MEET 2014
MULTIDISCIPLINARY EUROPEAN
ENDOVASCULAR THERAPY

Thoracoabdominal Branch Repair

Tim Resch MD
Vascular Center
Skåne University Hospital
Sweden

BUILDING ENDOVASCULAR SYNERGIES

MEET 2014
MULTIDISCIPLINARY EUROPEAN ENDOVASCULAR THERAPY

Faculty disclosure

Tim Resch

I disclose the following financial relationships:

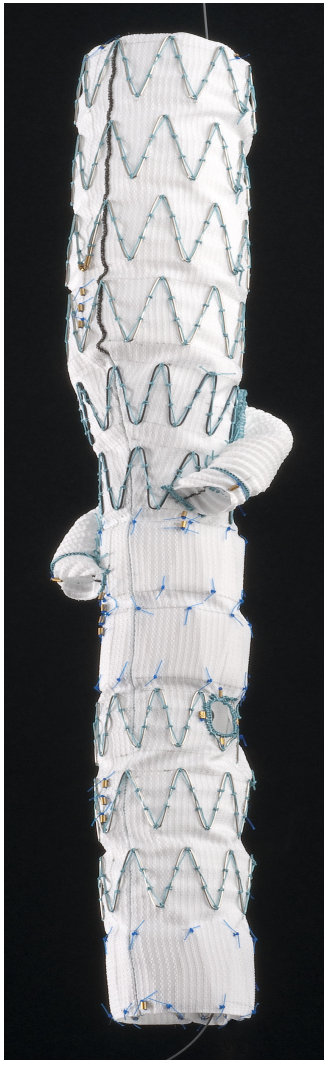
Consultant for COOK Medical

Receive grant/research support from COOK Medical

Advisory board of COOK Medical

Paid speaker for COOK Medical

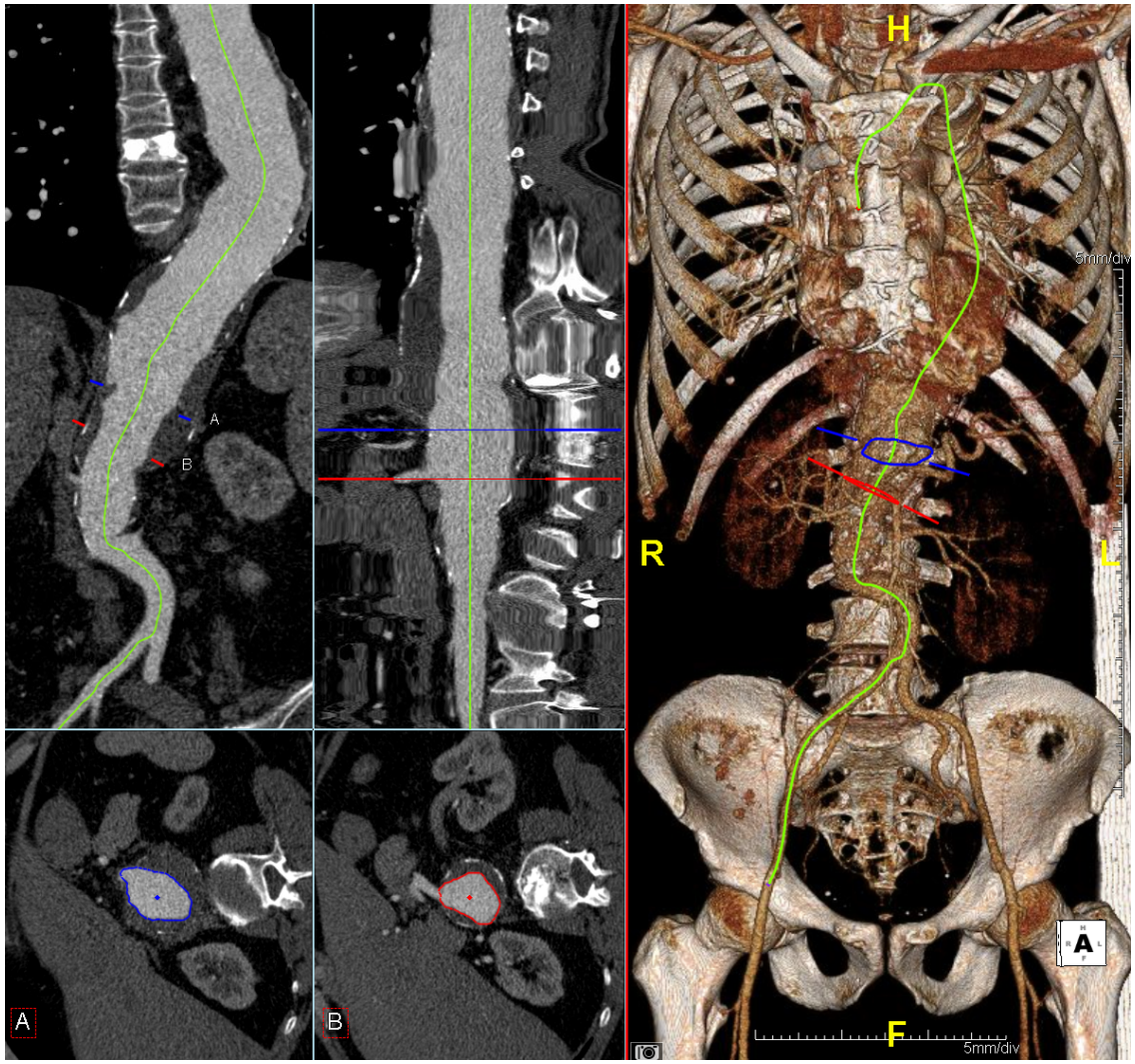
Concepts: Branches



- May be coupled with fenestrations
- Requires “reasonable” rotational orientation
- Placed >1.5cm above target vessel
- Proximal and distal length required for overlap

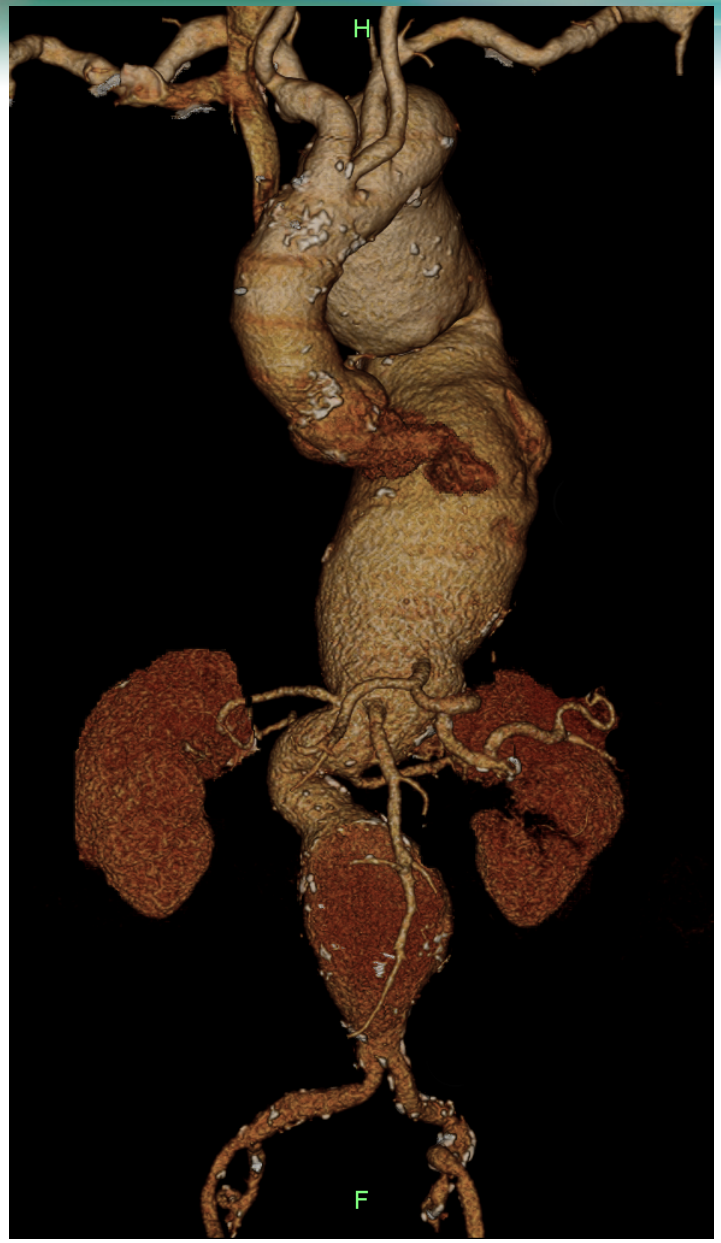
Imaging and Planning

- Preoperative 3D Imaging is critical
- Properly timed contrast bolus
- High-resolution reconstruction
  - Z-plane resolution
- Understanding of device deployment



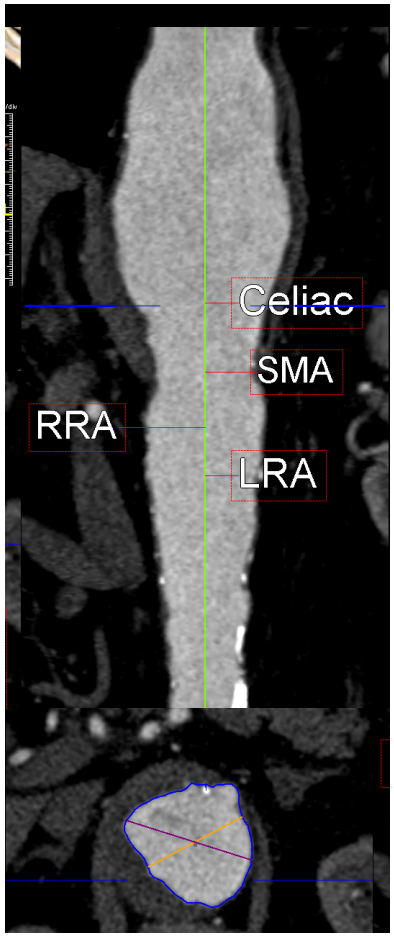
Considerations

- Proximal landing zone
- Distal landing zone
- Ability to incorporate branches
- Adequate access vessels
- Anatomy of Target vessels

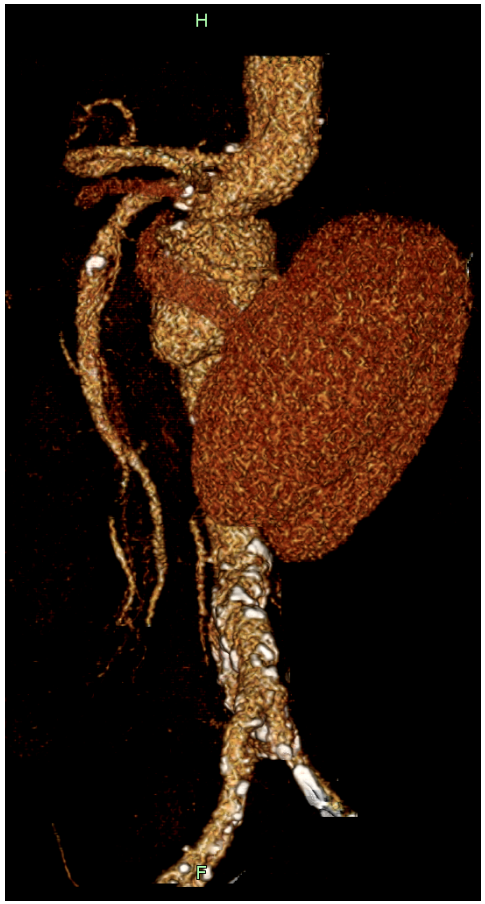


Branches Versus Fenestrations

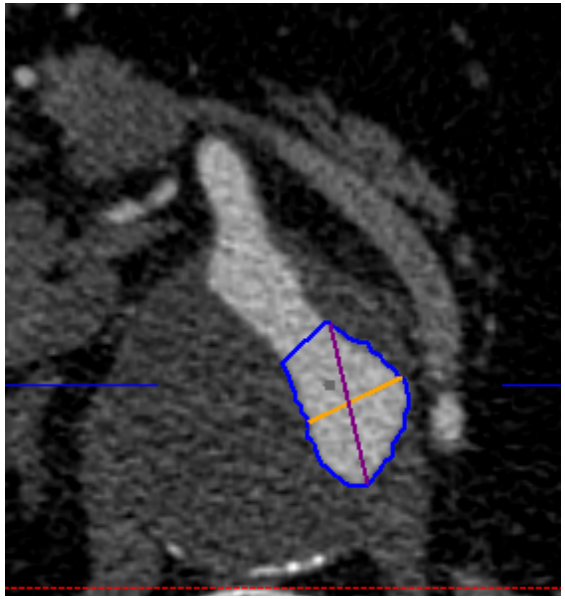
Clearly Branch



Clearly Fenestration

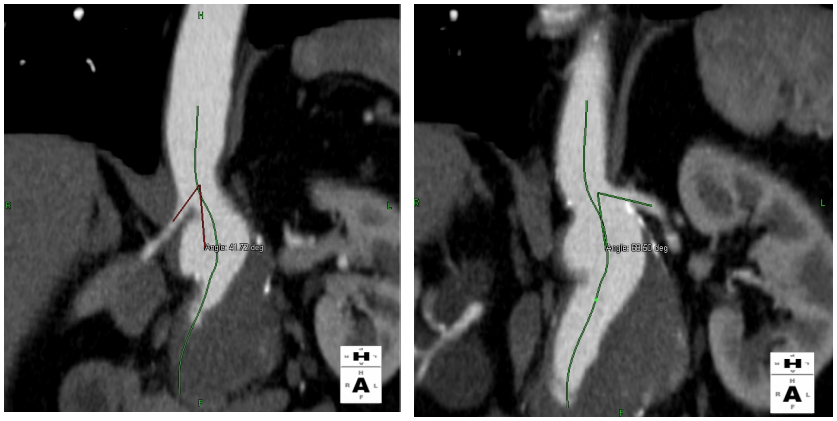


Clearly In-between

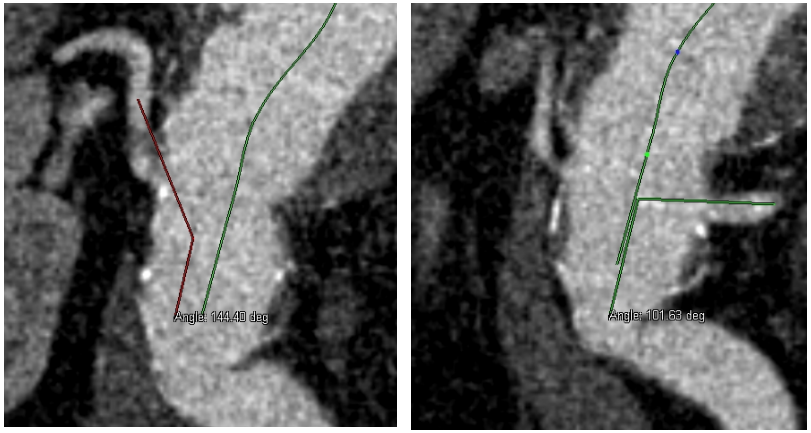


Branch – Aortic Geometric Interface

Crainocaudal

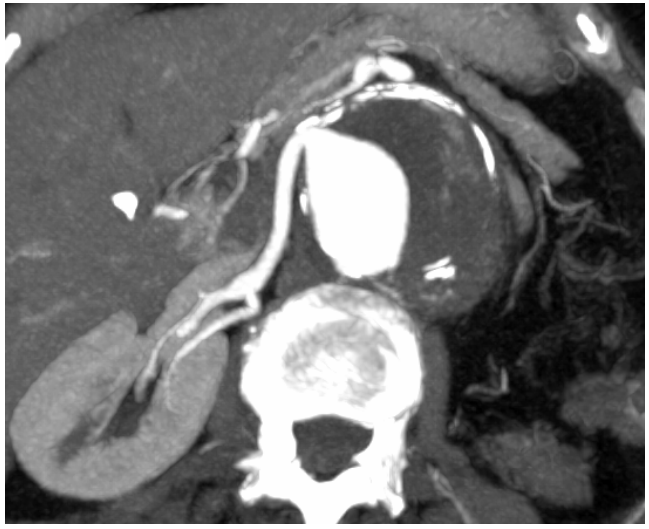


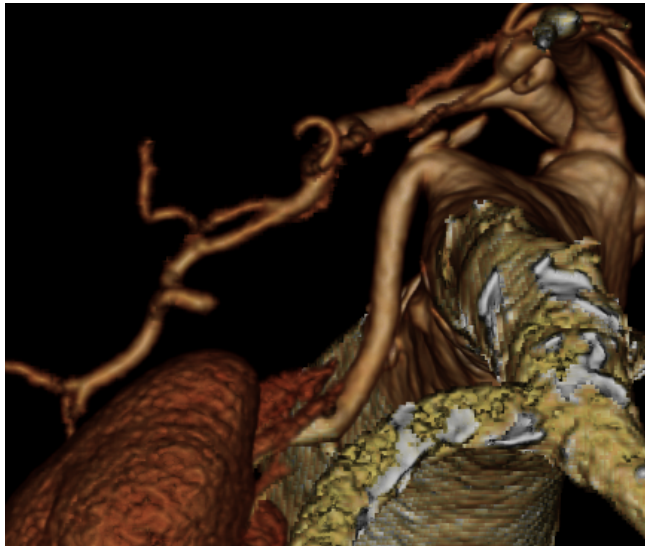
Type IV TAA



Type II/III TAA

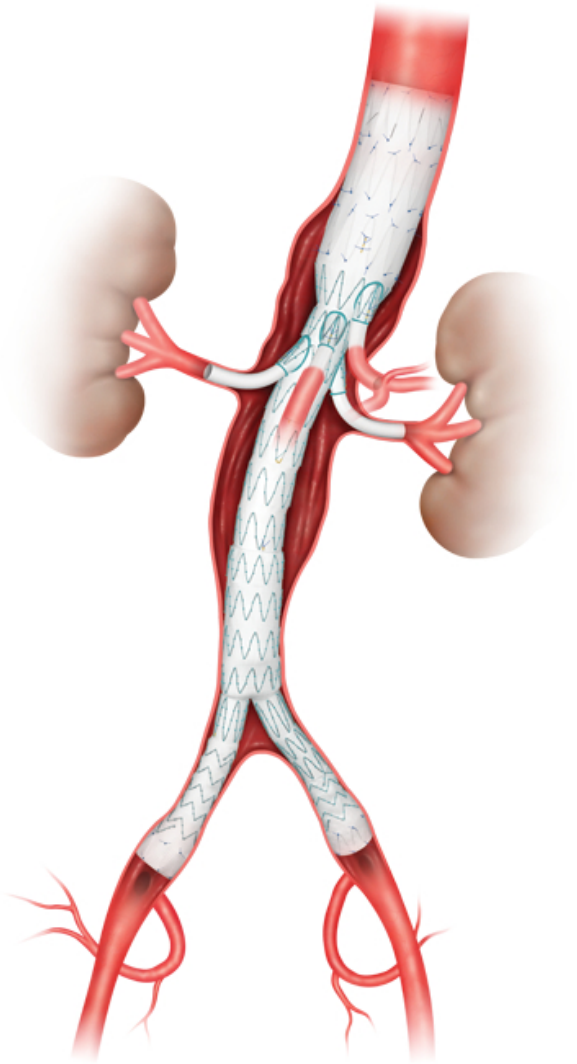
Ant-Post





Zenith tBranch

- Standard 4 Branch Component
- Bifurcated Unibody
- Proximal and Distal Components Standard



Branches vs. Fenestrations

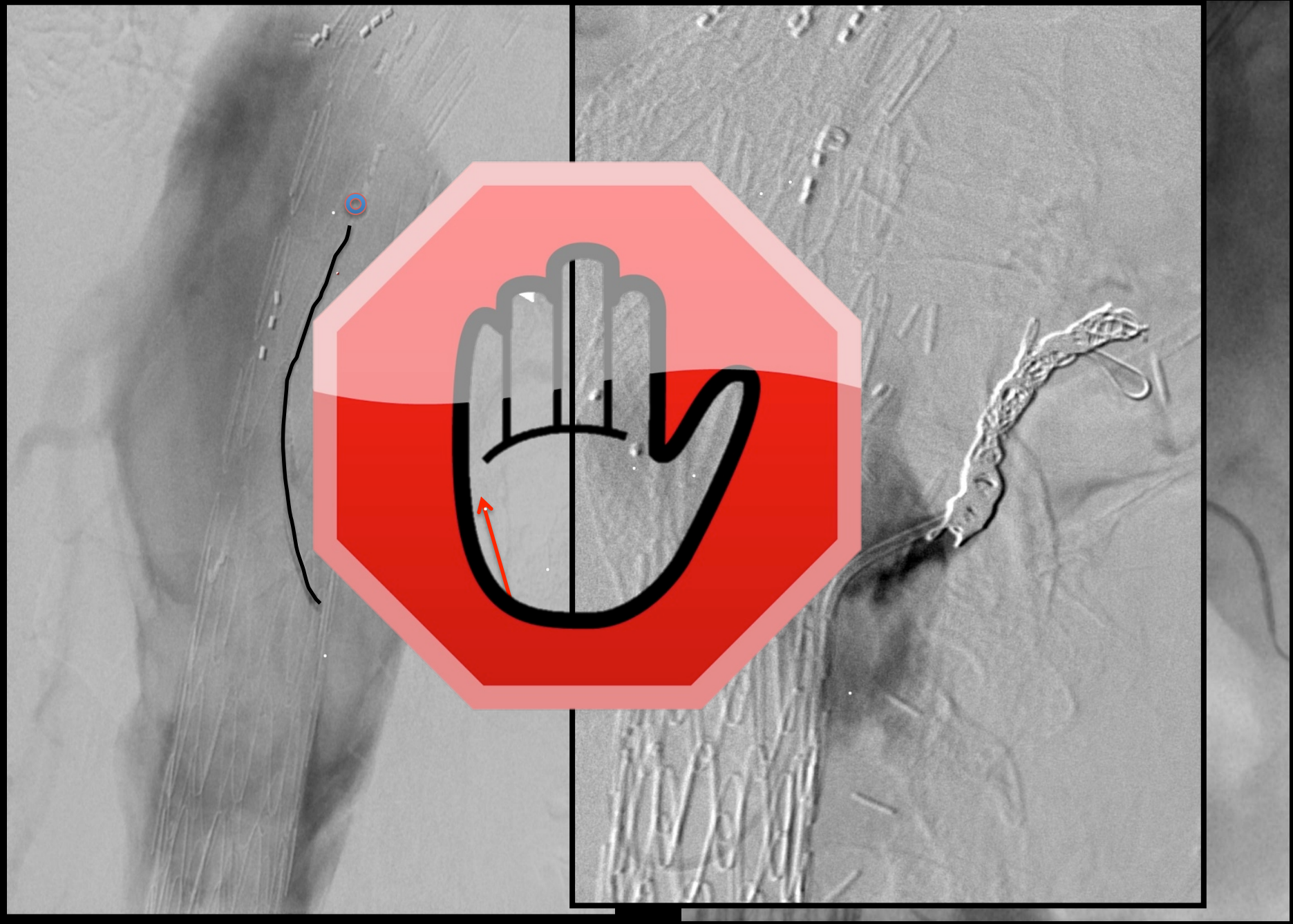
Branches

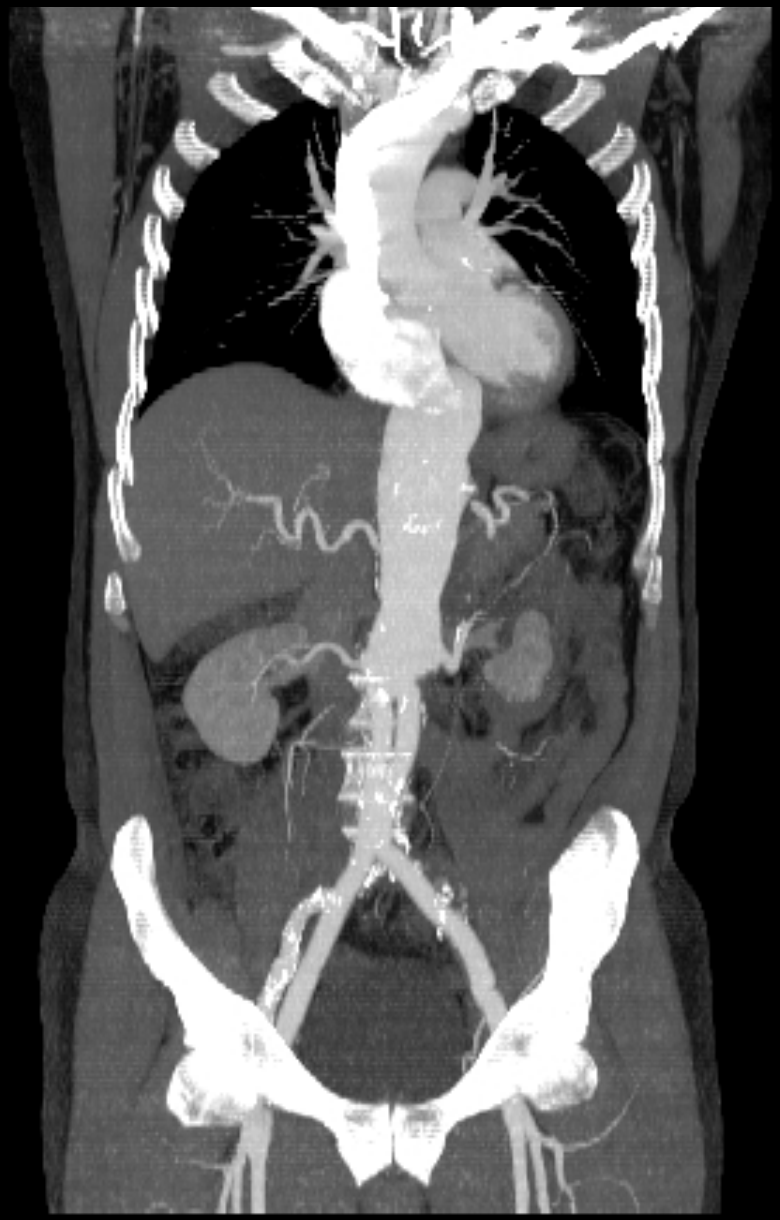
- TV in wide aorta >35
- Caudally oriented TV
  - SMA, CA
  - Renals in type 4 TAAA
- Emergency cases?
  - Off the Shelf

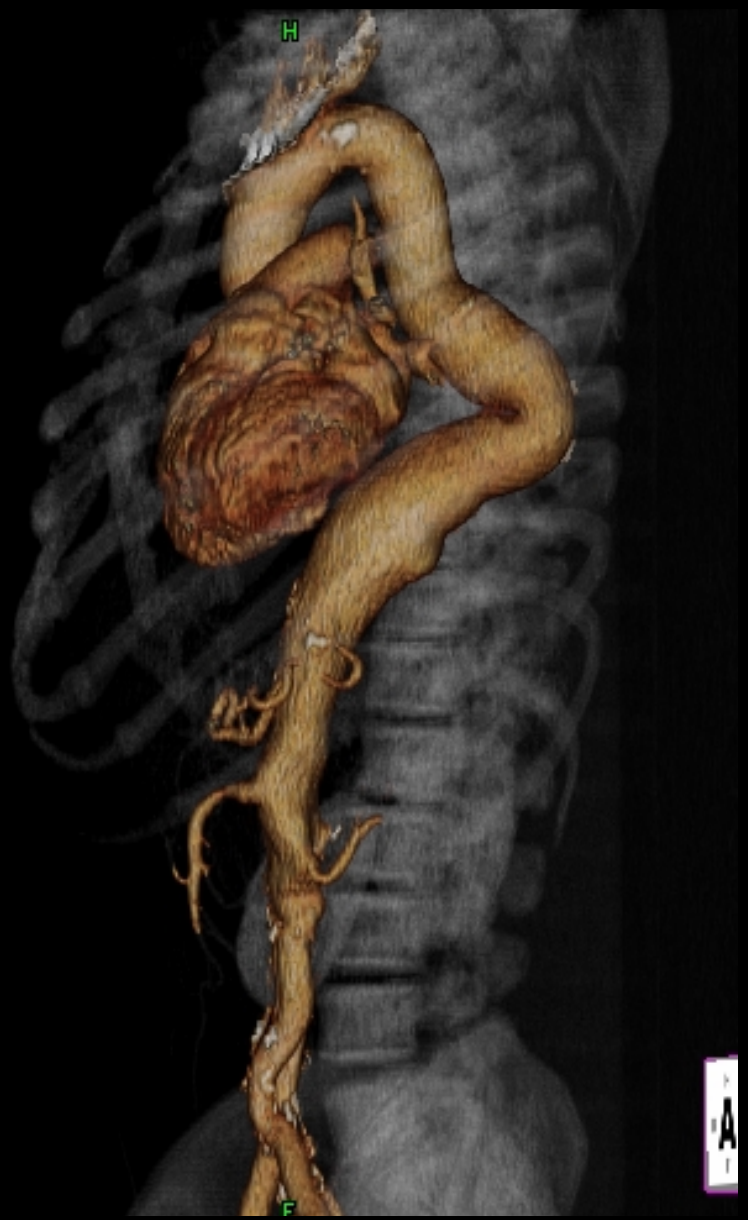
Fenestrations

- TV in narrow aorta
  - Type 1 TAAA
  - Chronic dissections
- Cranially oriented TV
  - Renals in type 2 TAAA
  - Juxta/Suprarenal AA

Tailor Graft to Patient in Planning



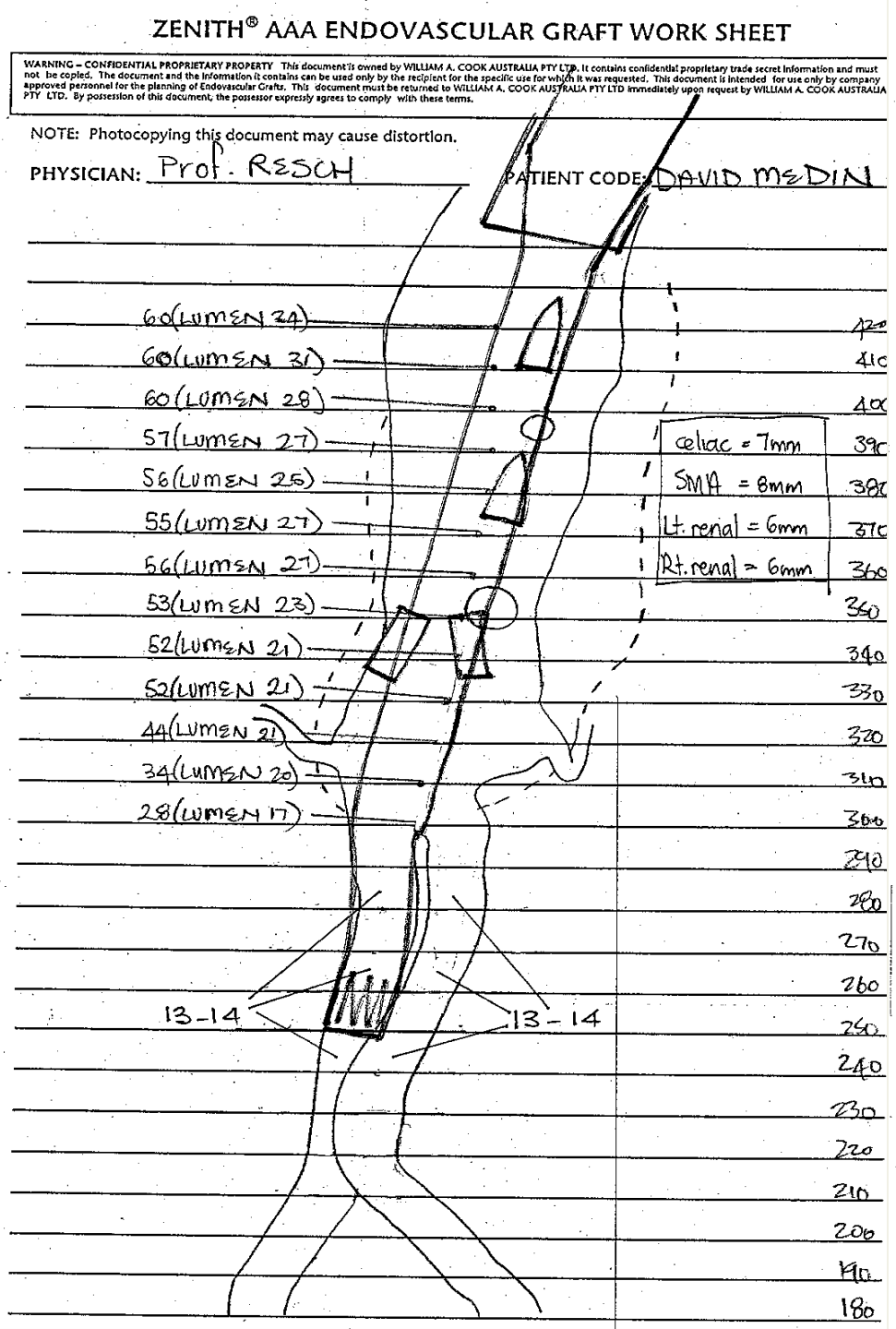


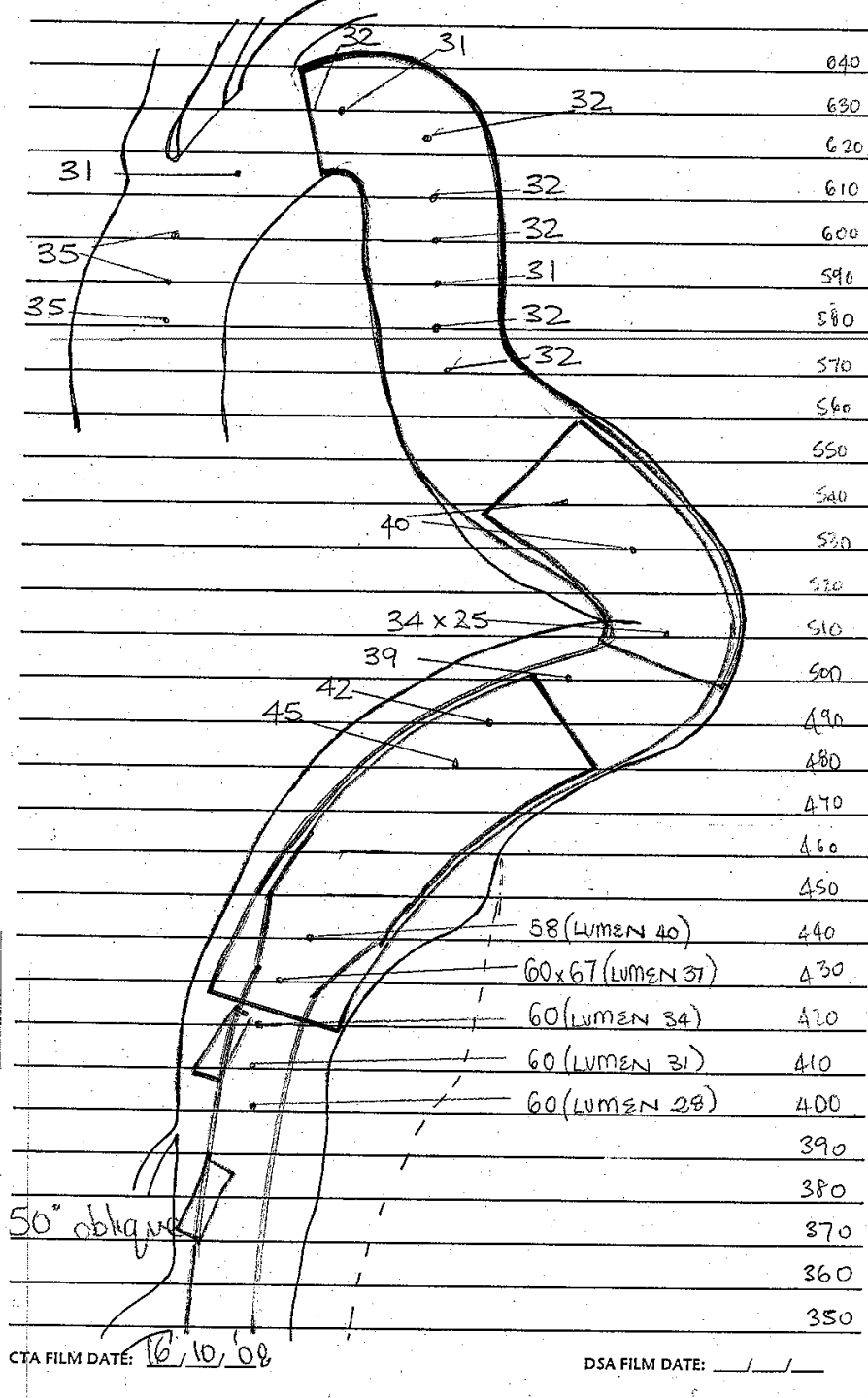

H
F

ZENITH® AAA ENDOVASCULAR GRAFT WORK SHEET

NOTE: Photocopying this document may cause distortion.

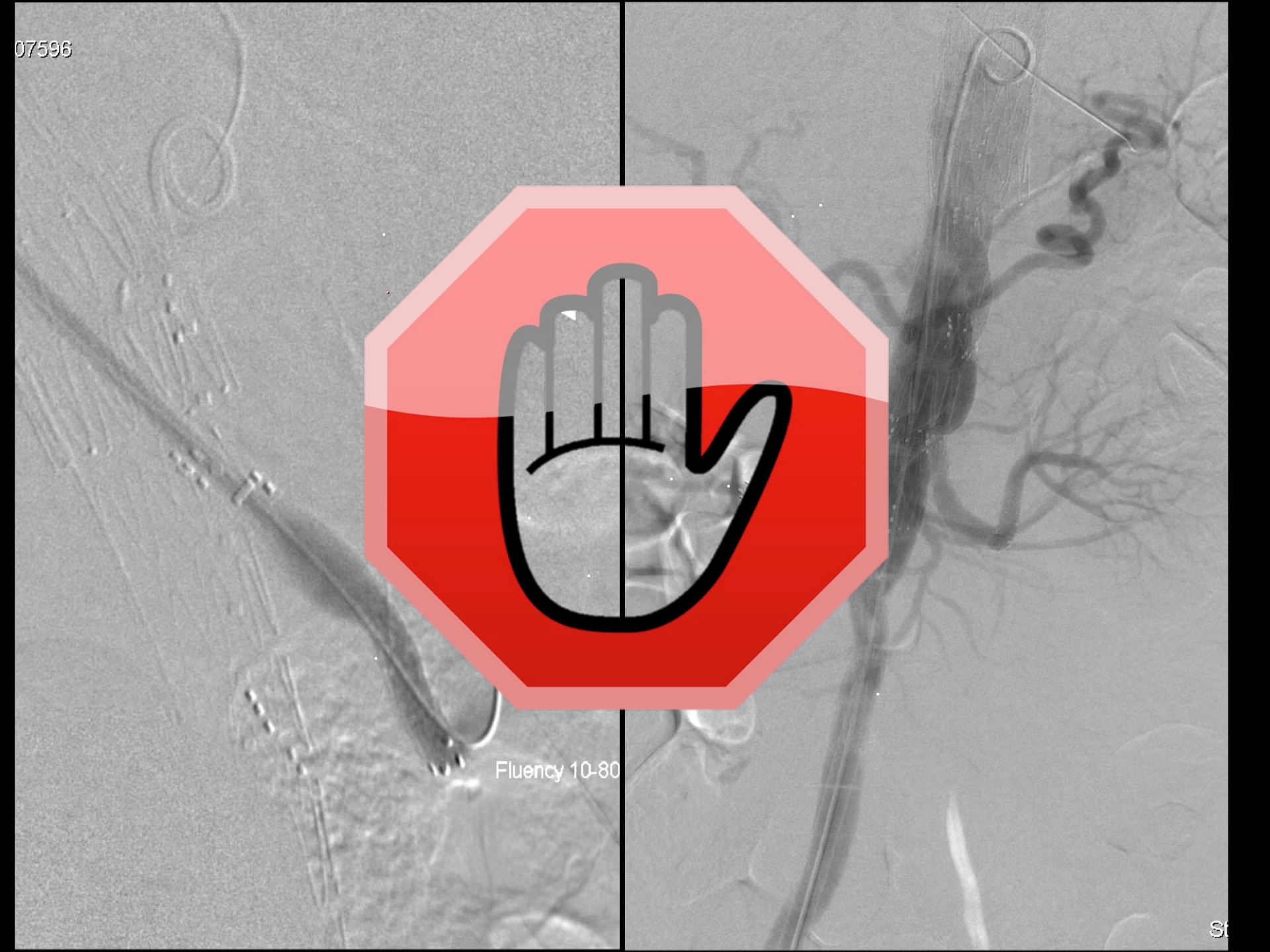
PHYSICIAN: Prof. RESCH PATIENT CODE: DAVID MEDIN

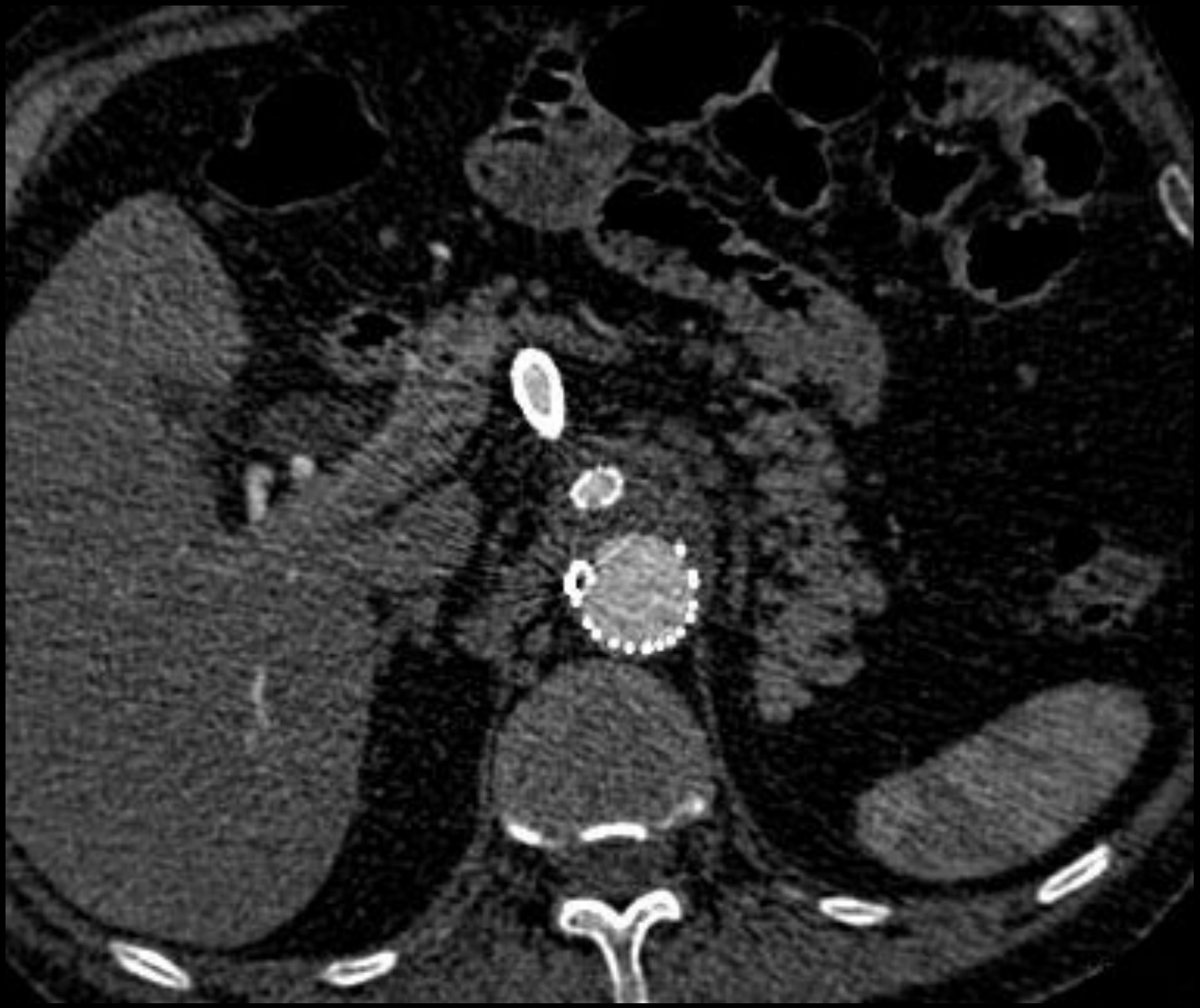




CTA FILM DATE: 16/10/08

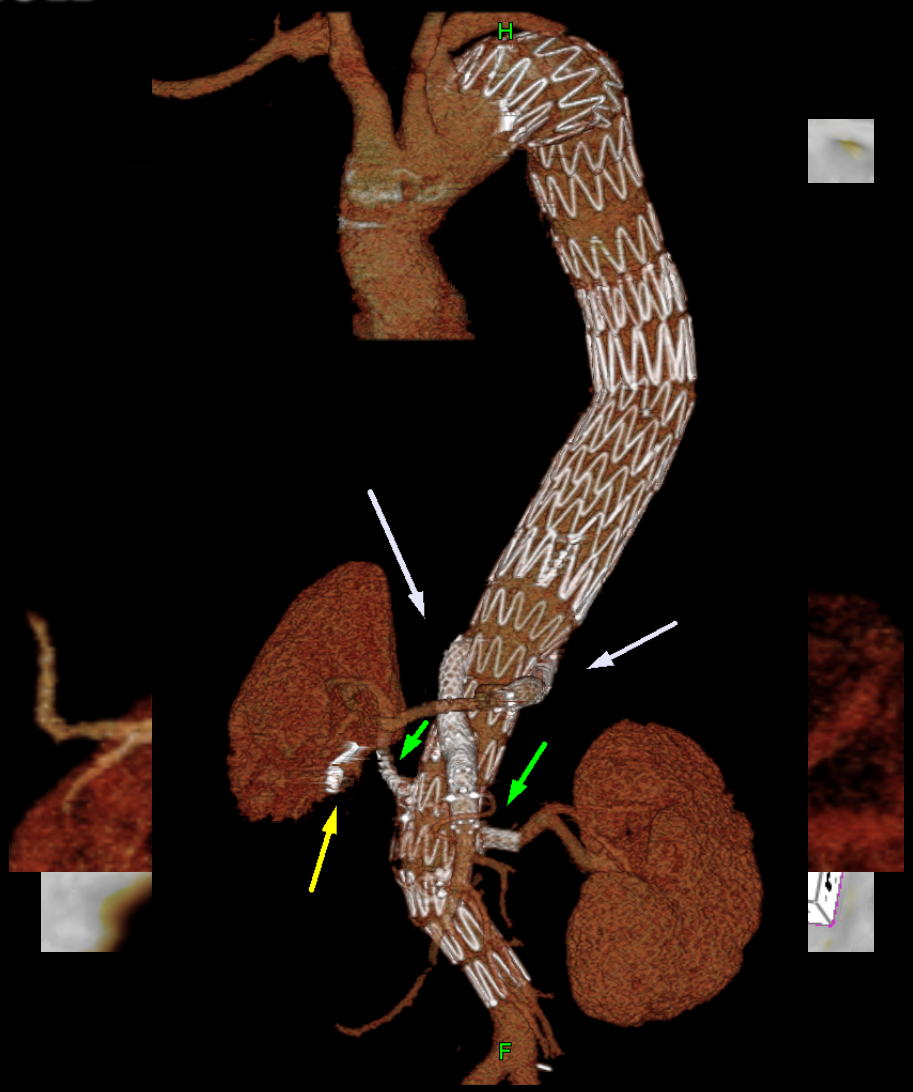
DSA FILM DATE: ___/___/___

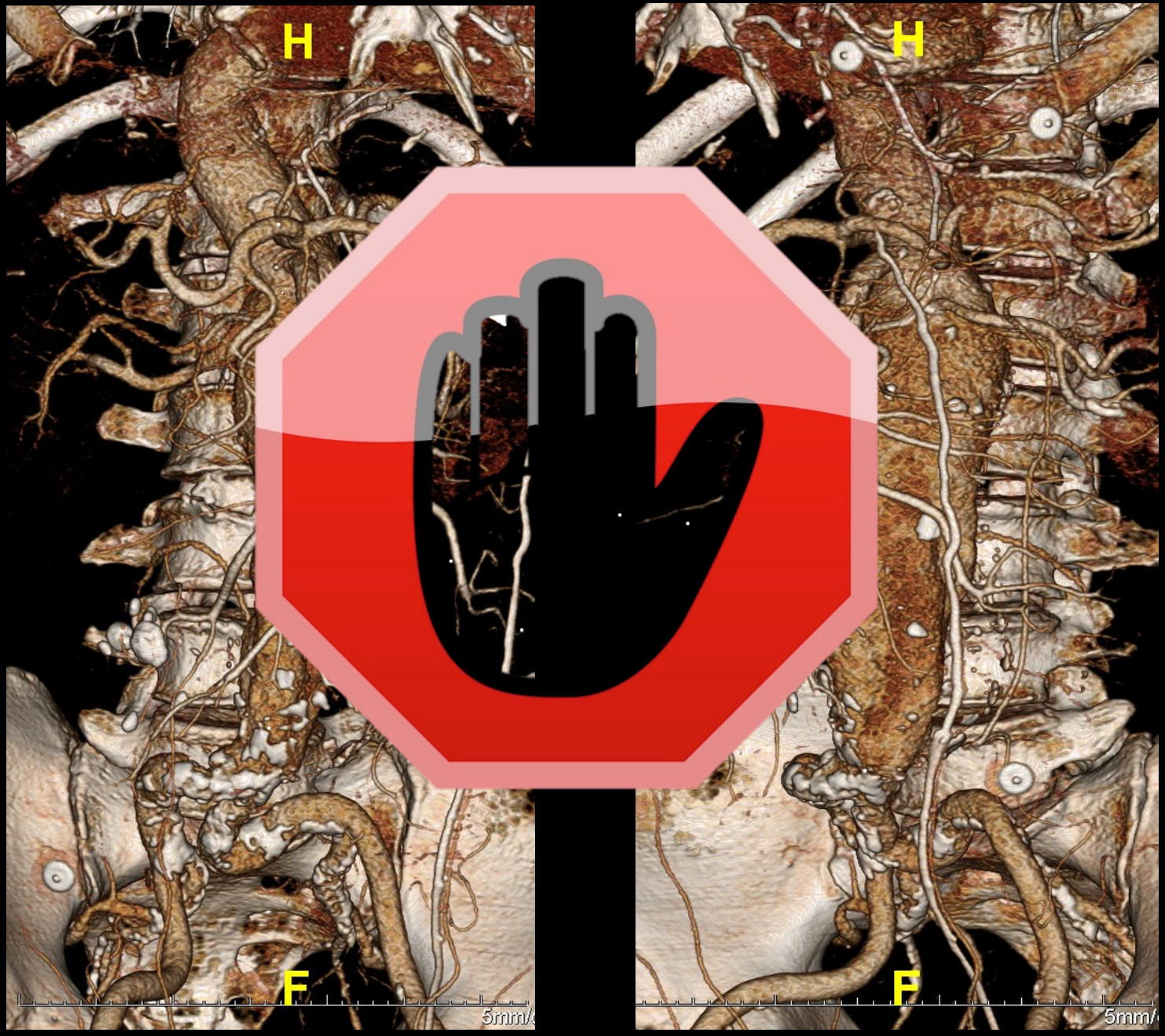

07596
Fluency 10-80

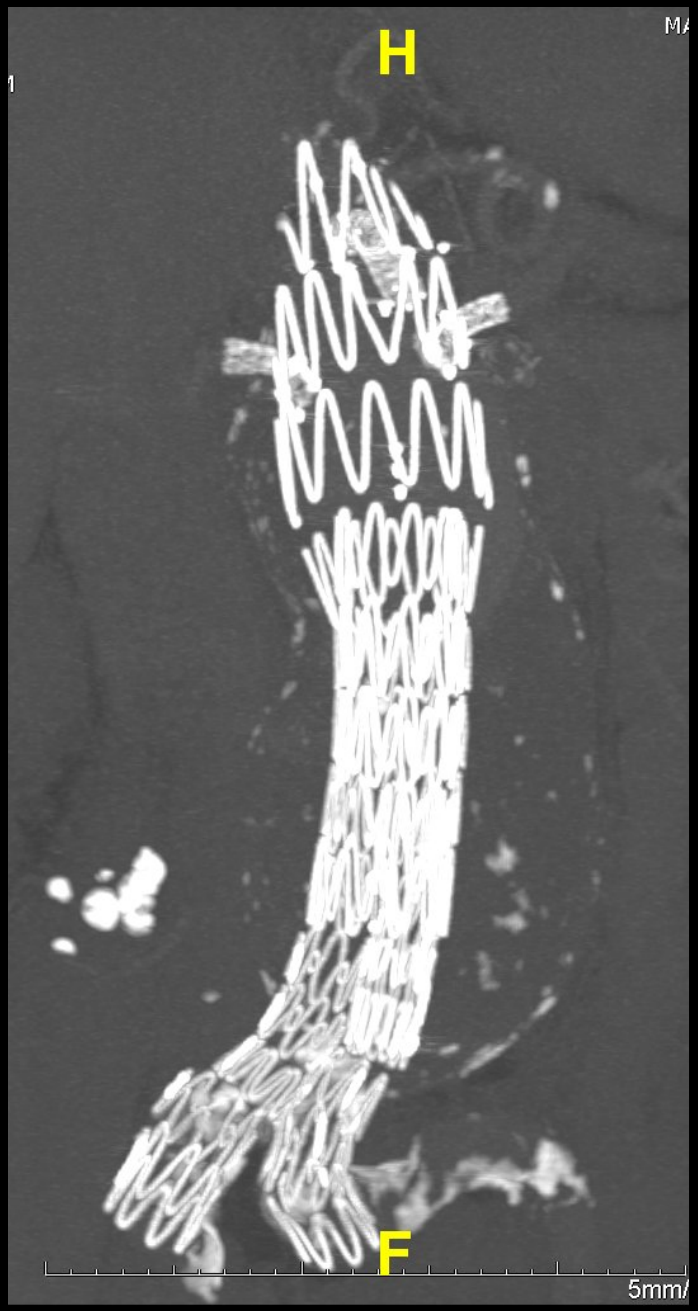


Making a Durable Branch

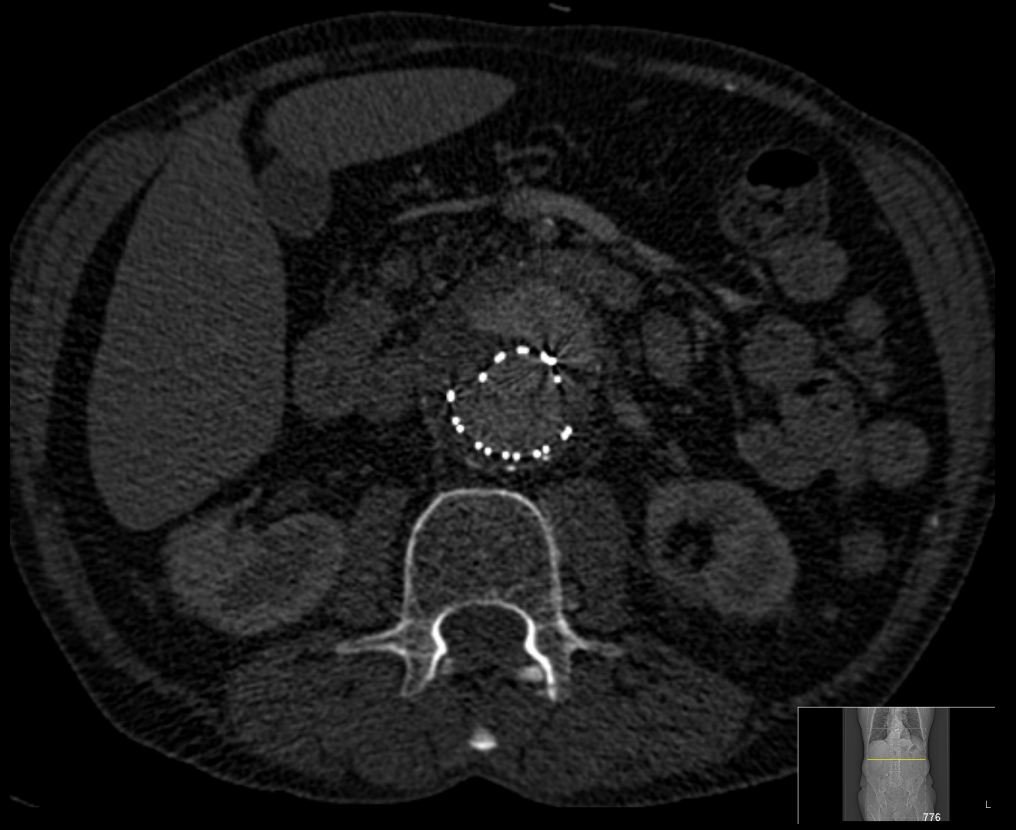
- Make branches as short as possible
- Align branch graft vector in accordance to target vessel native anatomy
- Provide as much overlap as possible between the branch and aortic component as well as the branch and visceral target vessel
- Minimize kinking and angulation in branches

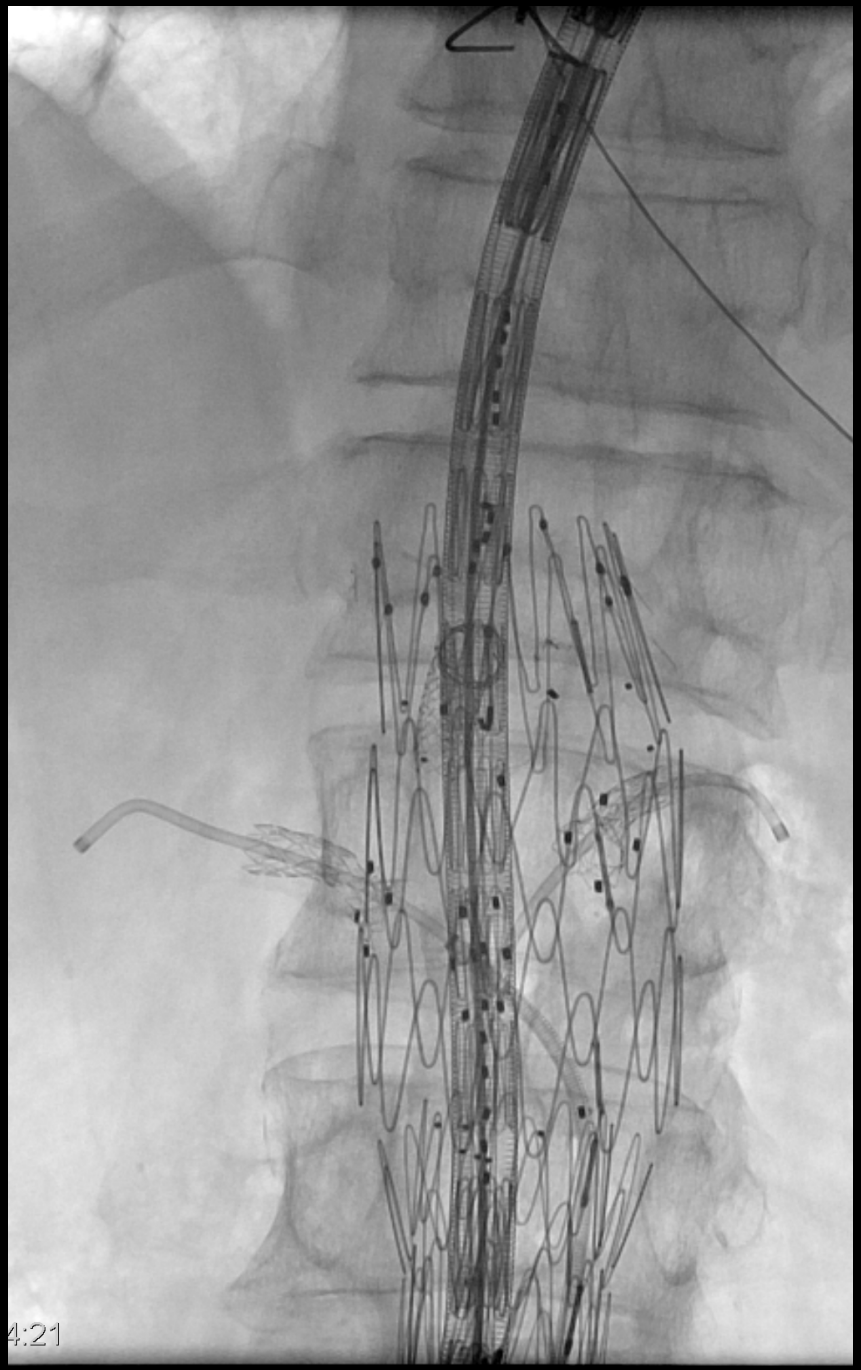


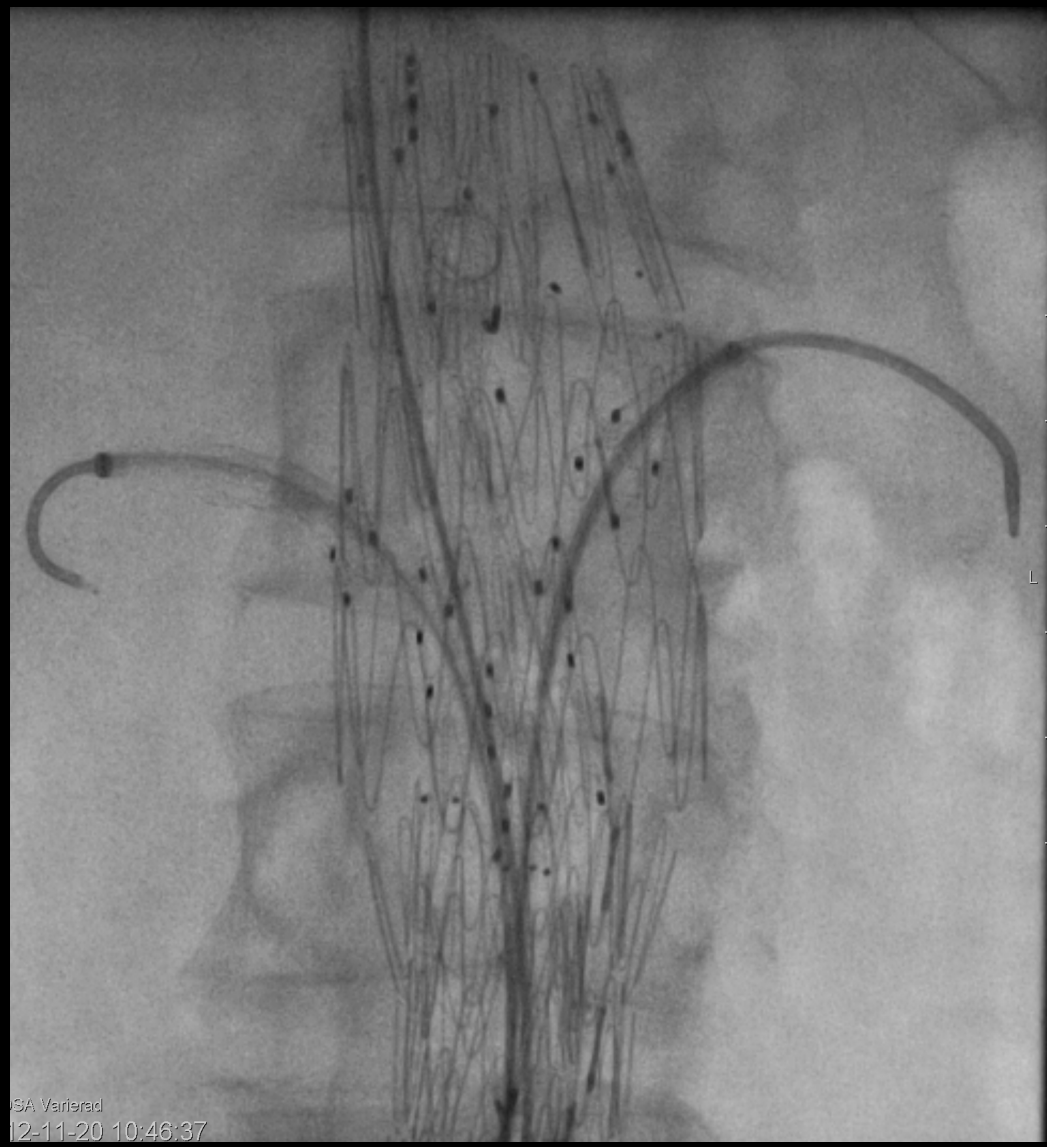

H
F
H
F

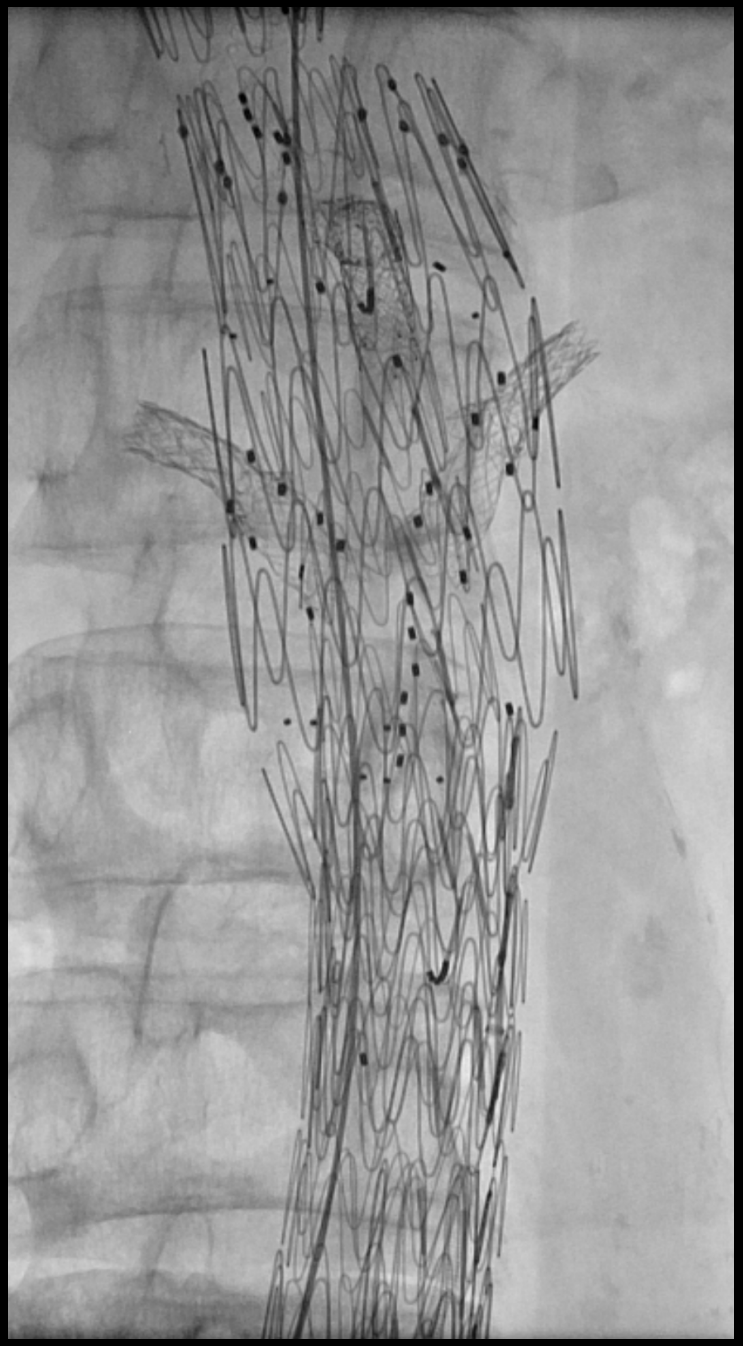


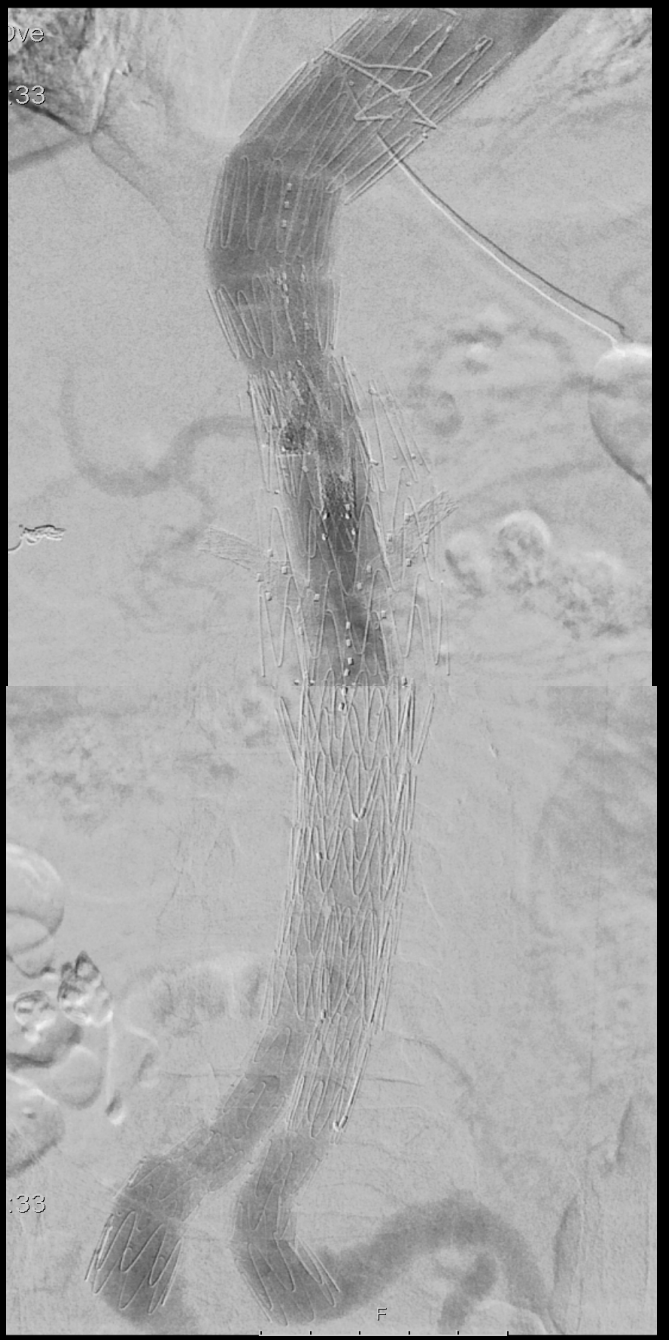
5y FU

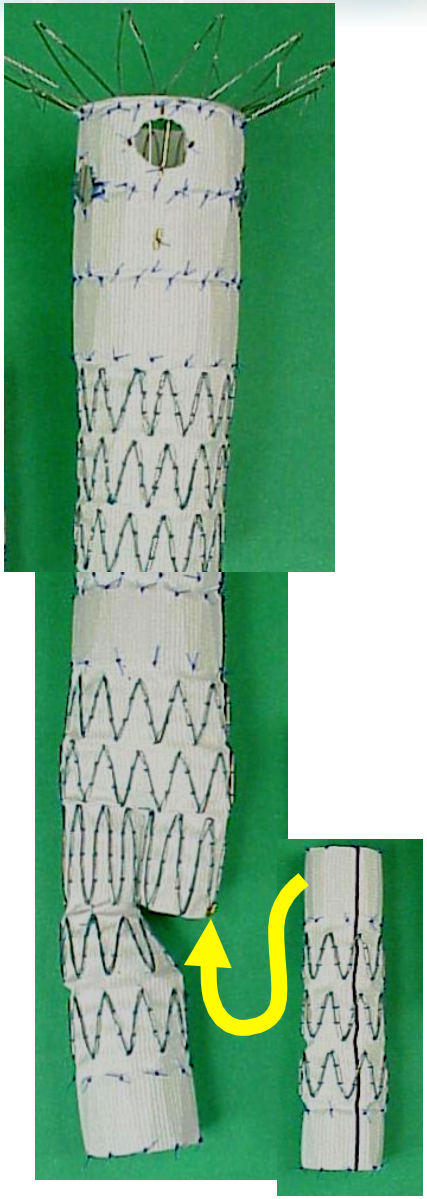



4:21

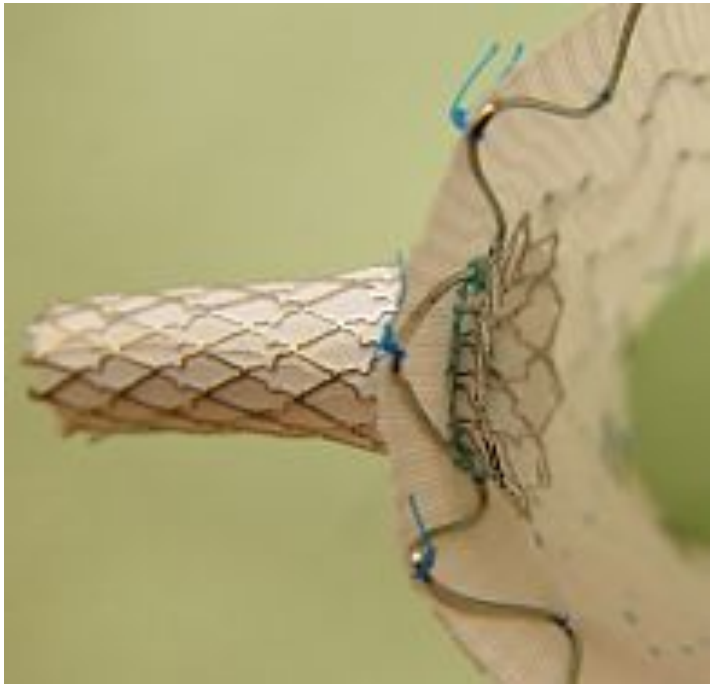

SA Varierad
12-11-20 10:46:37

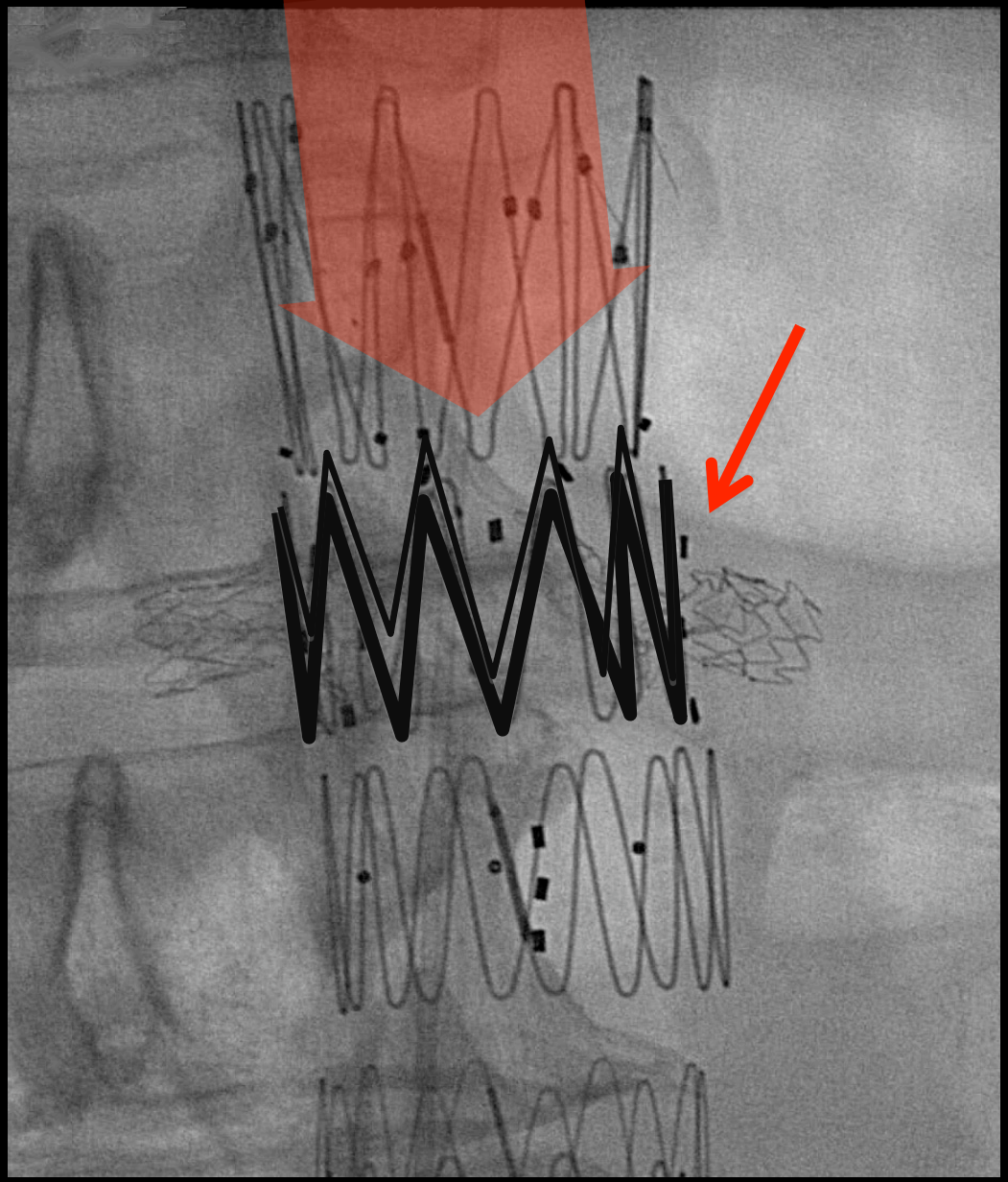




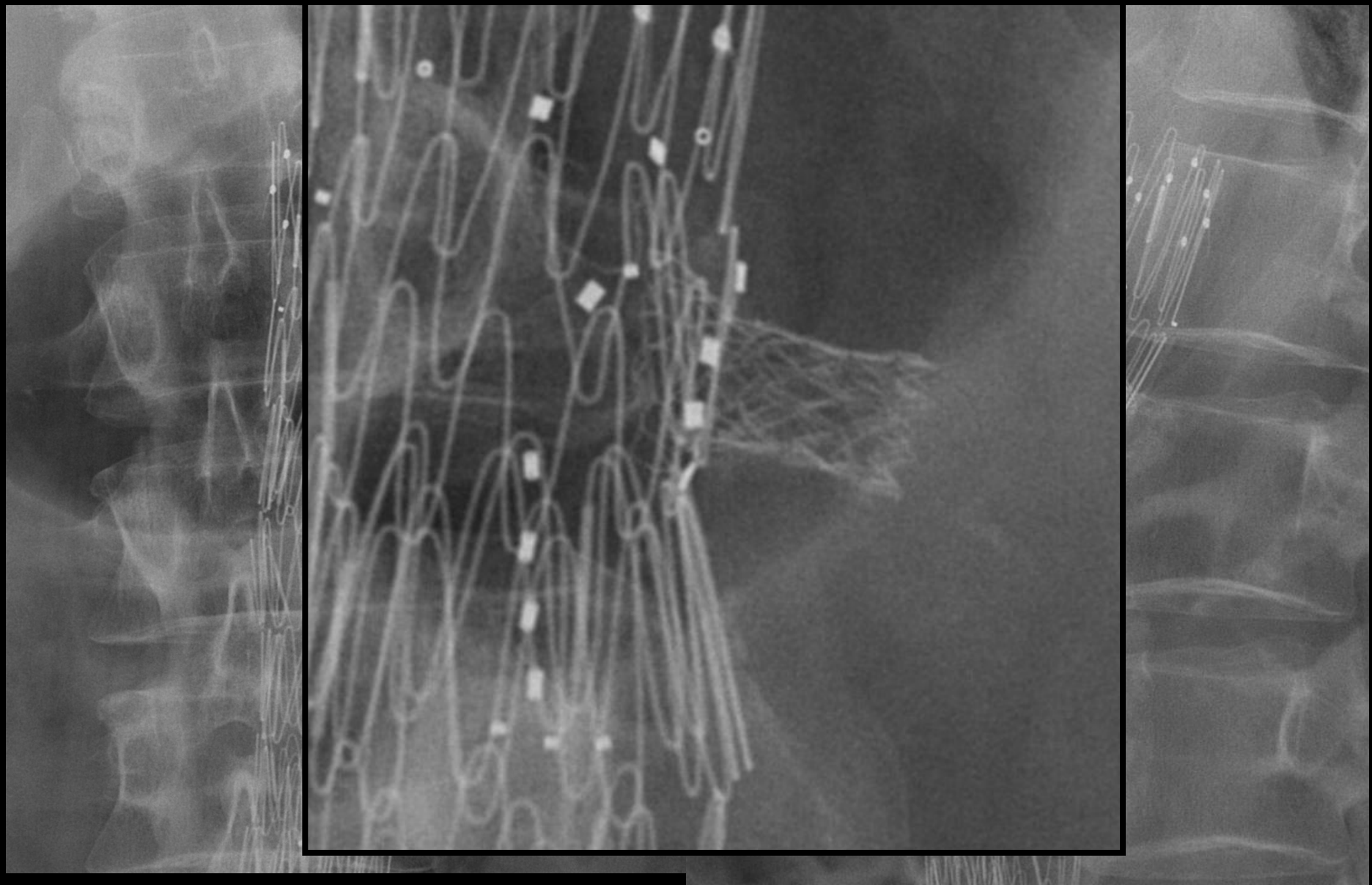


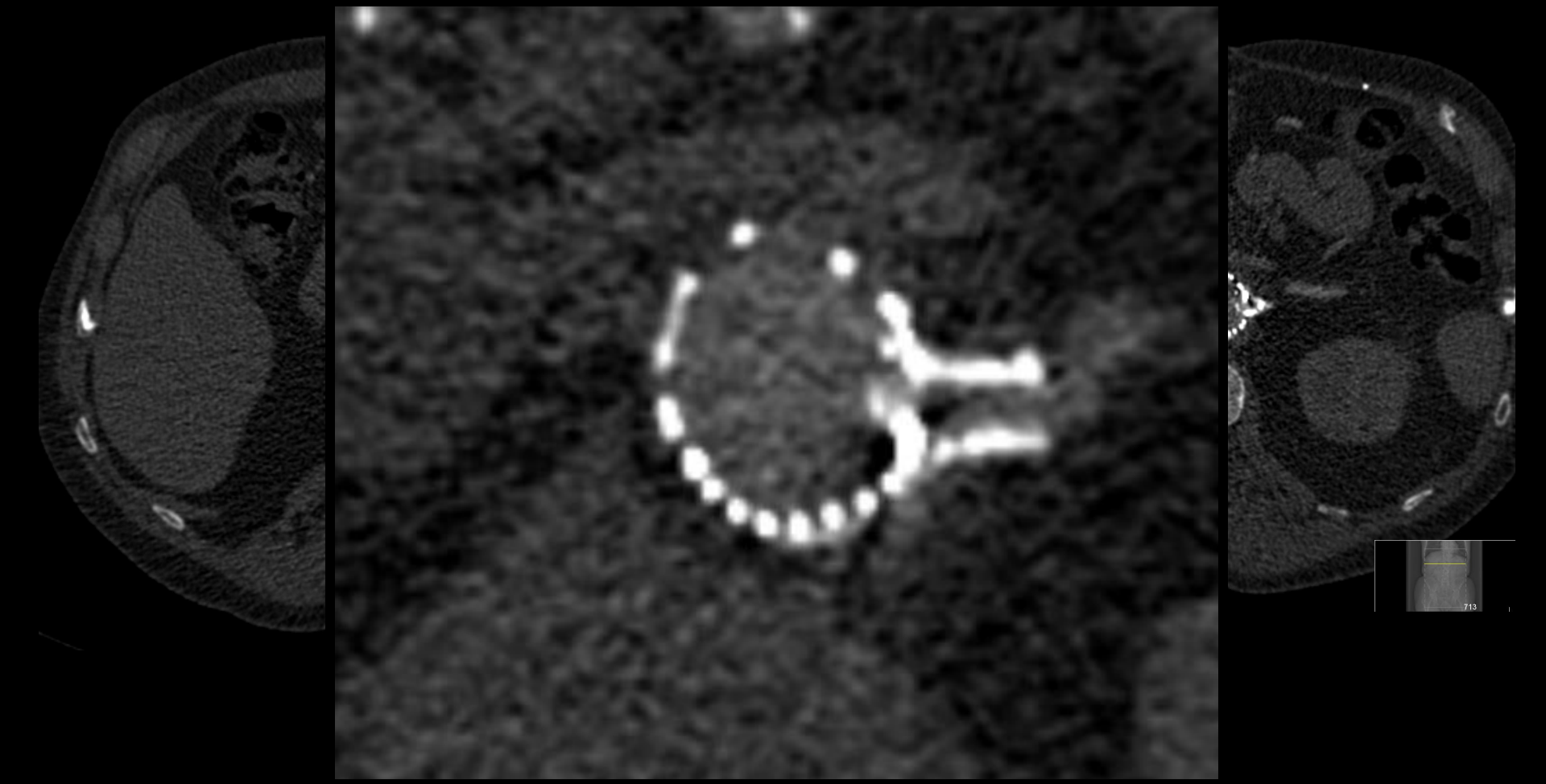
More vulnerable points?

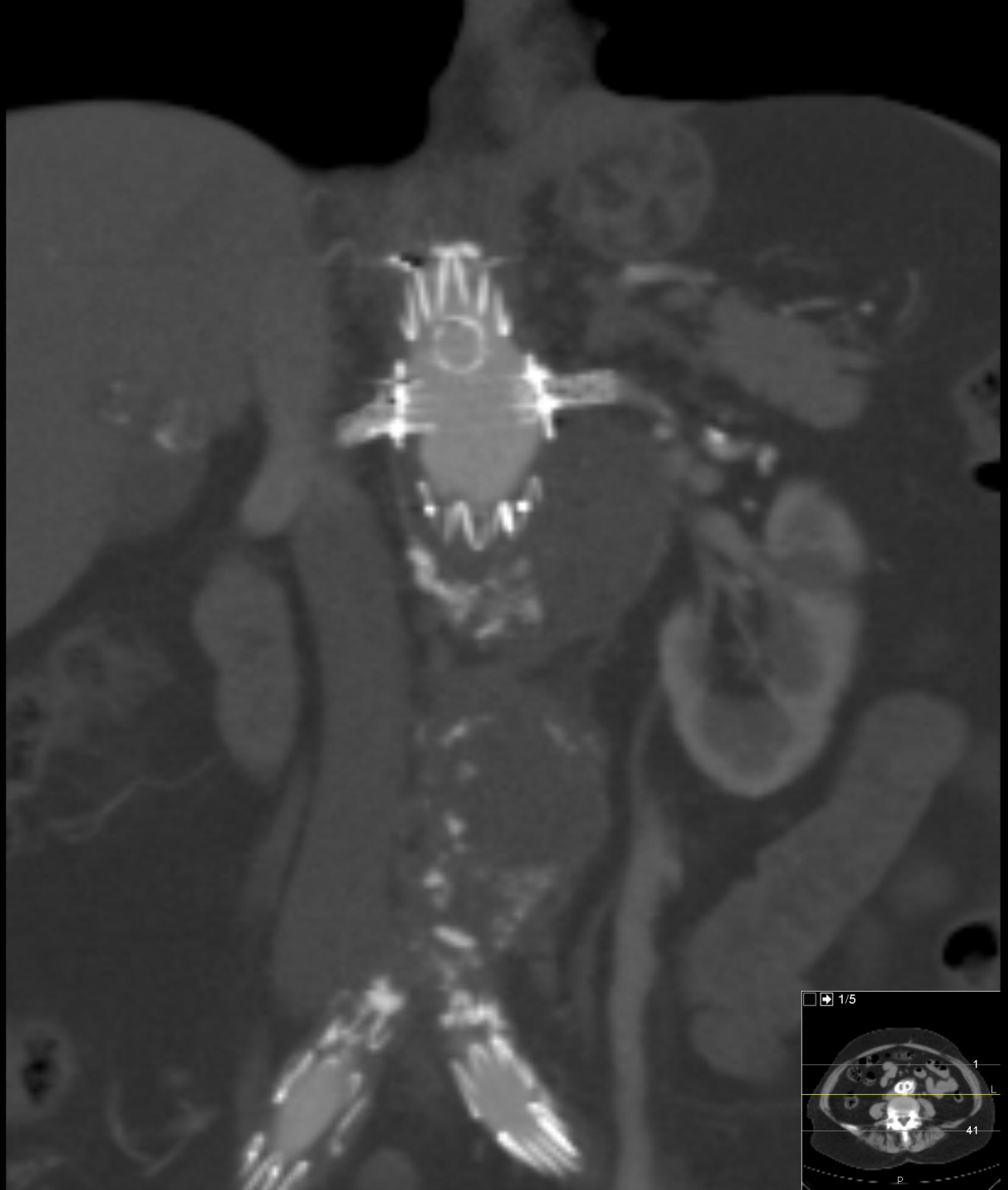


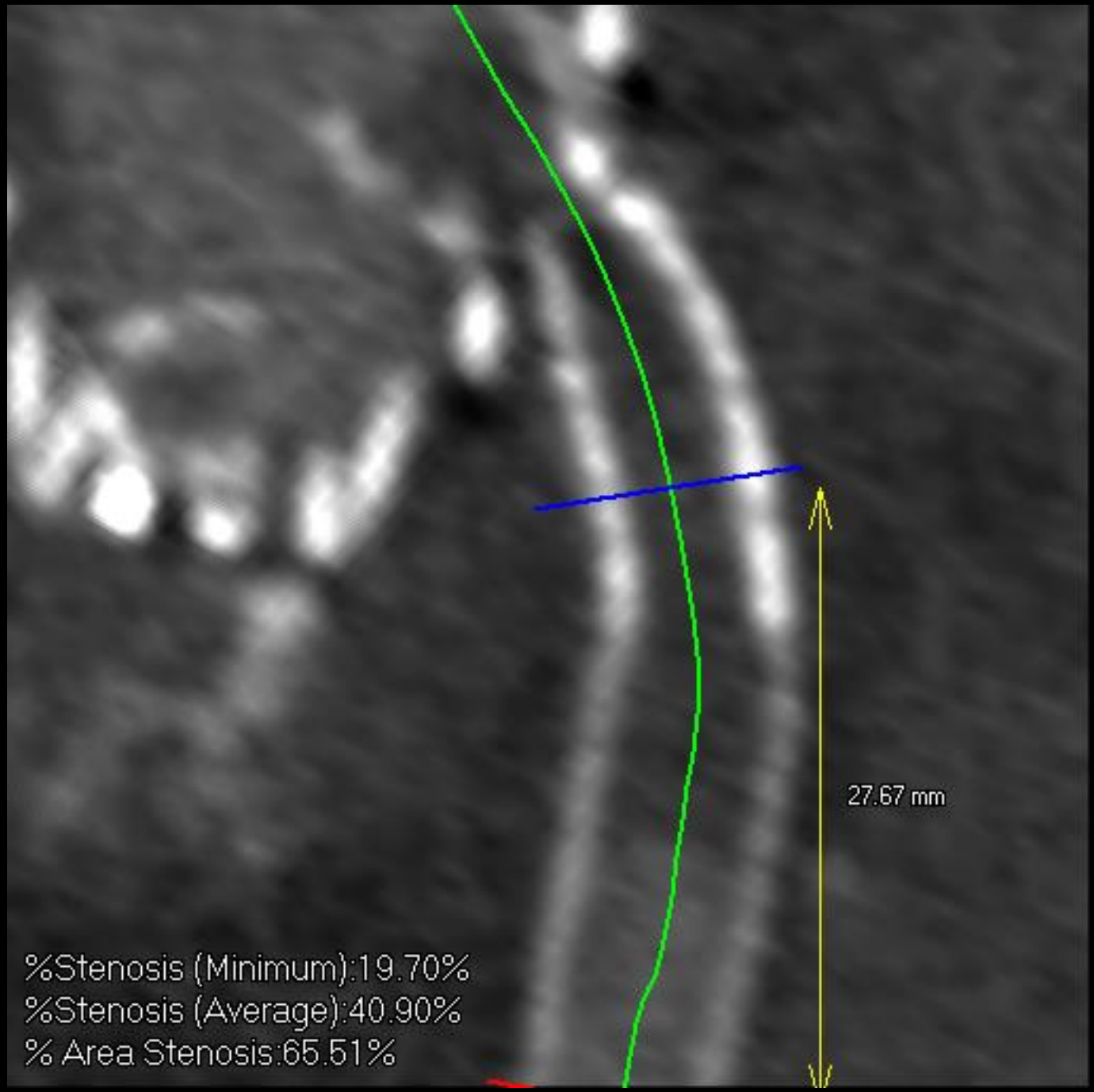


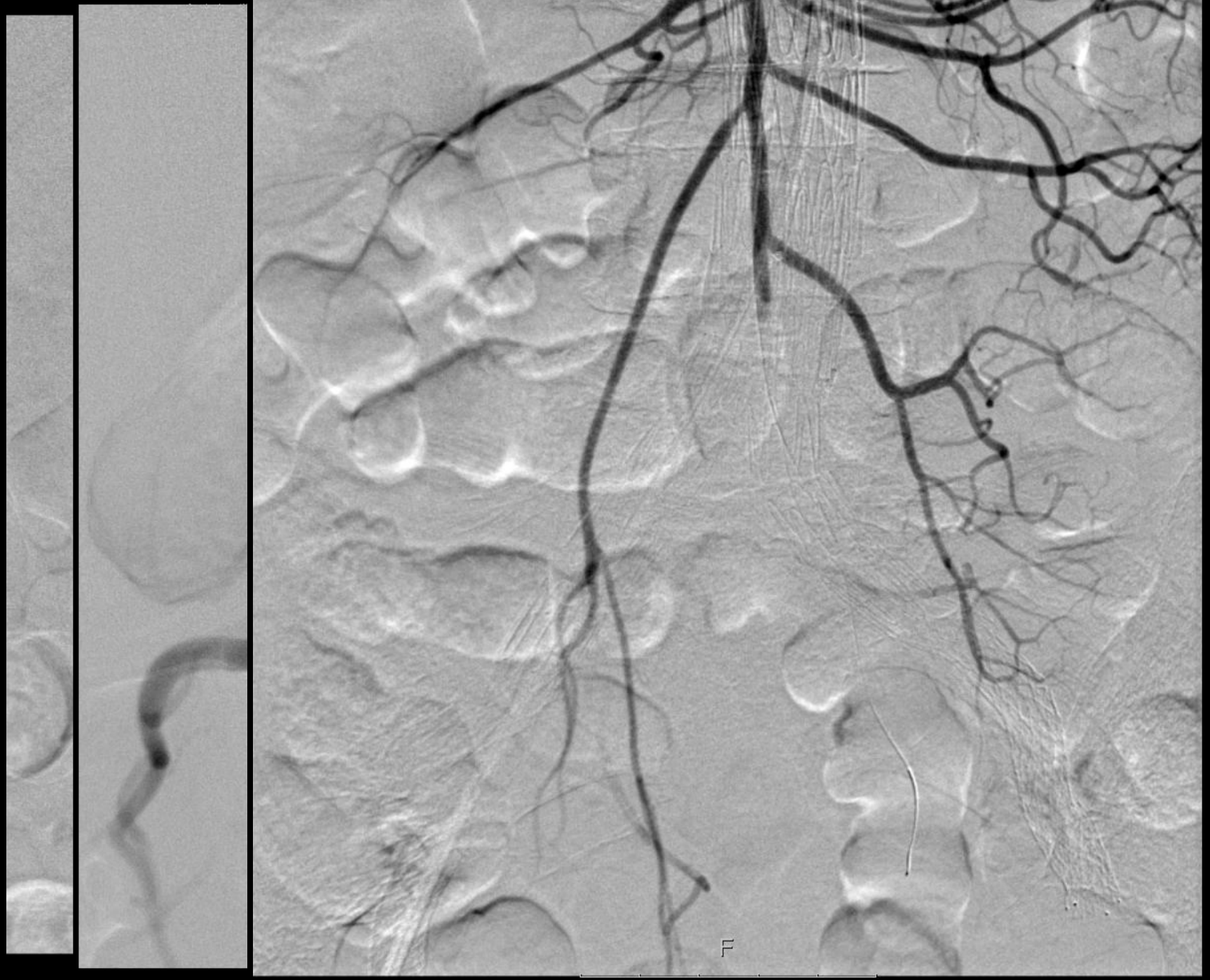
1 month FU




713

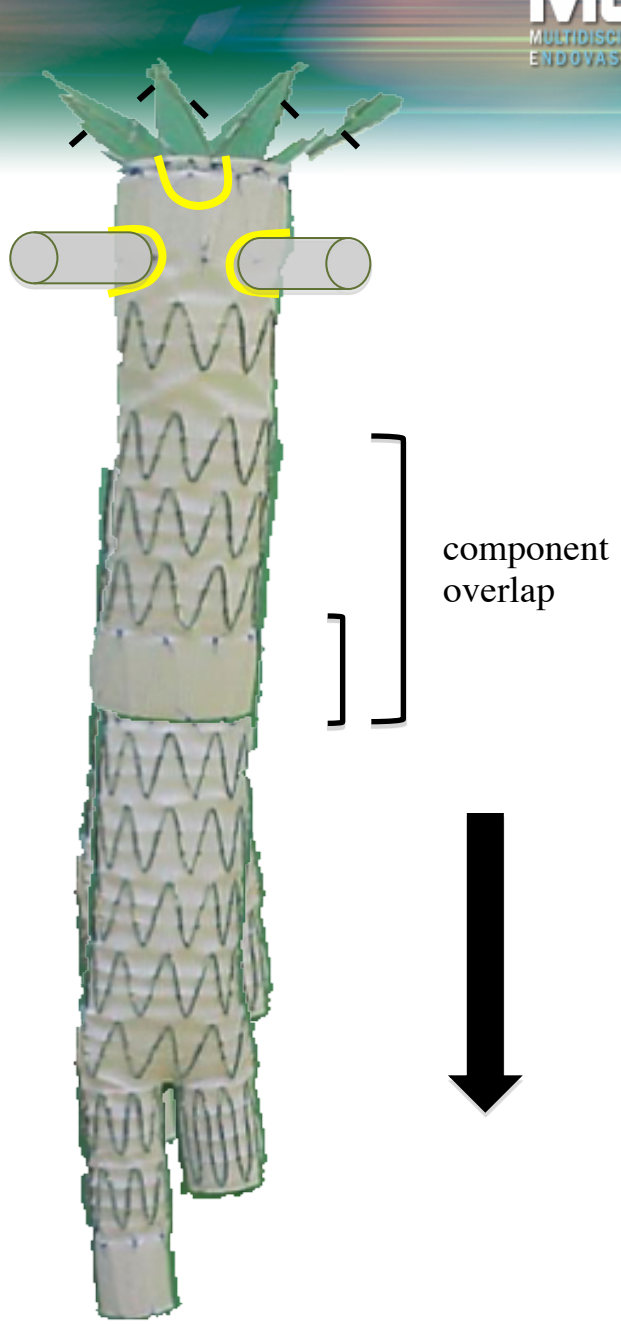

1/5
1
L
41
P


27.67 mm
%Stenosis (Minimum):19.70%
%Stenosis (Average):40.90%
% Area Stenosis:65.51%



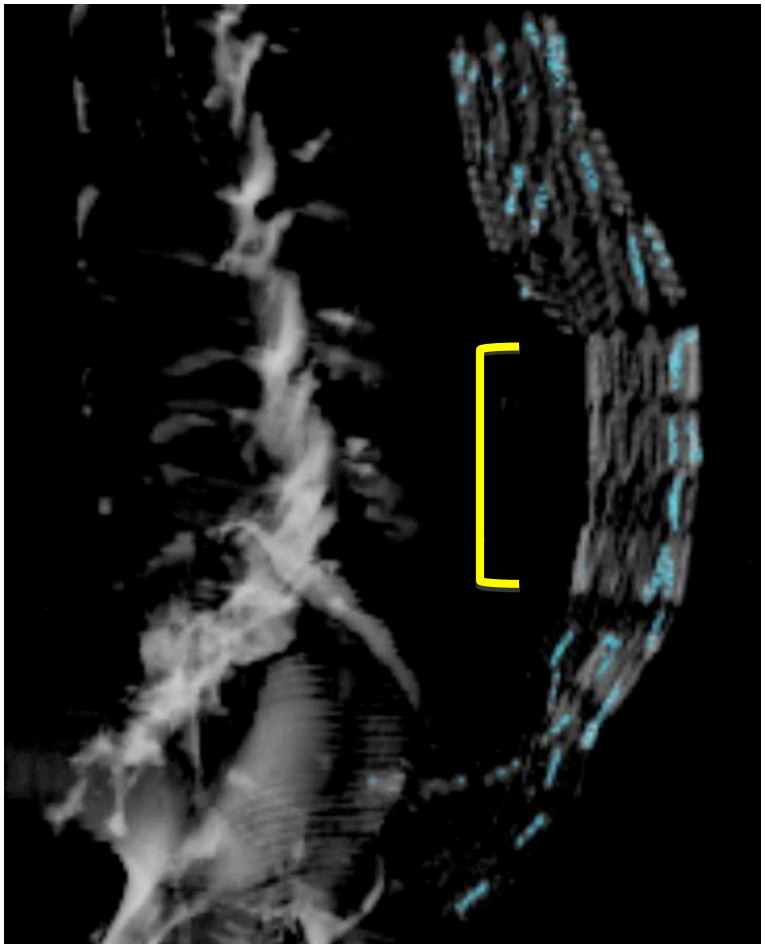
Migration

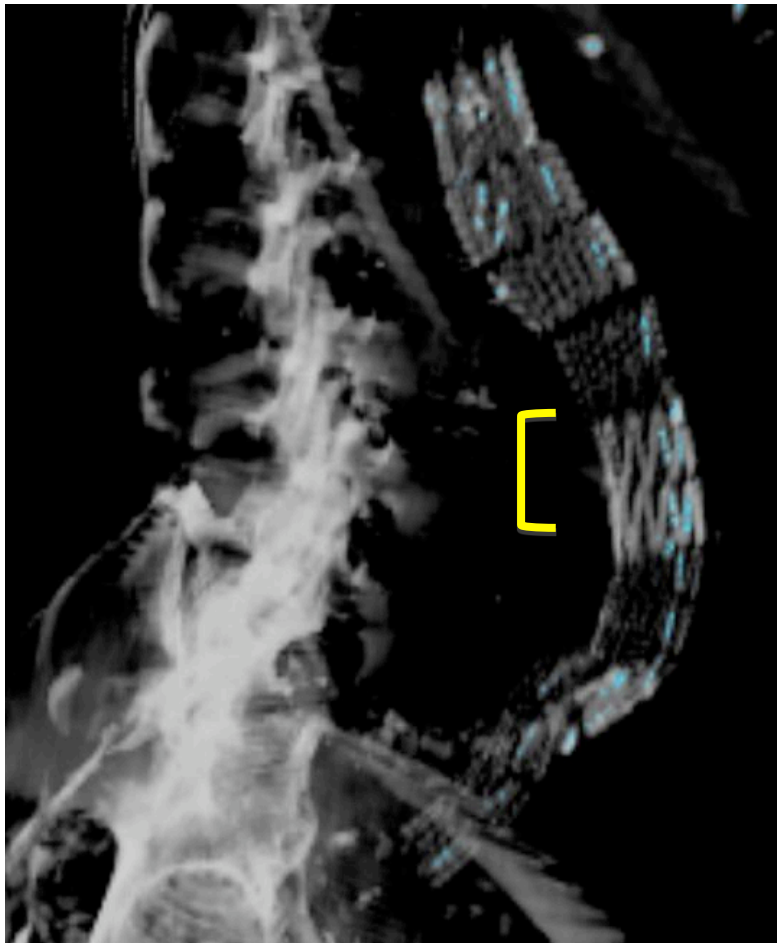
- 13 % bifurcated component movement > 10 mm
- 0.9 % complete separation



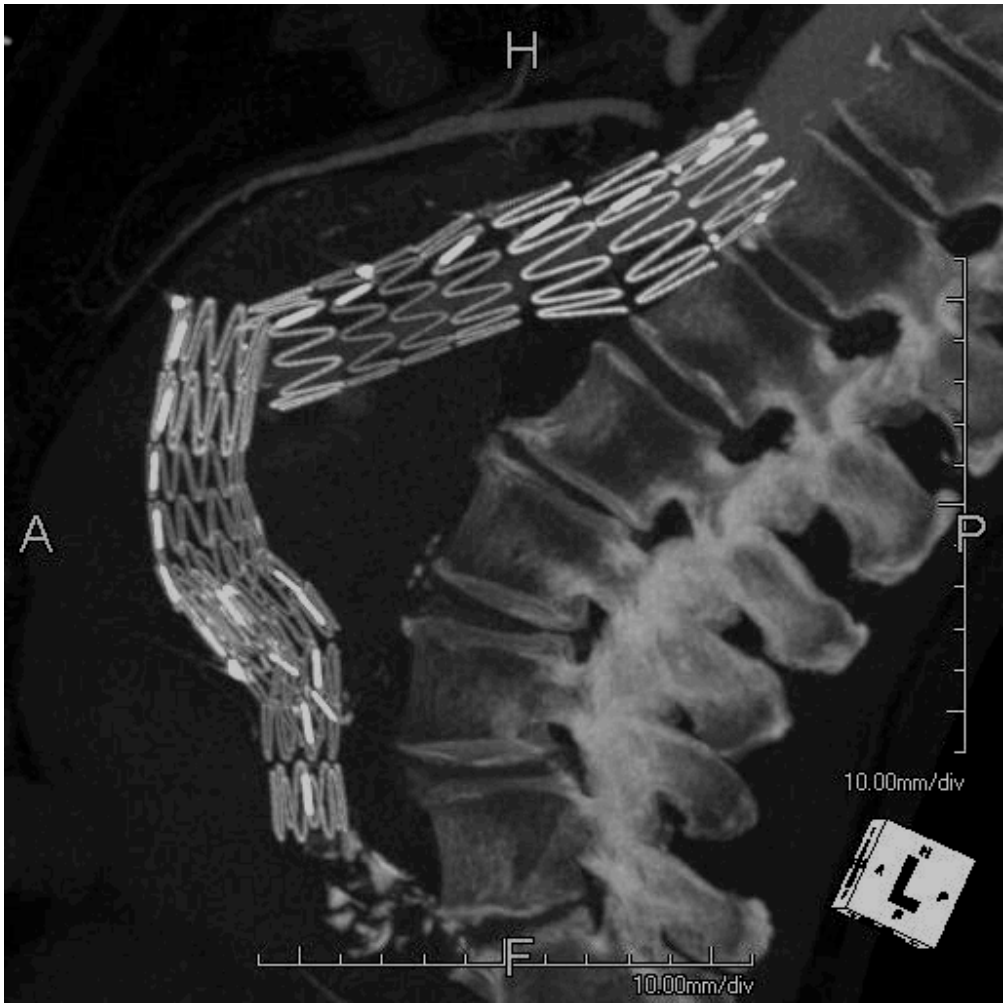
in Dowdall et al., *Eur J Vasc Endovasc Surg* 2008

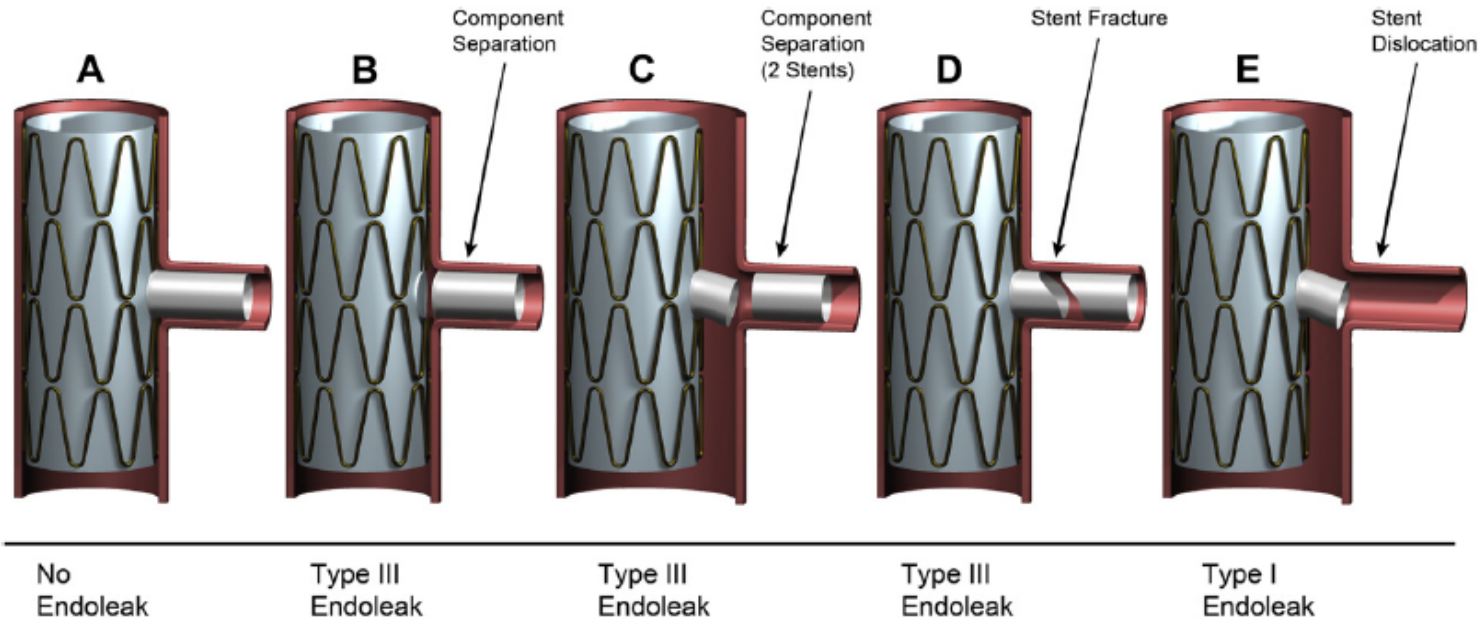
Component Separation





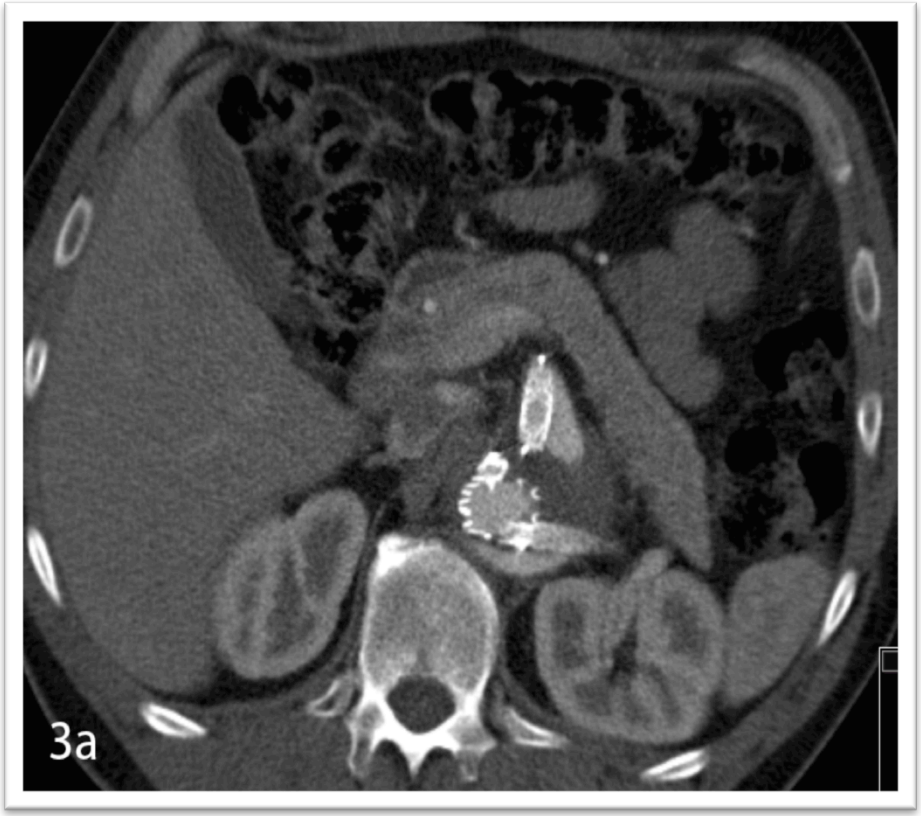
Rupture!

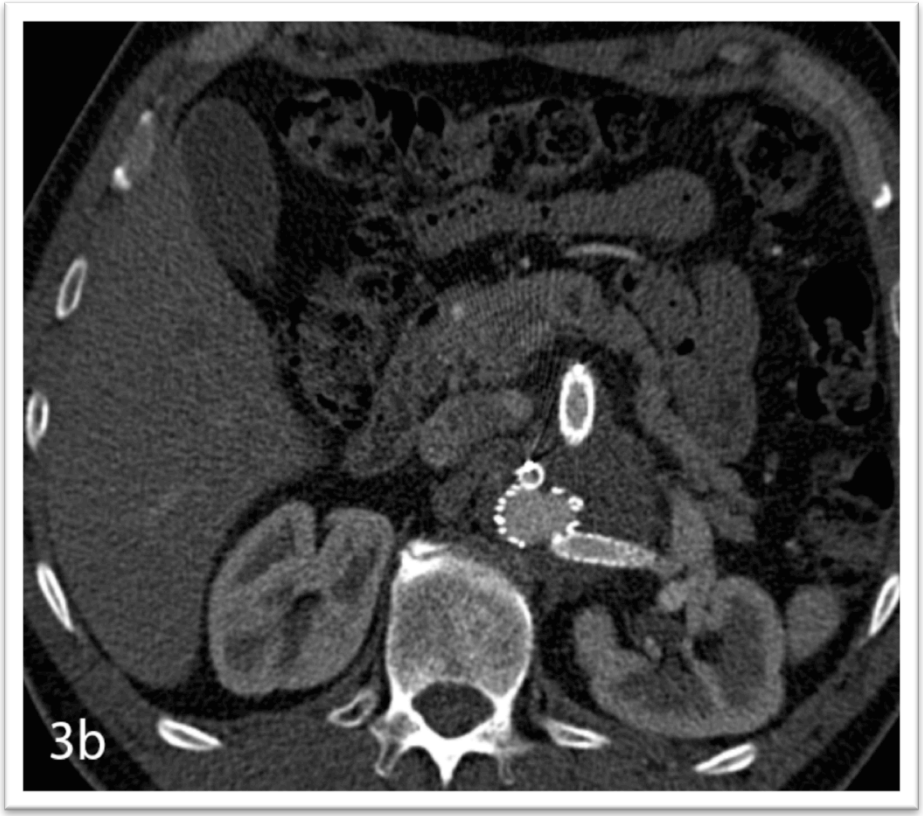




Mastracci et al JVS 2013;57

Type 1 EL





Summary - Planning

- Maximize component overlap
  - TV branches
  - Main components
- Plan to match anatomy
  - Do not force the anatomy to the graft!

Summary - Intraoperative

- Reinforce branches appropriately
  - Compression
  - Transition
- Intraoperative issues sometimes hard to detect
  - Small endoleaks around branches
  - Minor branch disconfigurations
  - Intraoperative Angio-CT useful

Summary – FU Failures

- Complex Endografts introduce new failure modes
  - TV issues
  - Component Separation
  - Complex type 1 and 3 EL (uncommon)
- FU must be tailored for specific failures
  - CTA reconstructions
  - Plain X-ray

June 27 & 28
Malmö, Sweden 2014

COURSE DIRECTORS
Martin Malina, Malmö, Sweden
Tim Resch, Malmö, Sweden

SCIENTIFIC COMMITTEE:
John Brennan, Stephan Haulon,
Richard Mc Williams, Eric Verhoeven

18TH INTERNATIONAL EXPERTS SYMPOSIUM

CRITICAL ISSUES
in aortic endografting 2014

www.critical-issues-congress.com