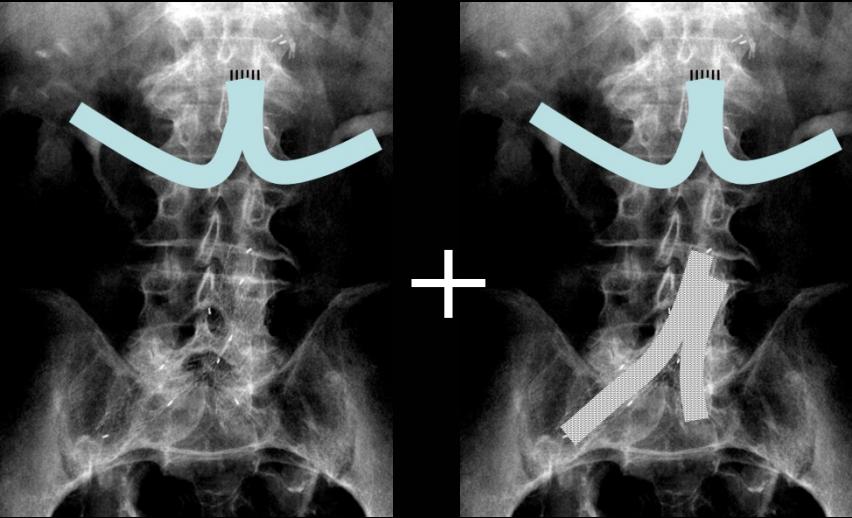


# Results

- ✓ 2002-2010
- ✓ 5 surgeons
- ✓ **279 aortic branches**
  - Immediate technical success (98%)
  - Overall mean ischemia time (< 4')
- ✓ Patency rate
  - 30-day (94%)
  - Long-term (91%)

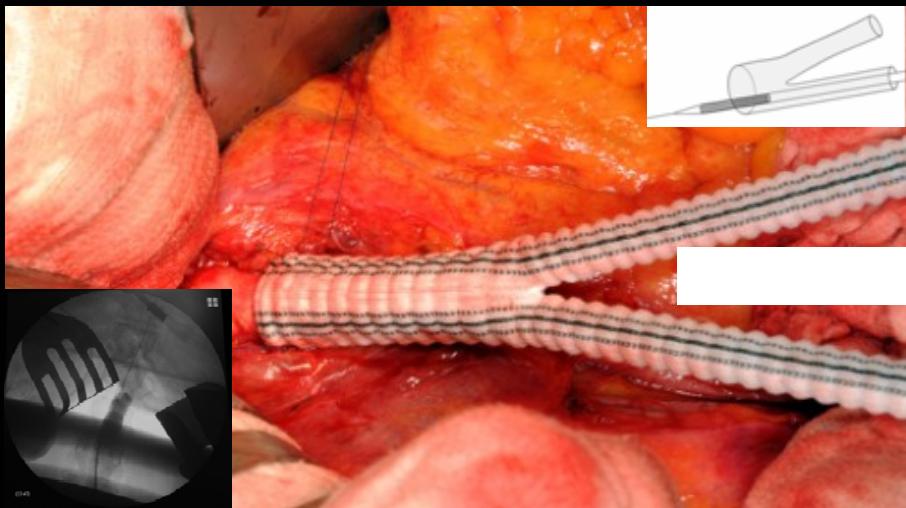
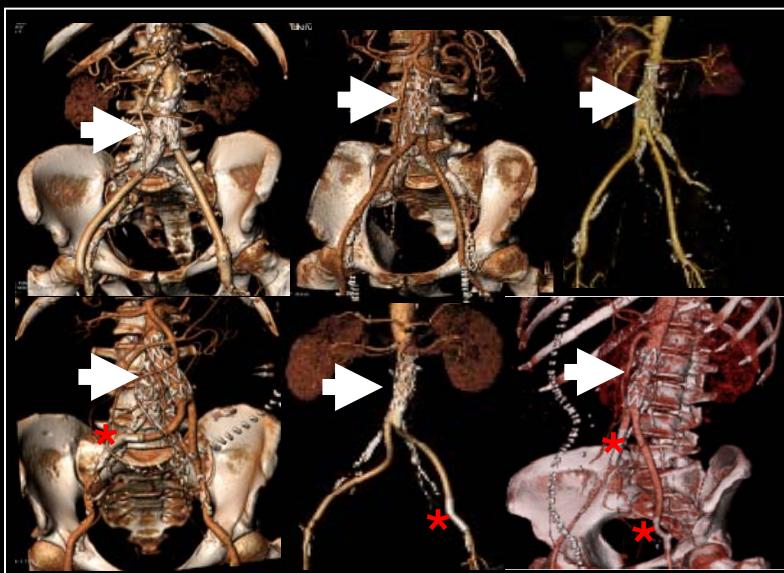
NSTA

## Hybrid grafts (13)

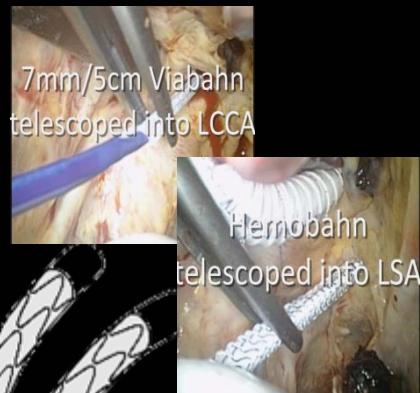
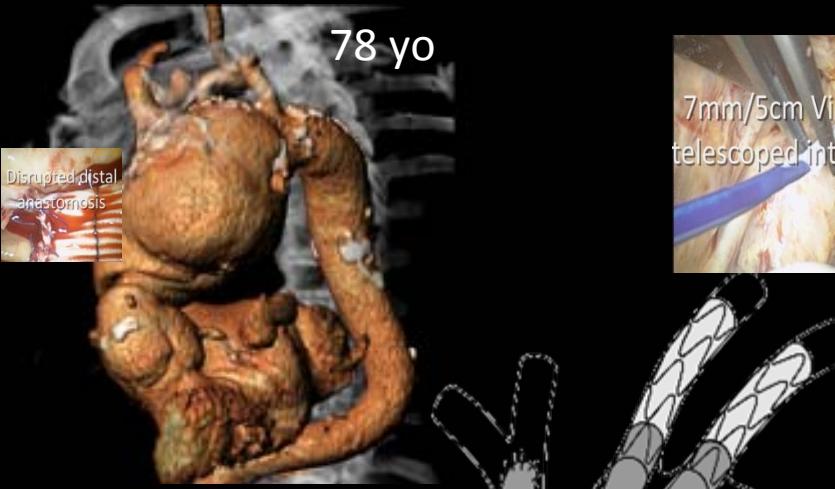


or

# NSTA AIOD (1+6)



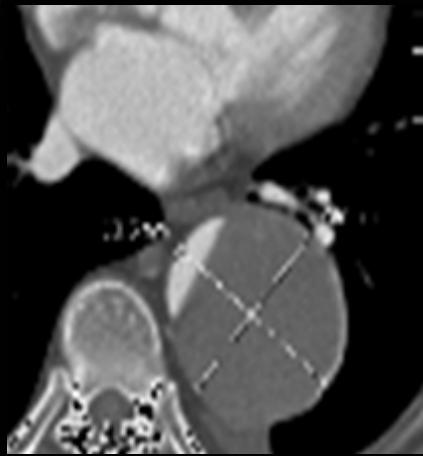
NSTA  
aortic arch (3)



Preop: arch und descending  
aneurysms

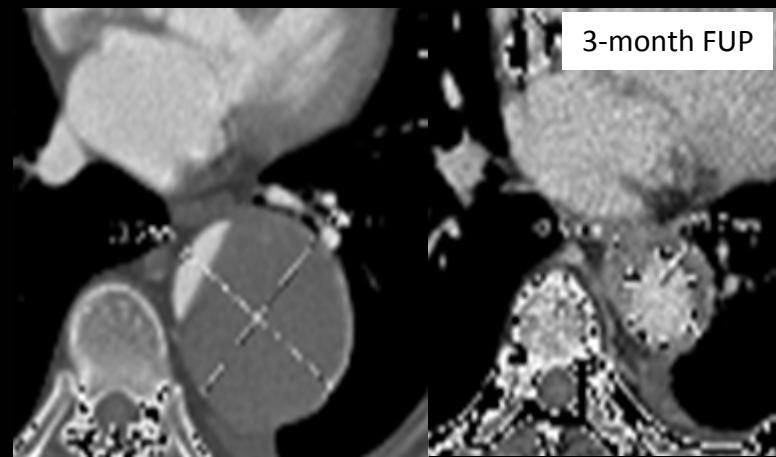
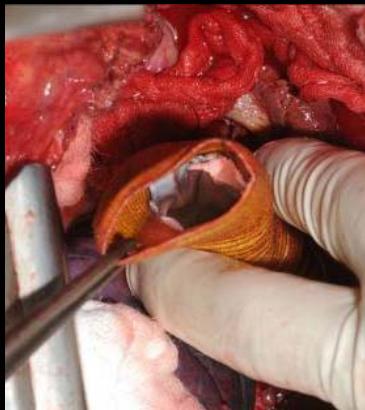
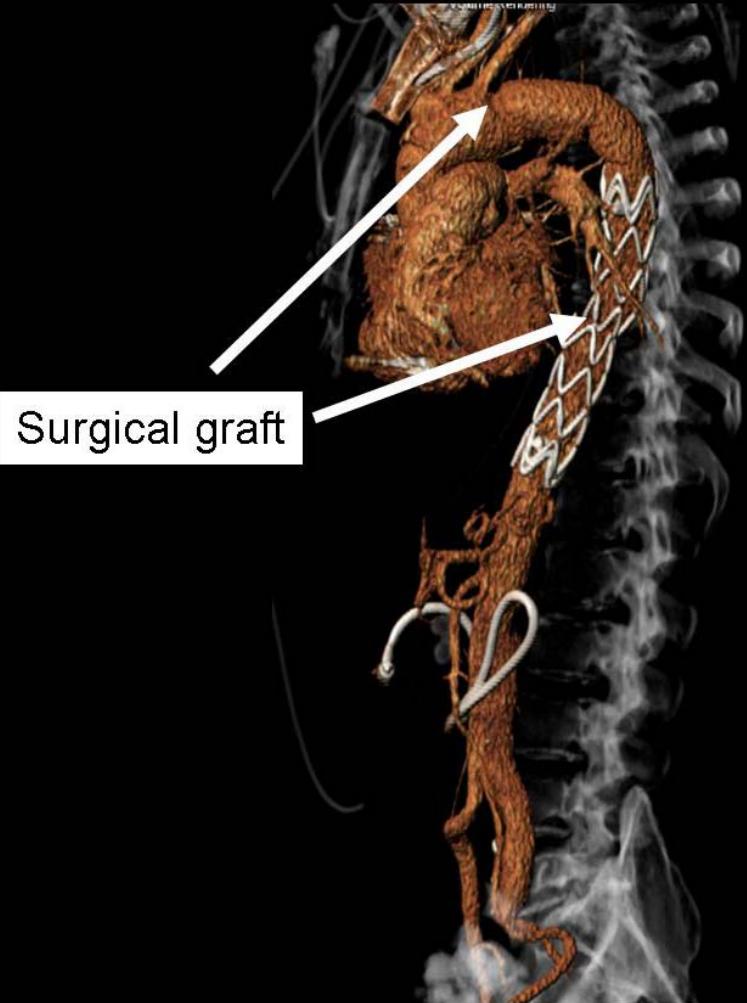
NSTA  
descending aorta (1)

True lumen collapse



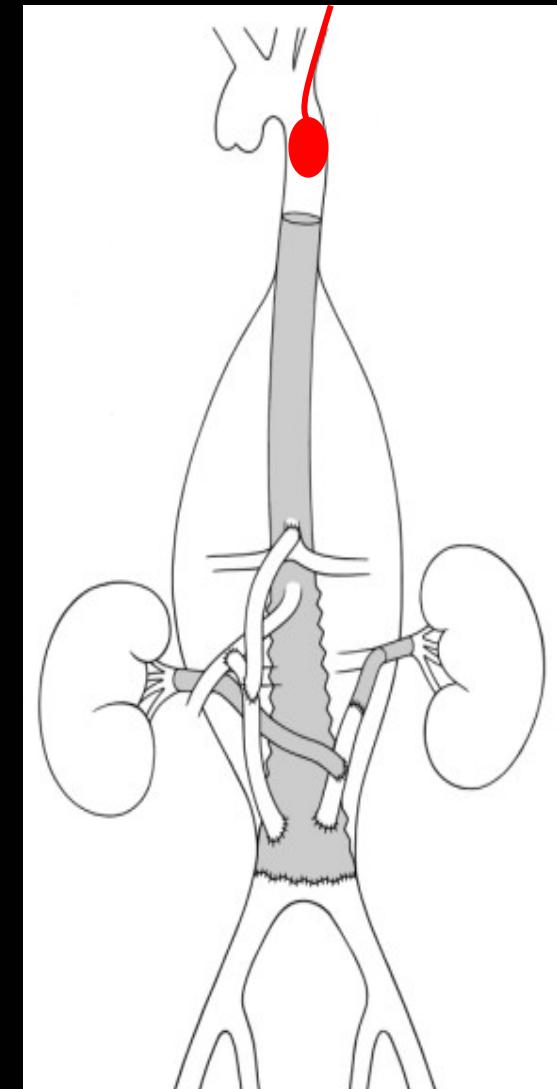
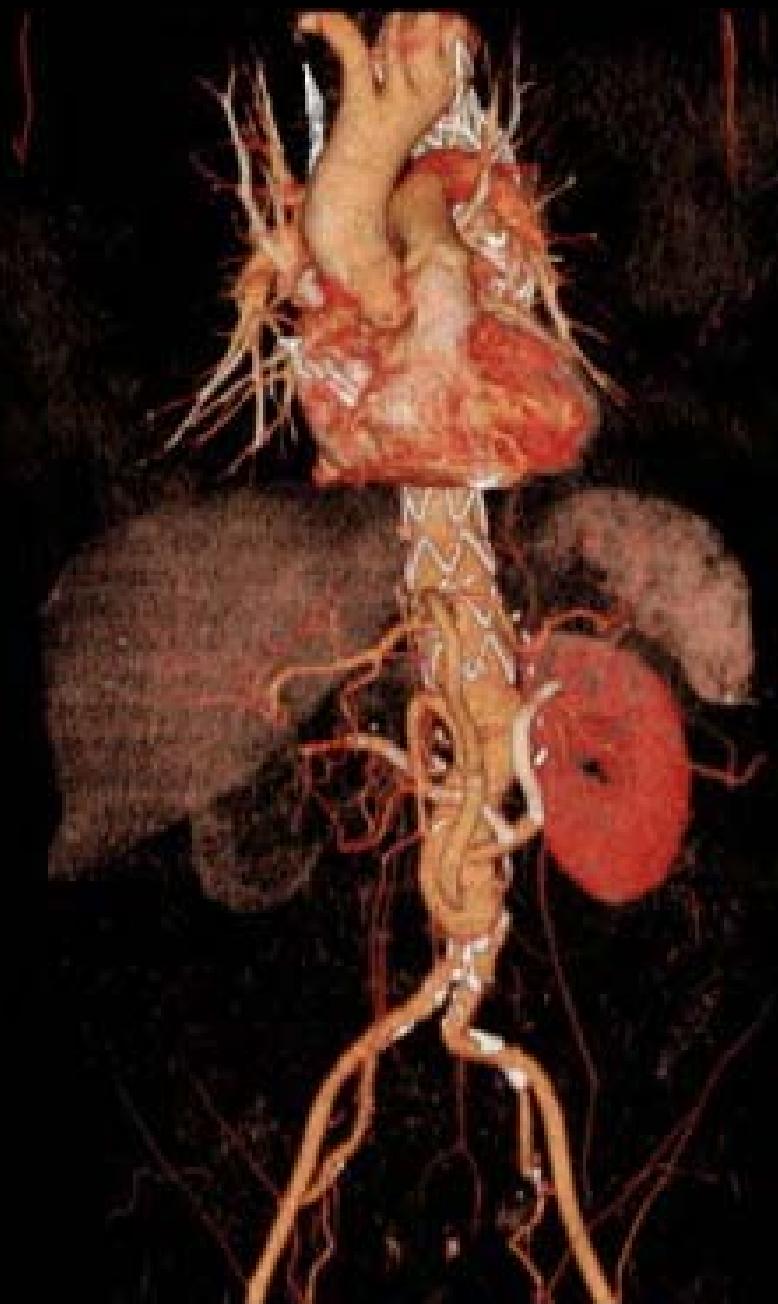
After arch repair and distal stureless  
telescoping aortic anastomosis

NSTA  
descending aorta (1)



NSTA

thoracoabdominal (1)



## **Nonsutured Telescoping Aortic Anastomotic Technique (n=11)**

- arch (n=3)
  - thoracic (n=1)
  - thoracoabdominal (n=1)
  - abdominal (n=6)
- 
- Follow-up up to 5 years

# Advantages NSTA

## □ As branch connector

- Reduces technical difficulties
- Reduces ischemia time
- No anastomotic bleeding (**0/310**)

## □ As aortic connector

- Reduces invasiveness of aortic surgery
  - Allows performing anastomosis where sutured anastomosis is not possible

## □ As «over the wire» technique

- No learning curve for endovascular surgeons

# Conclusions

## Nonsutured Telescoping Anastomotic Technique

- Allows performing aortic or branch vessels anastomosis without clamping or circumferential dissection
- Shows excellent early and long-term results

# Thank You!

