

Embolization in patients with genetic arteriopathy

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October 3, 2025



- No relevant disclosures



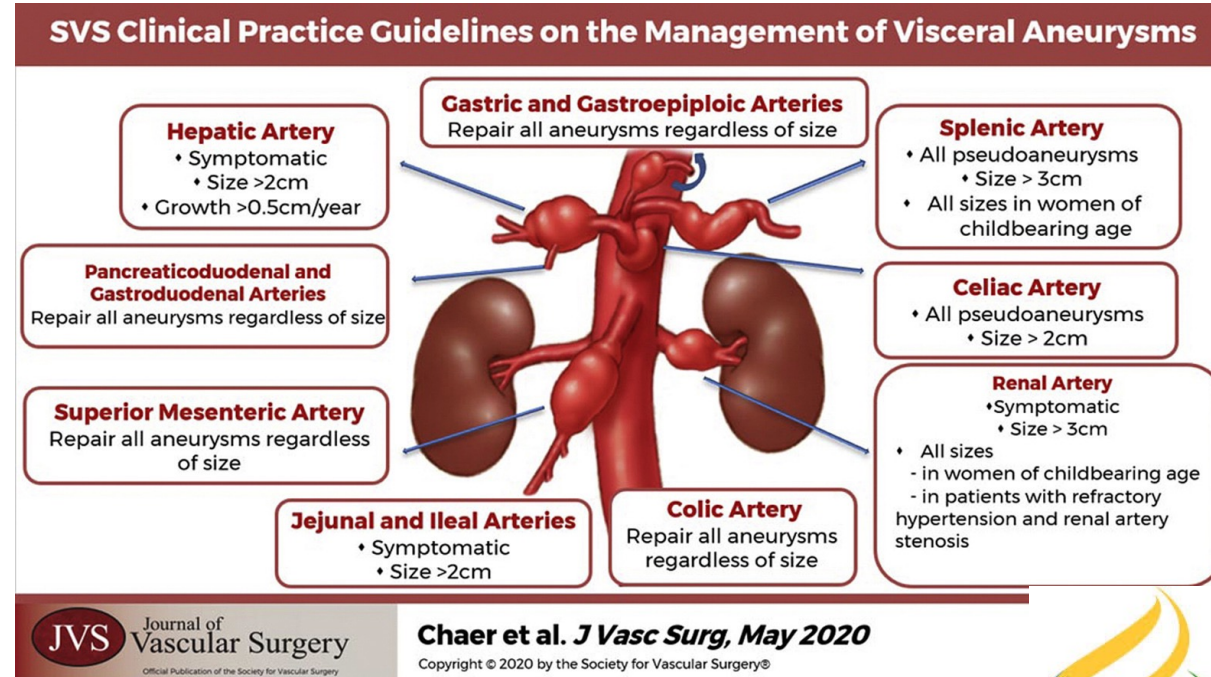
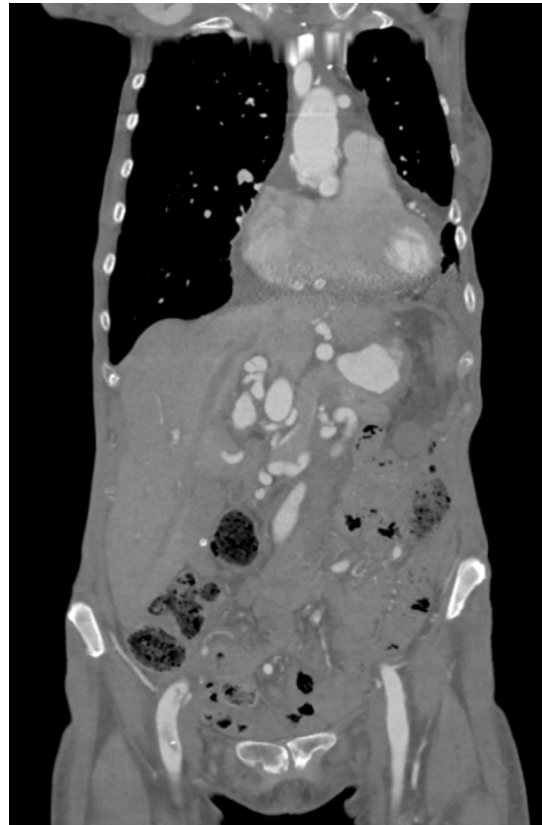
Considerations

- Pre-procedure imaging
- Access
- How to get there
- Embolic



Who and what to embolize?

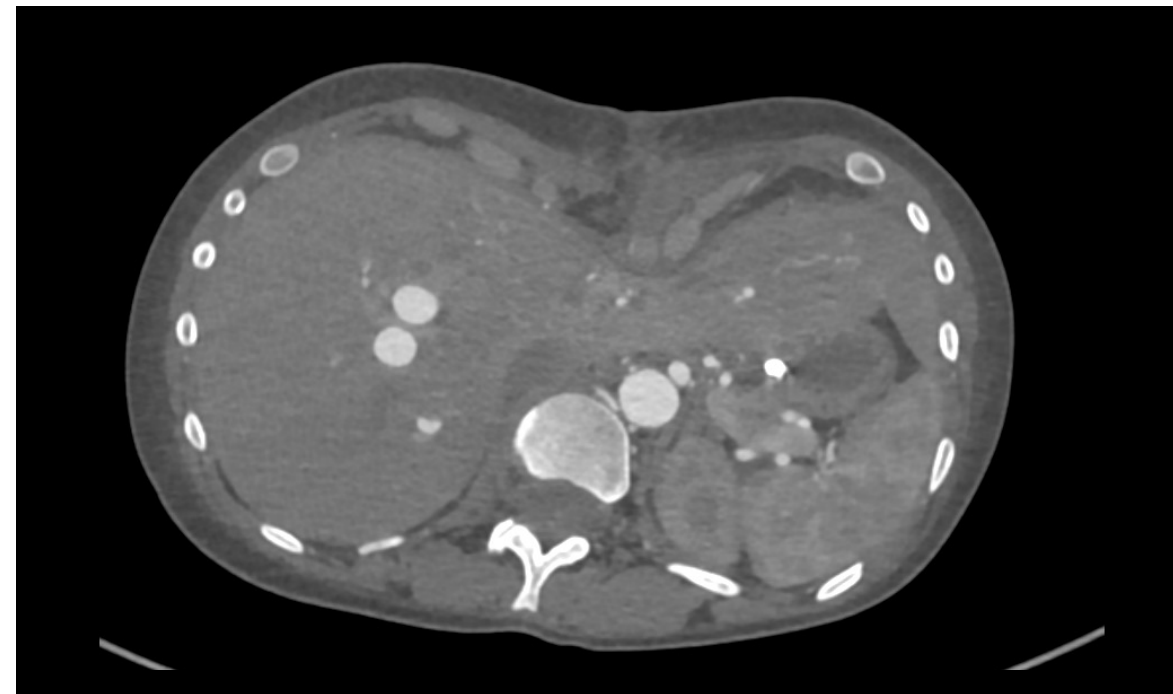
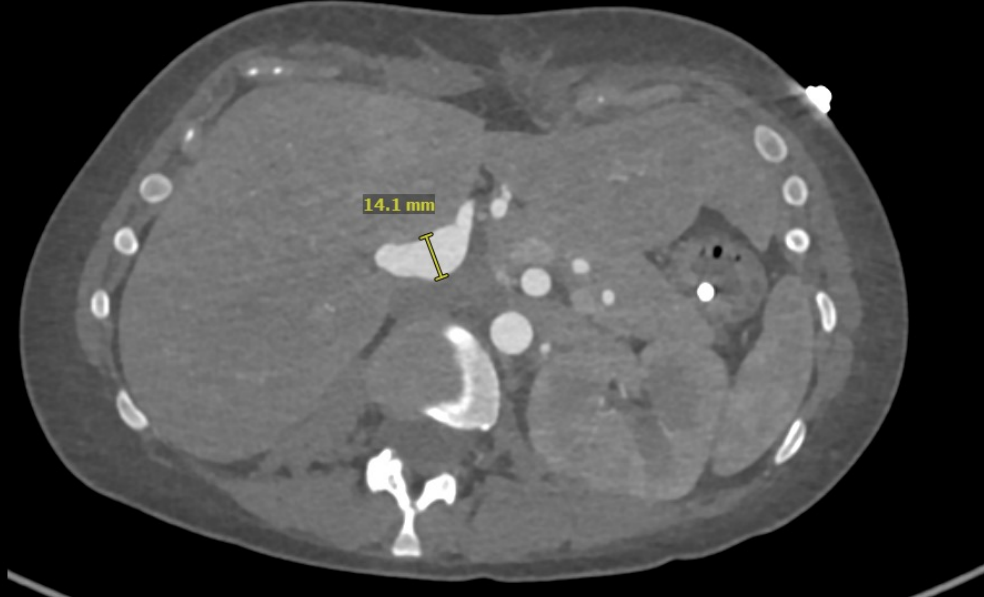
- Different from the non-arteriopathy patients
- Growth
- Location
- Risk of rupture

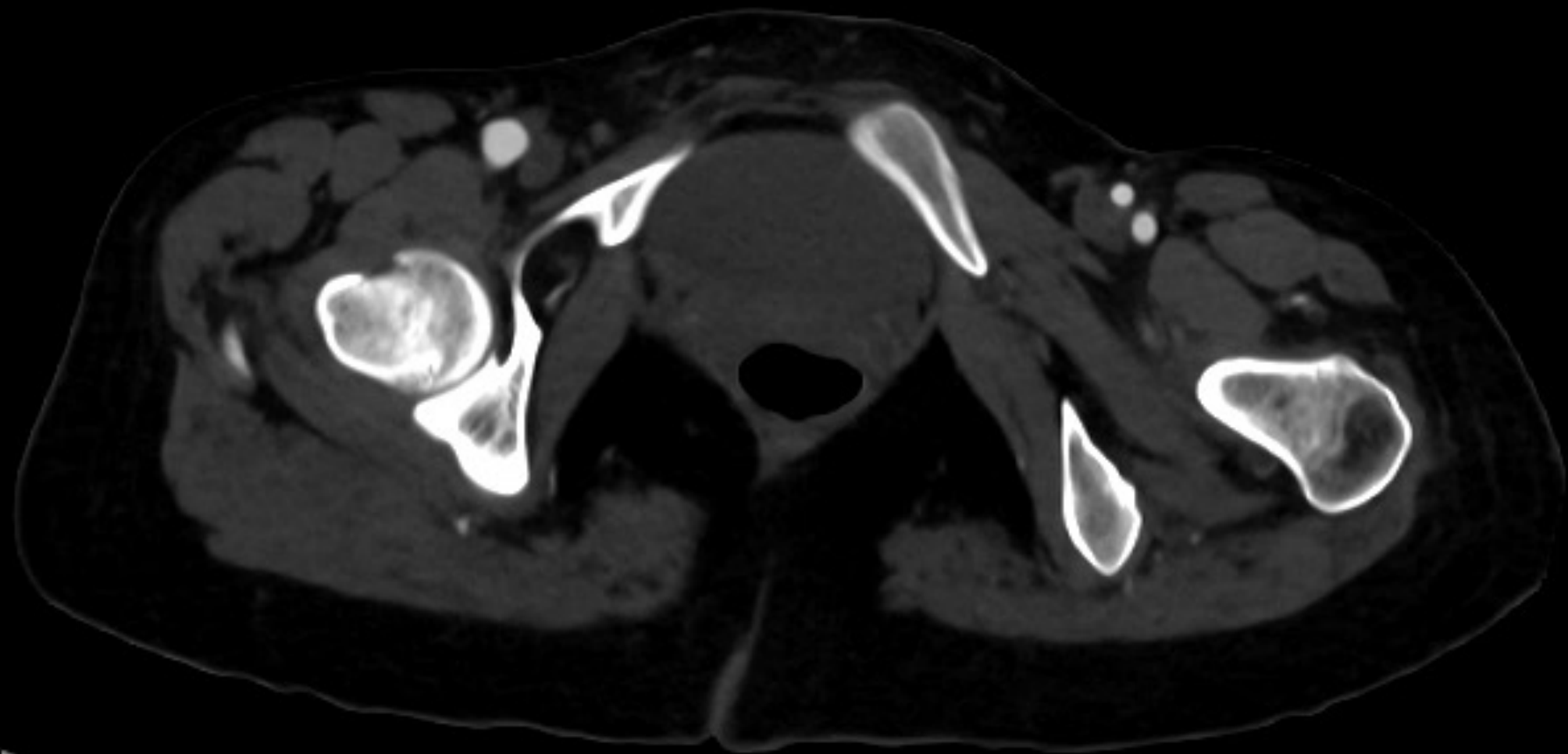


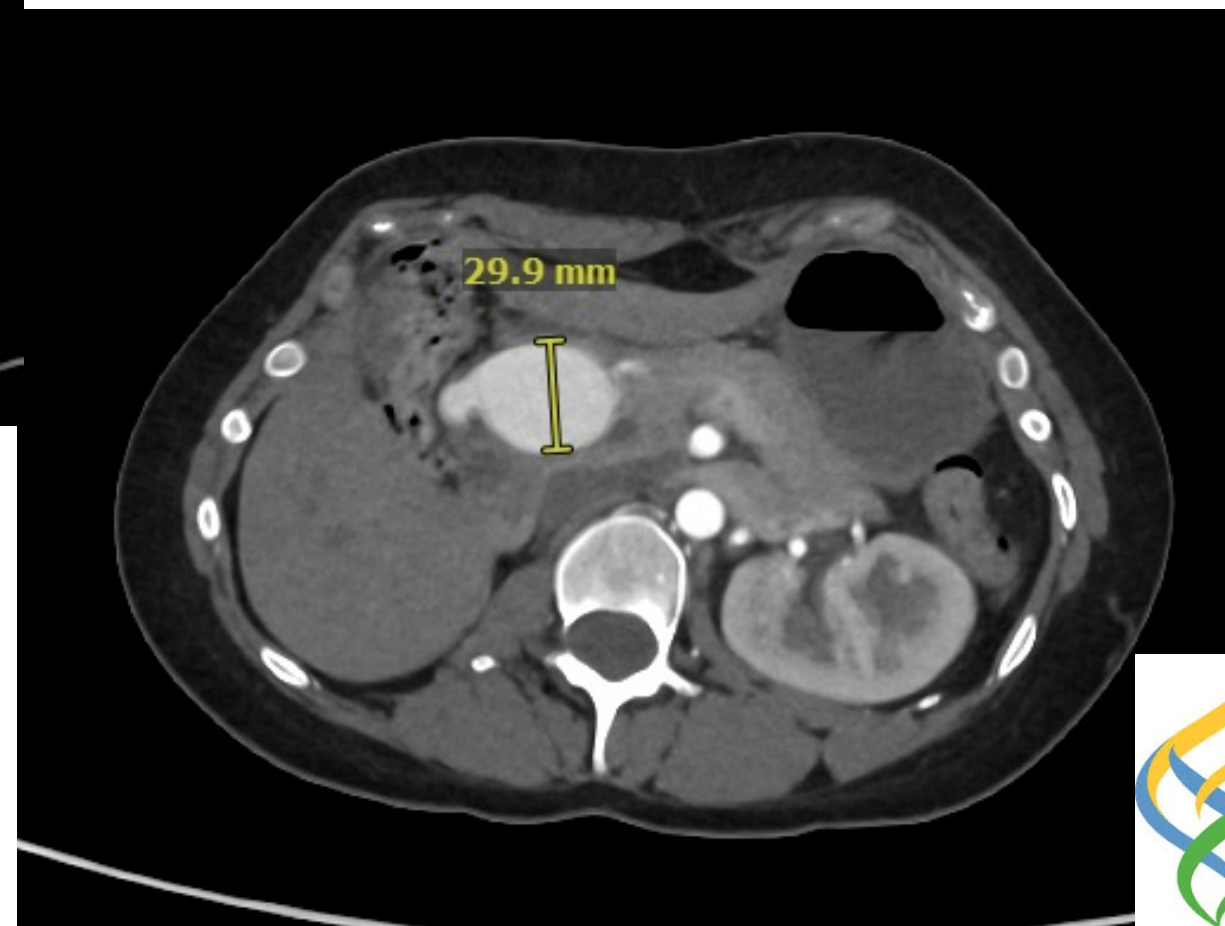
Pre- procedure imaging

- When to treat?
 - Serial imaging
 - Helpful for stability/growth
 - Timing of intervention



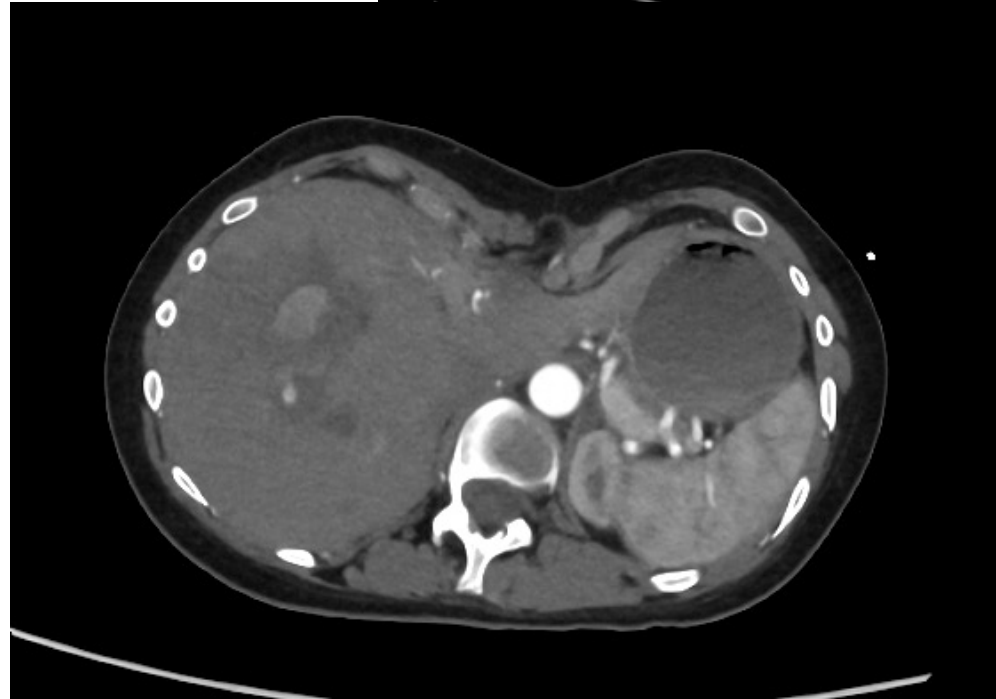
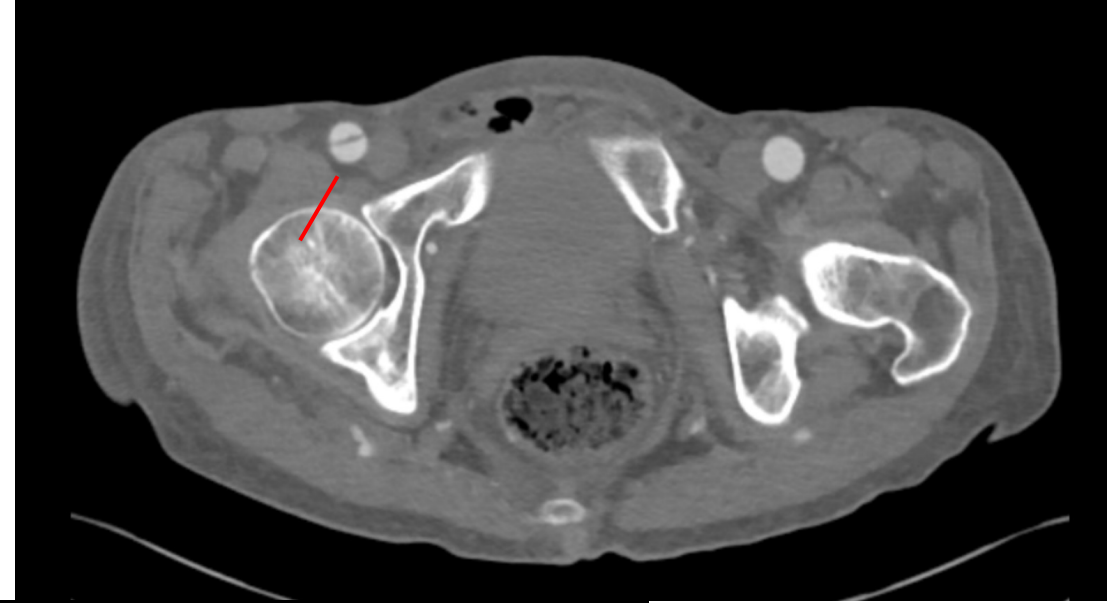


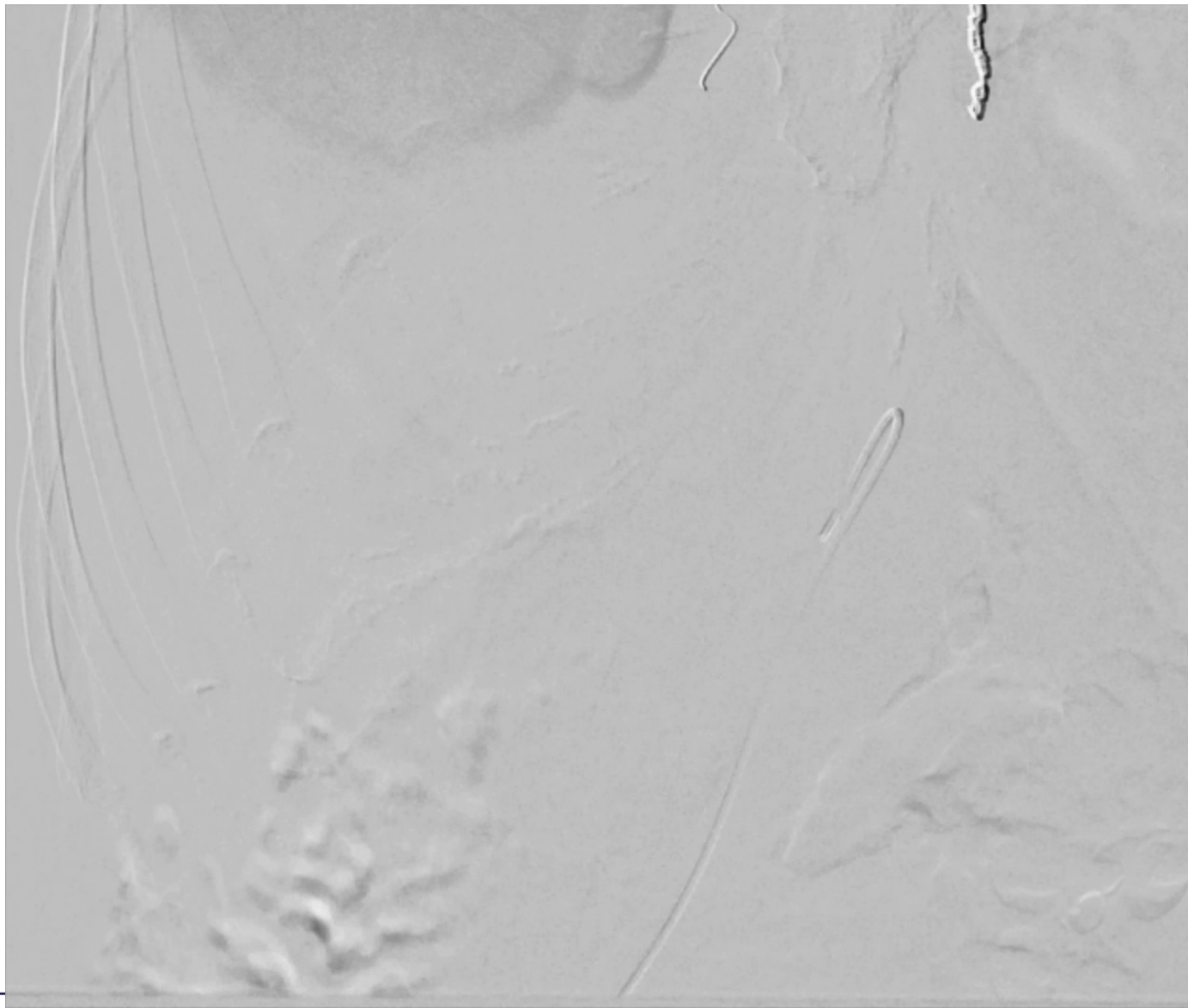




Pre-procedure imaging

- When to treat?
 - Serial imaging
 - Helpful for stability/growth
 - Timing of intervention
- Determine access site
- Plan procedure
 - Catheter shapes
- Mural thrombus
- Dissections

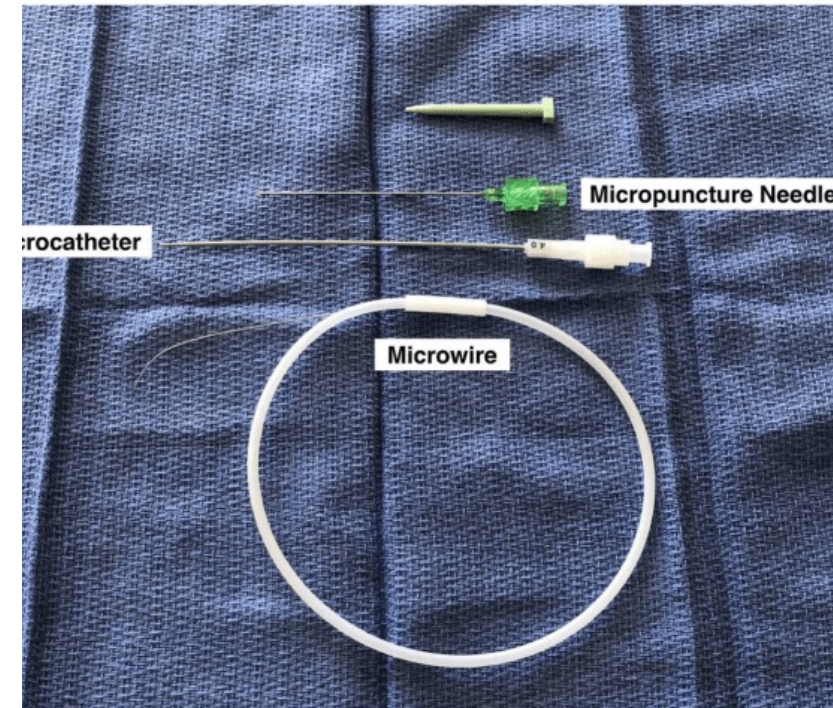




Access

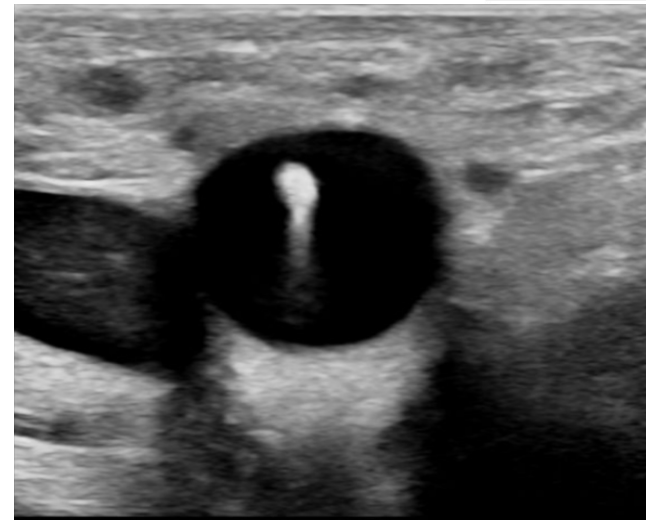
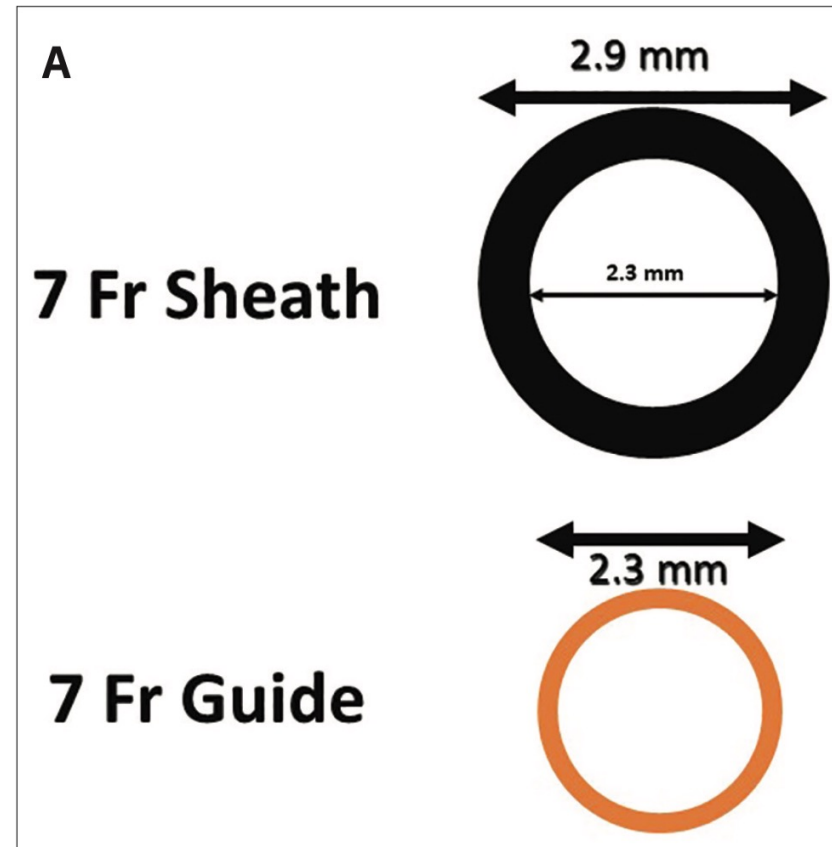
- Patient genetics
 - Fragility of the tissue
- Laterality
 - Dissections
 - Intervening pathology
 - Occlusions/stenosis
 - Aneurysm
- Size of sheath/access needed
- Type of access
 - Percutaneous alone?
 - Cut-down
 - Direct stick?

What's
the
plan?



Tricks for Percutaneous Arterial Access

- Ultrasound guidance
- Take your time
- Start small, keep it soft
 - 21 G micropuncture and upsize
 - Smallest sheath/access possible
 - Think outside the box
 - 4 French
 - Radial slim
 - Thin
 - Lack stability
 - Micropuncture with check flow

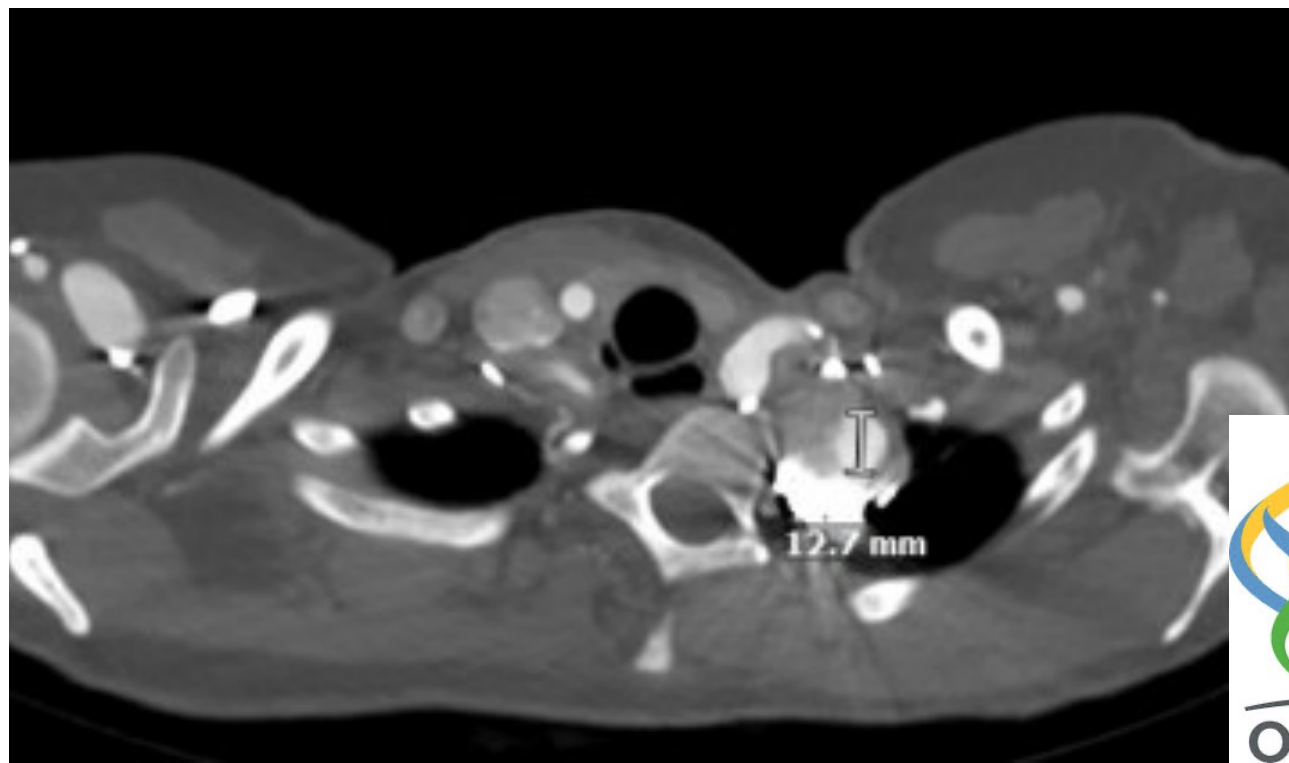
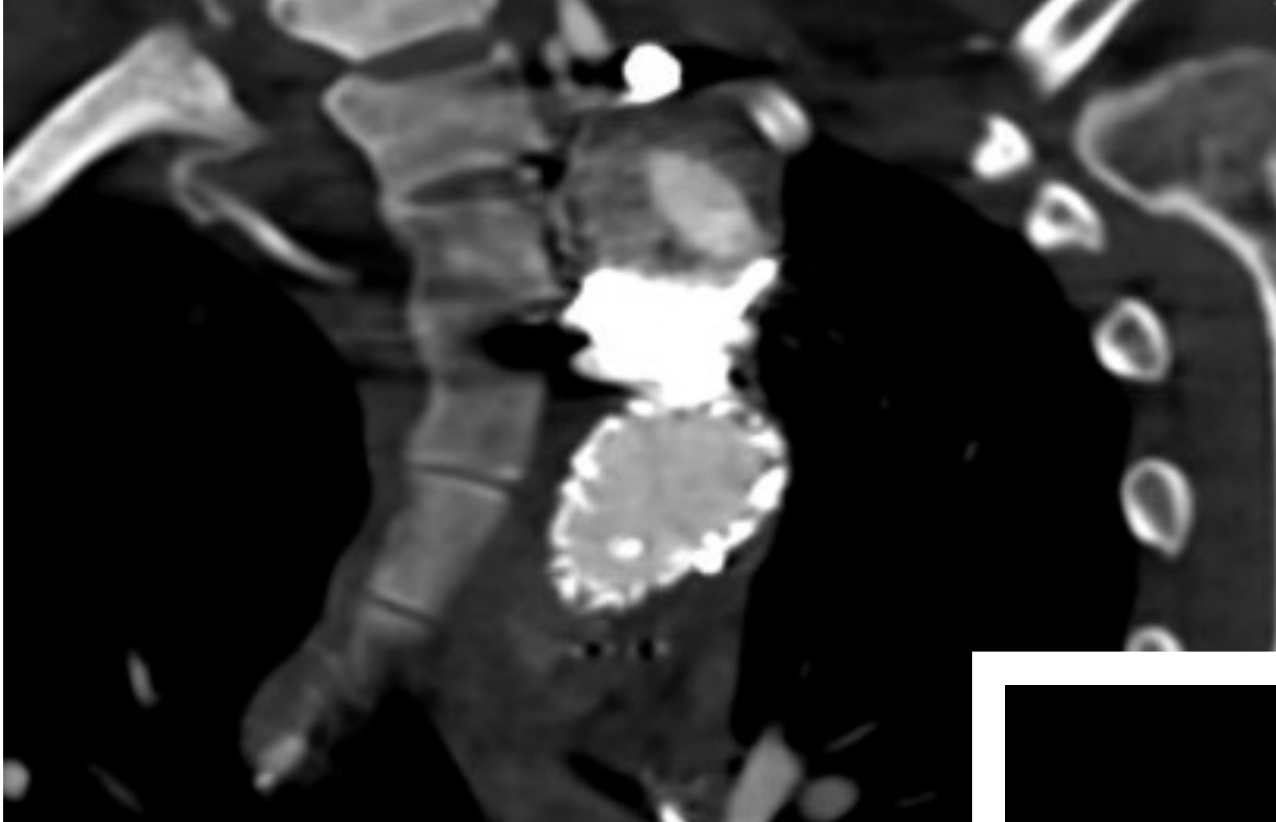


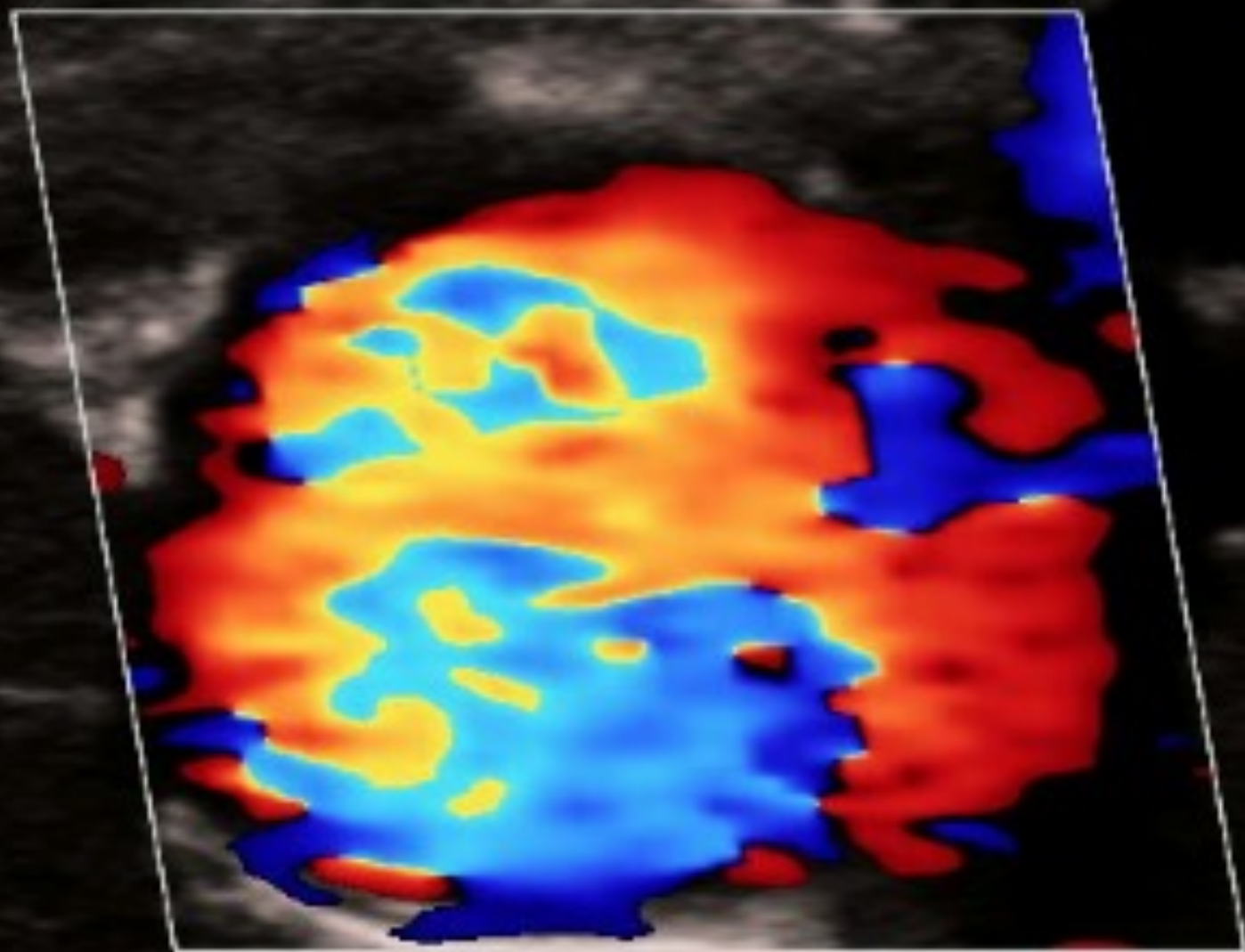
How to get there?

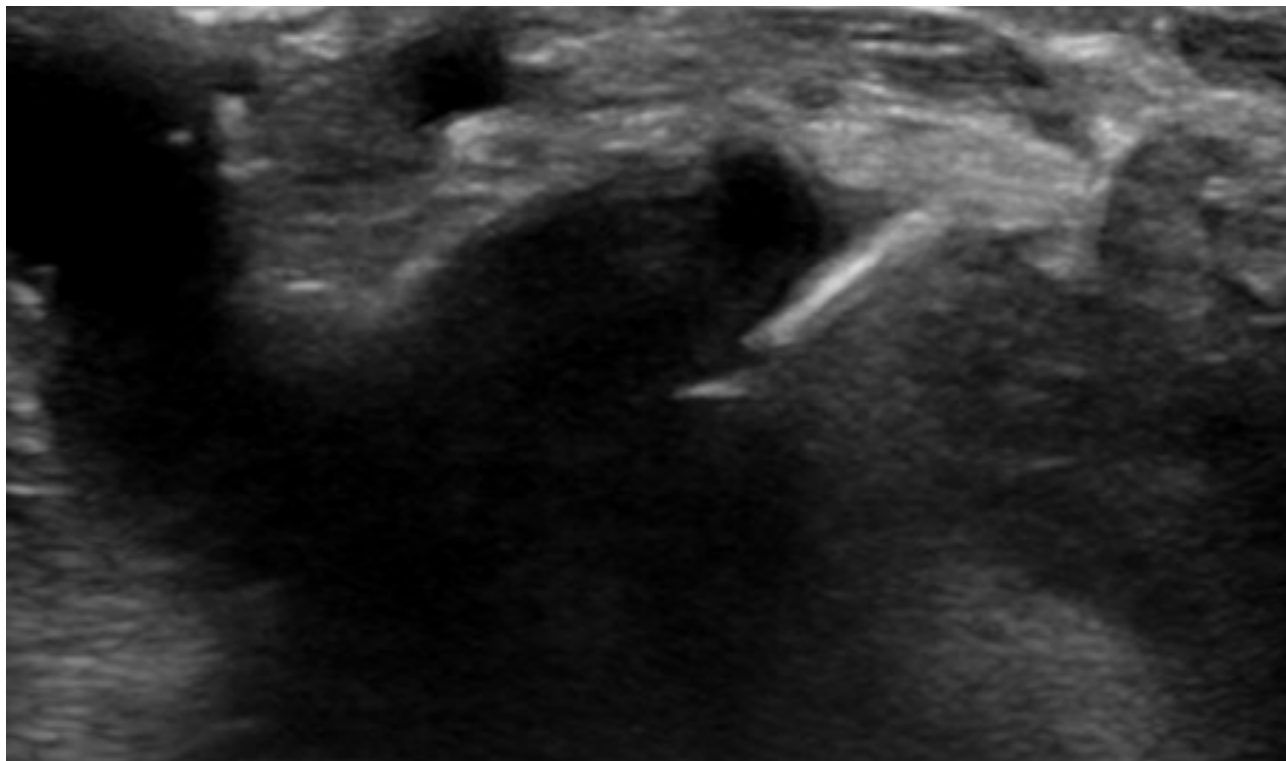
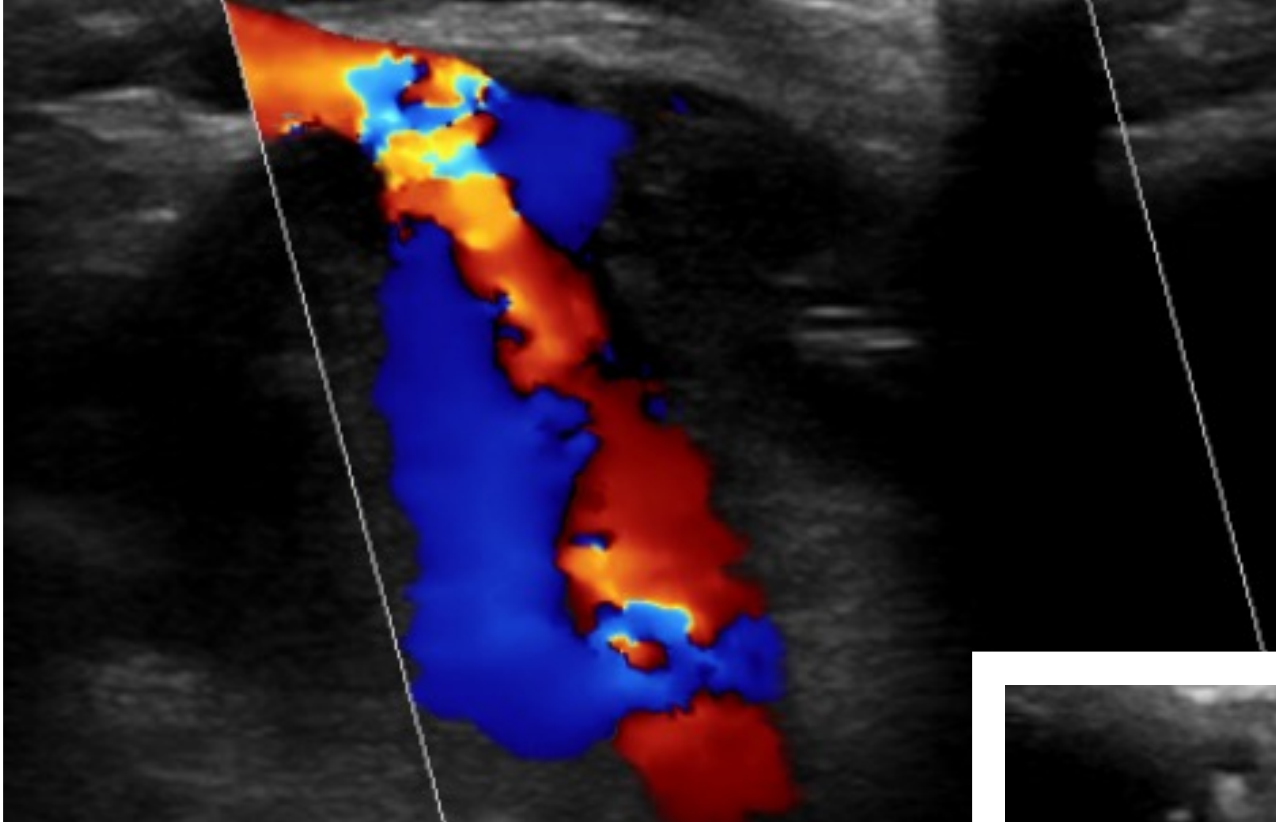


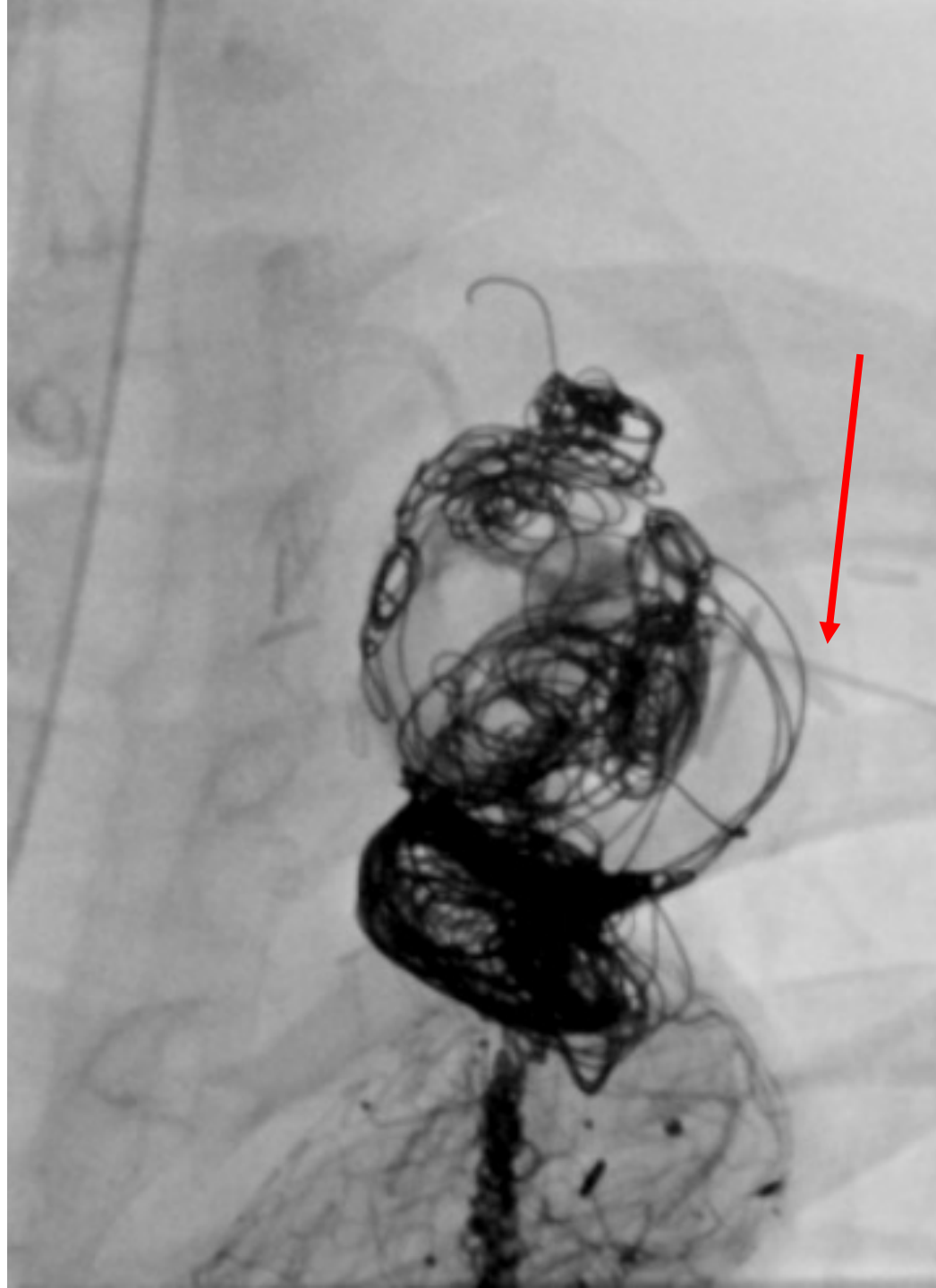
Direct Stick

- Do you need to go through the vessels or is there a more direct route?



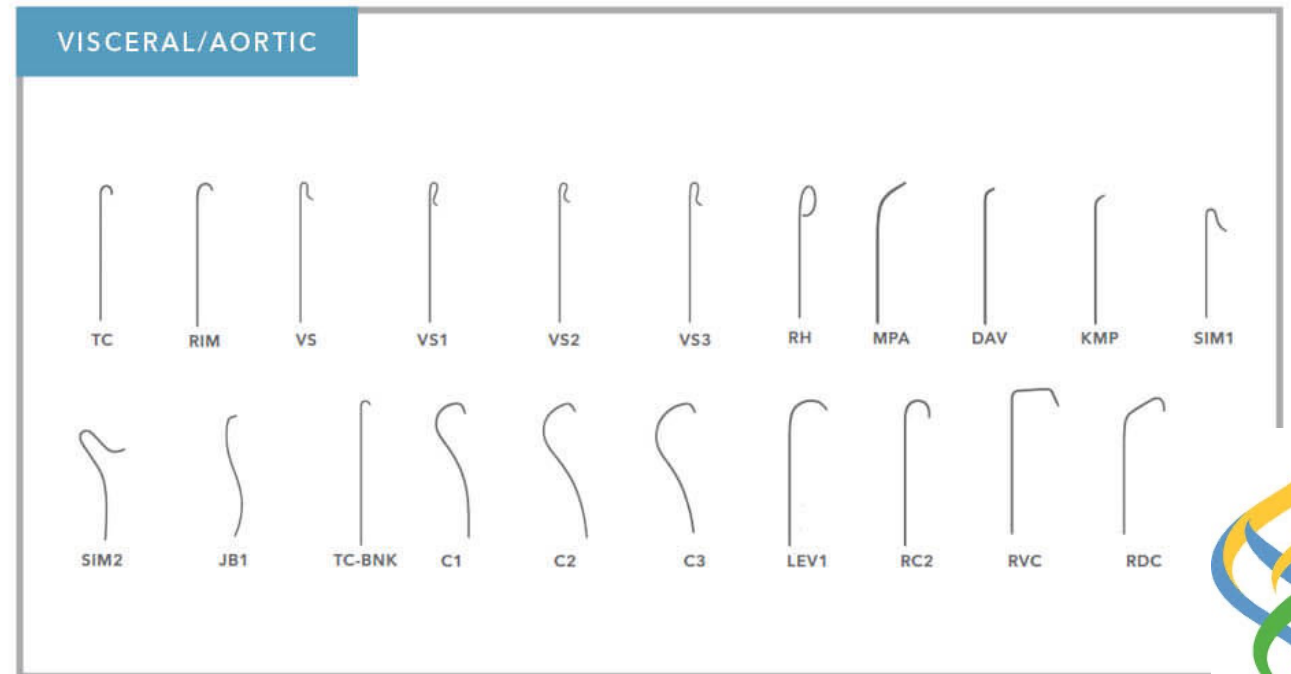


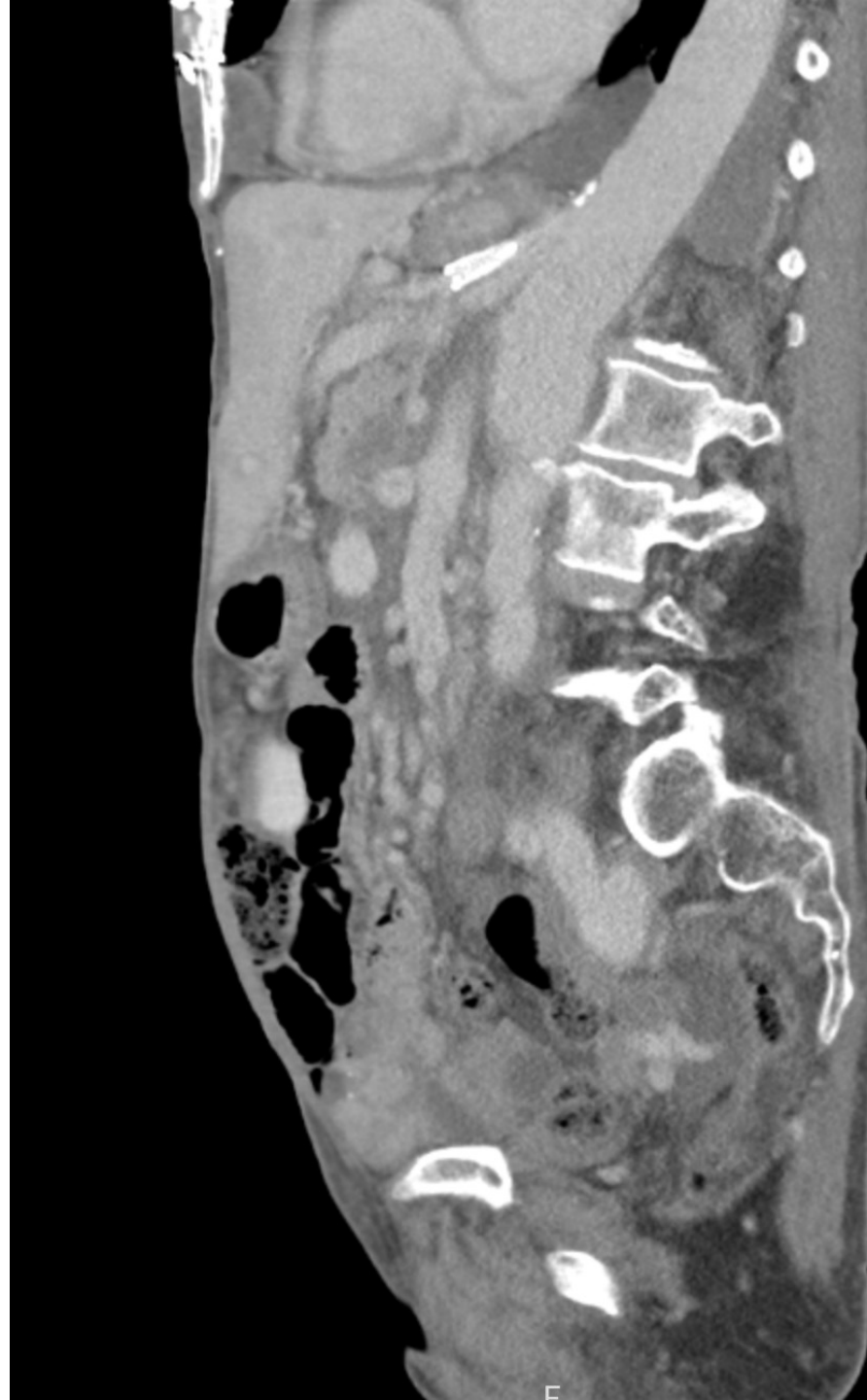
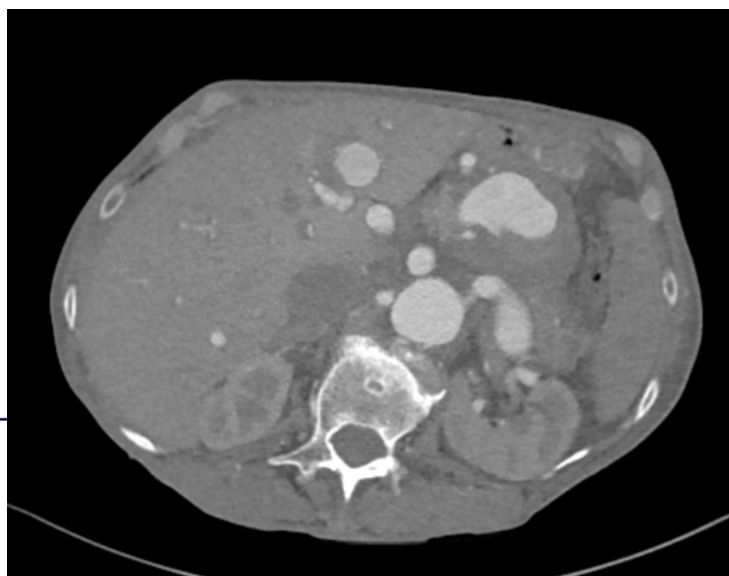




Arterial access

- Study your pre-procedure imaging
- Know your product!!
- Wire
 - Soft
 - Benson
 - Glide
- Catheter shape







REF G08585 REF
LOT 5018944 REF HNBRS.0-38-100-P-NS-SIM3

SIM3

5.0 F .038" 100 cm



11 cc/sec at 82 bar/1200 psi

**Beacon® Tip Torcon NB®
Advantage Catheter**

EC REP William Cook Europe ApS
Sandet 8 DK - 4632 Bjaeverskov, DENMARK

2014-06 2017-06

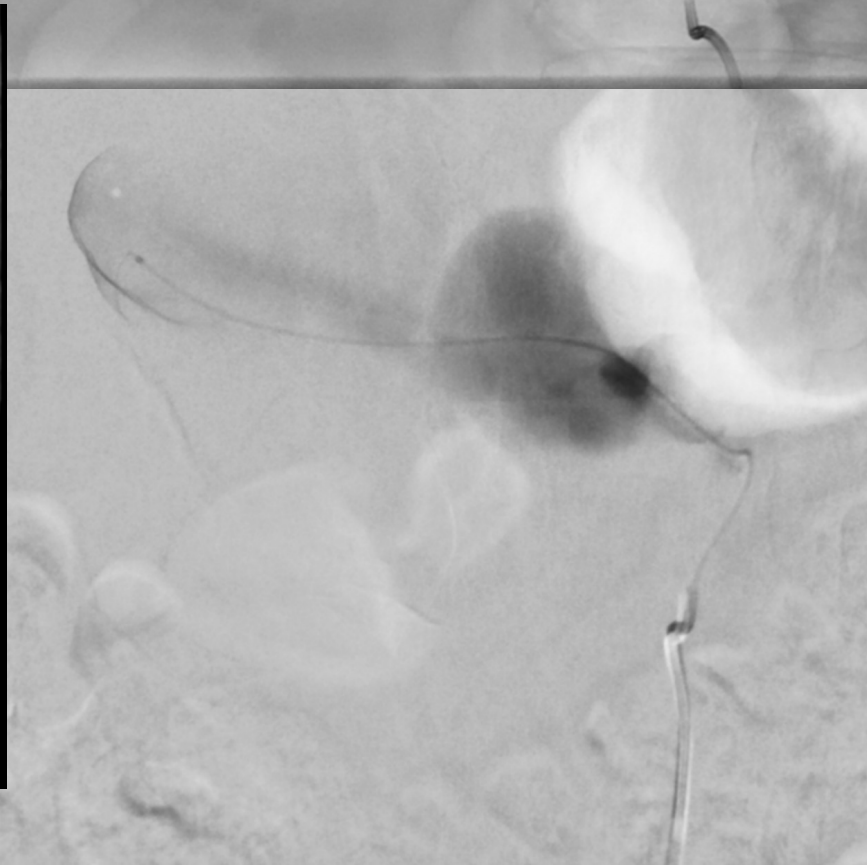
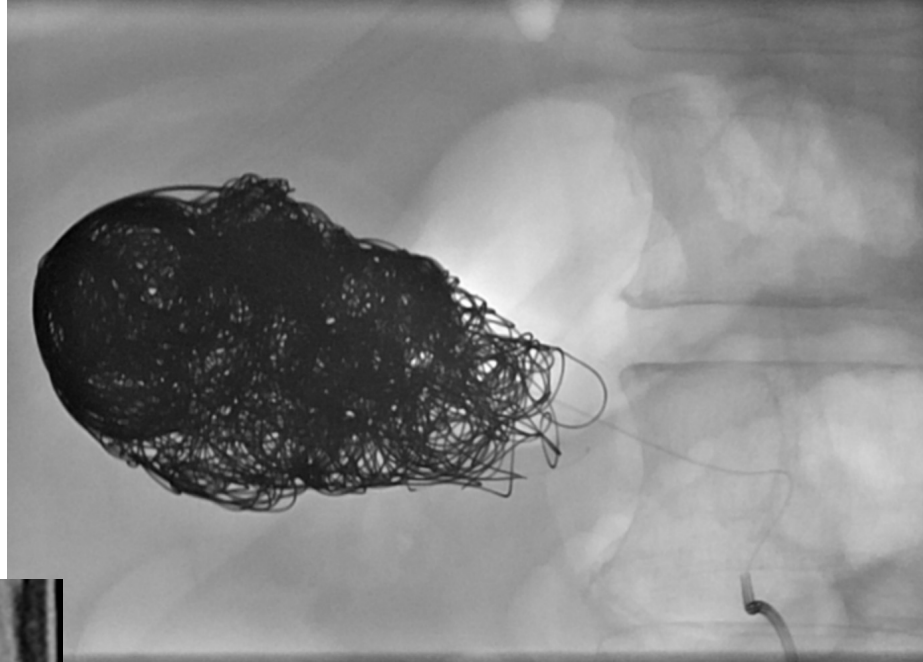
HNBRS.0-38-100-P-NS-SIM3

REF G08585

MADE IN USA Rx only

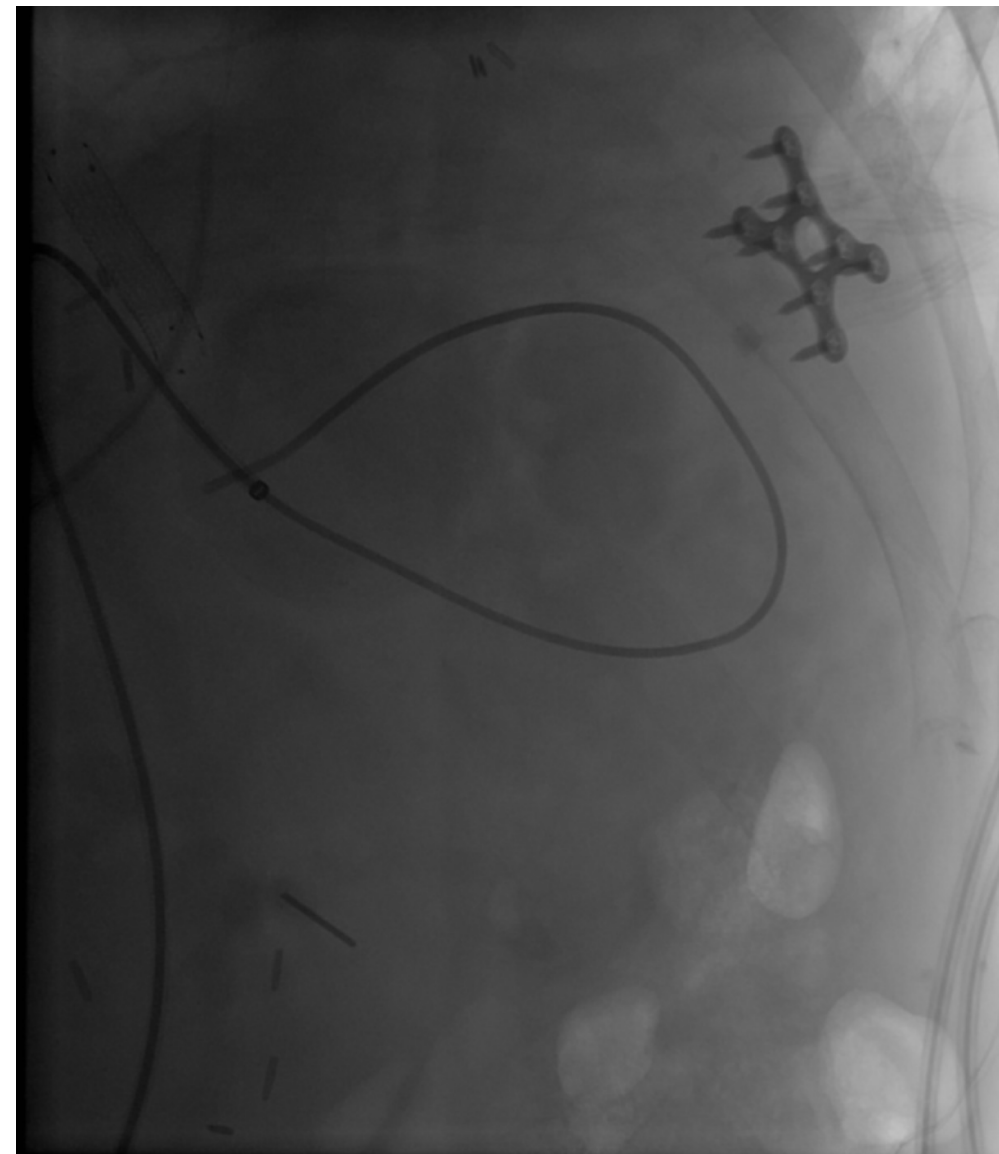
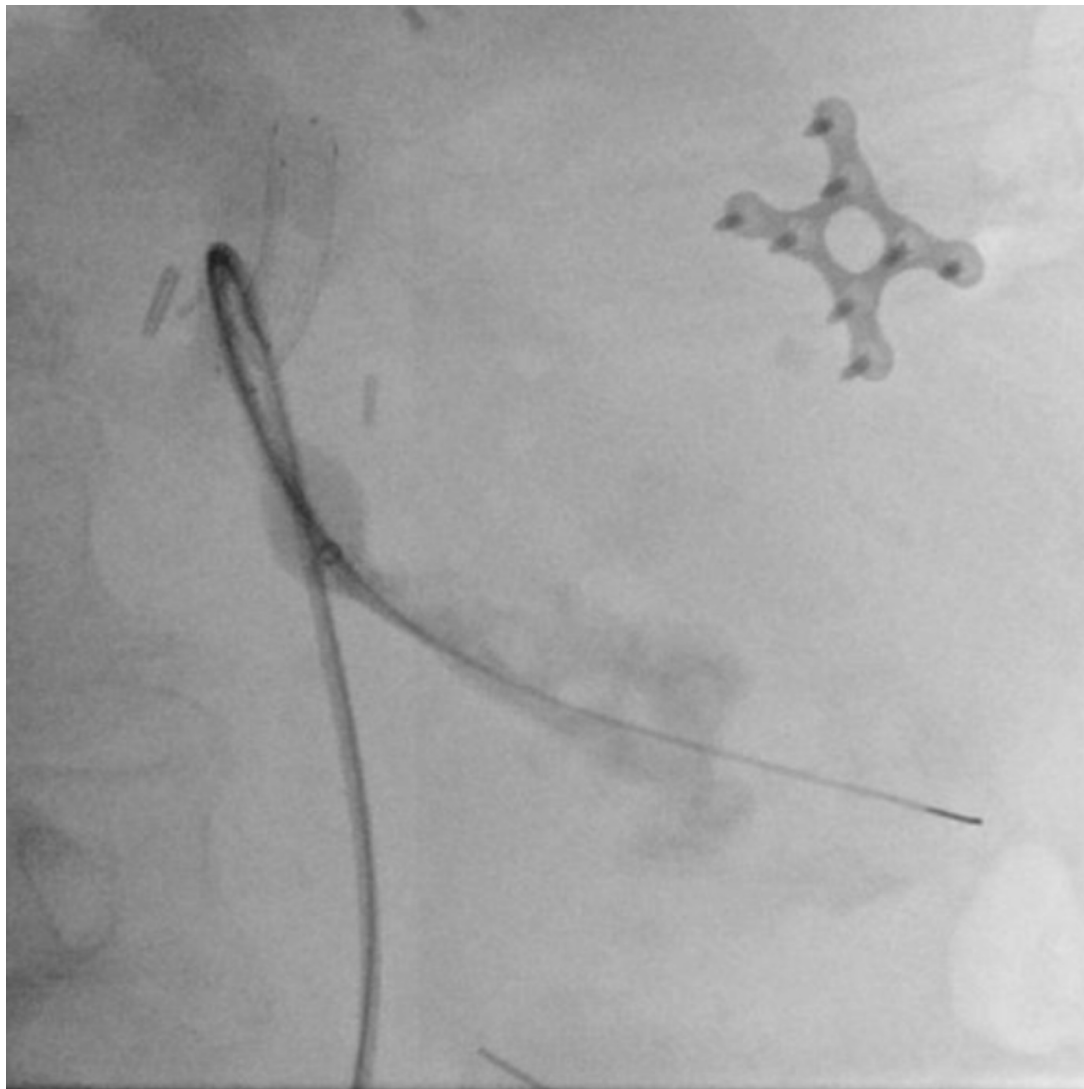
C2_REV 3

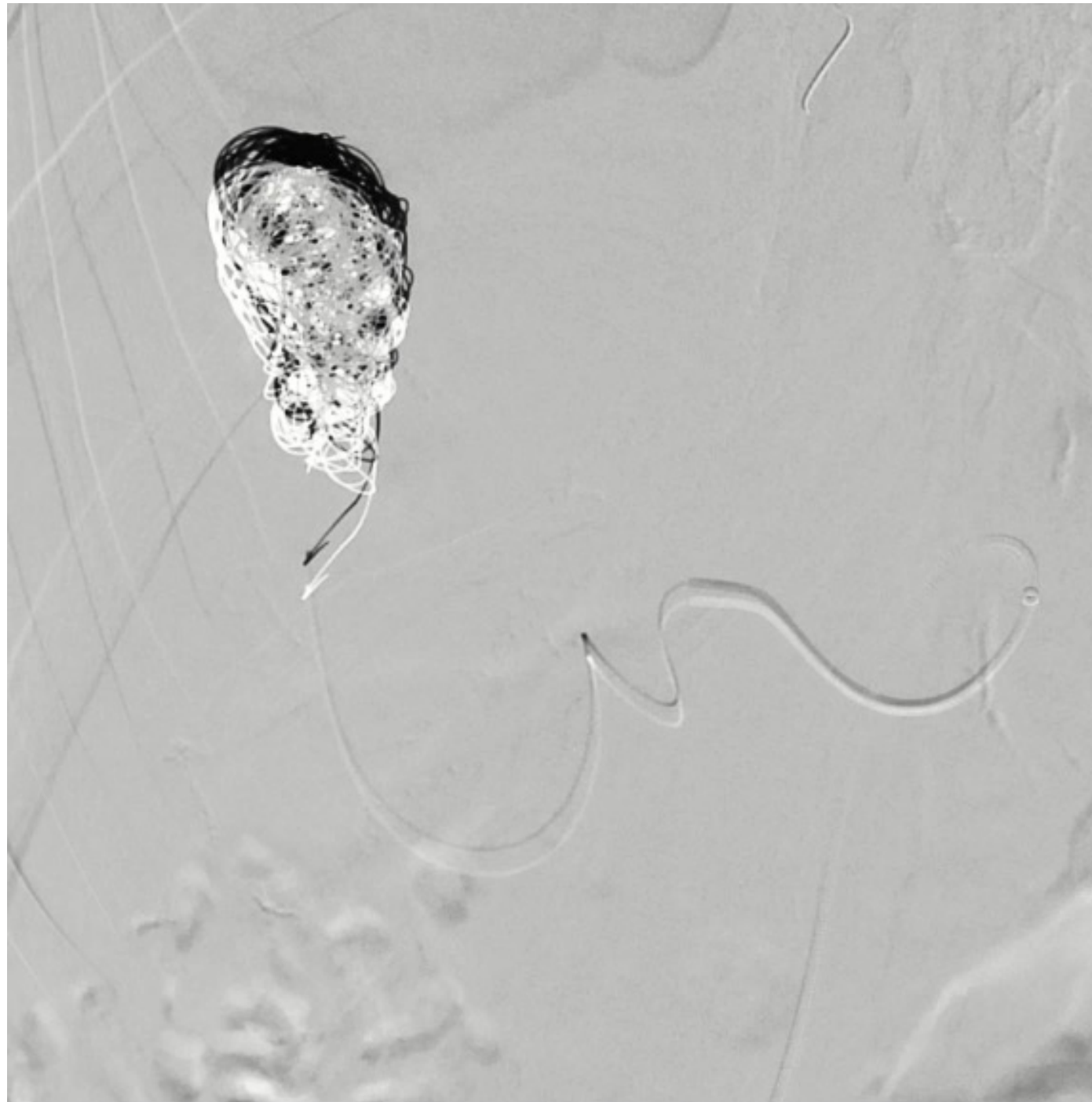




Stability for the Embolization

- Stability of system
- Tri-axial?
- Support
- Plan A, B, C, D, and....Bail out



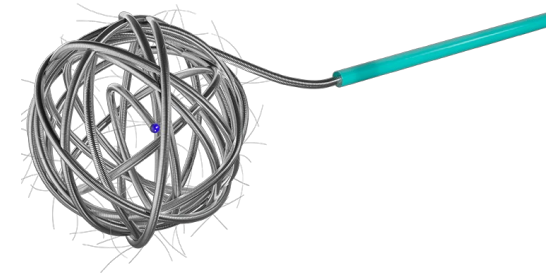


Embolics - Coils



Coils

- Platinum
- Delivery
 - Pushable
 - Detachable
- Type
 - Soft
 - Framing
 - Gel
 - Fibered
 - Bare metal
 - Figure of 8
 - Tornado



Basics

Pushable

- Commit once load to the catheter
- Older technology
- Nuanced deployment
- More fibers
- Stiff

Detachable

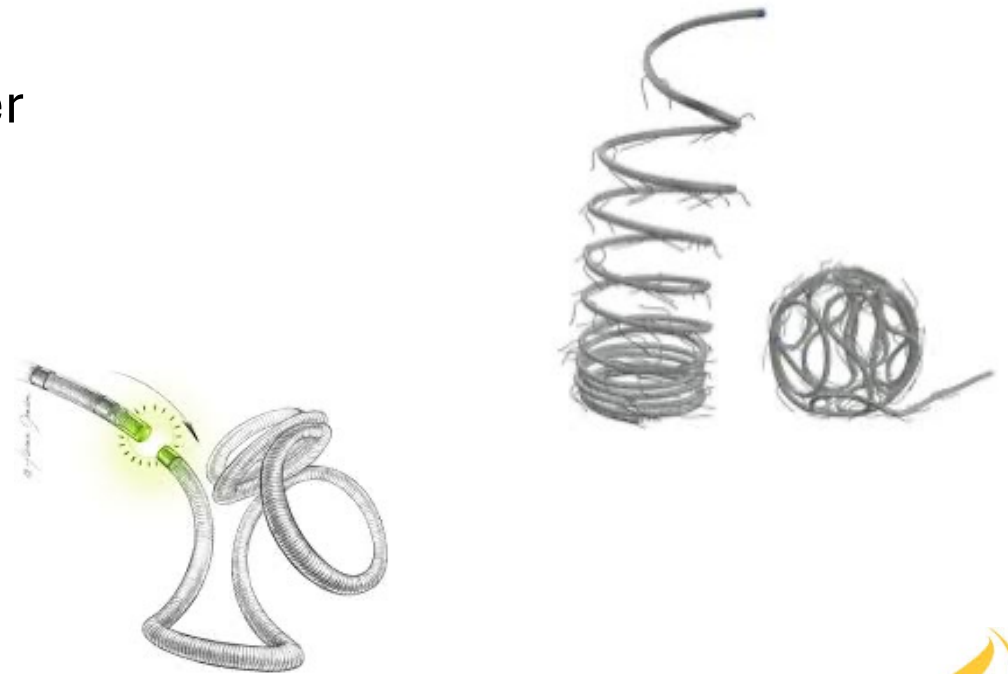
- Newer technology
- Can retract and remove
- More forgiving
 - Don't like coil or sizing
- Softer



Detachable

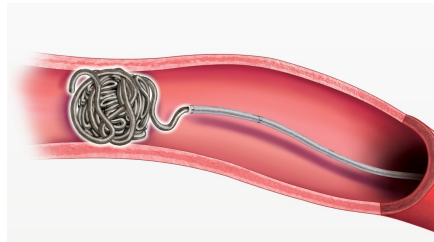


- Know catheter compatibility and sizing will differ based on coil
- In general – smaller catheter type
 - Hi-flow will start to buckle in the microcatheter
 - Certain coils require certain catheters
- Different properties of the coils
 - Packing
 - Framing
 - Gel
 - “Plug-like”
- Fibered versus non-fibered “liquid metal”
- Deployment lengths
- Releasing the coil

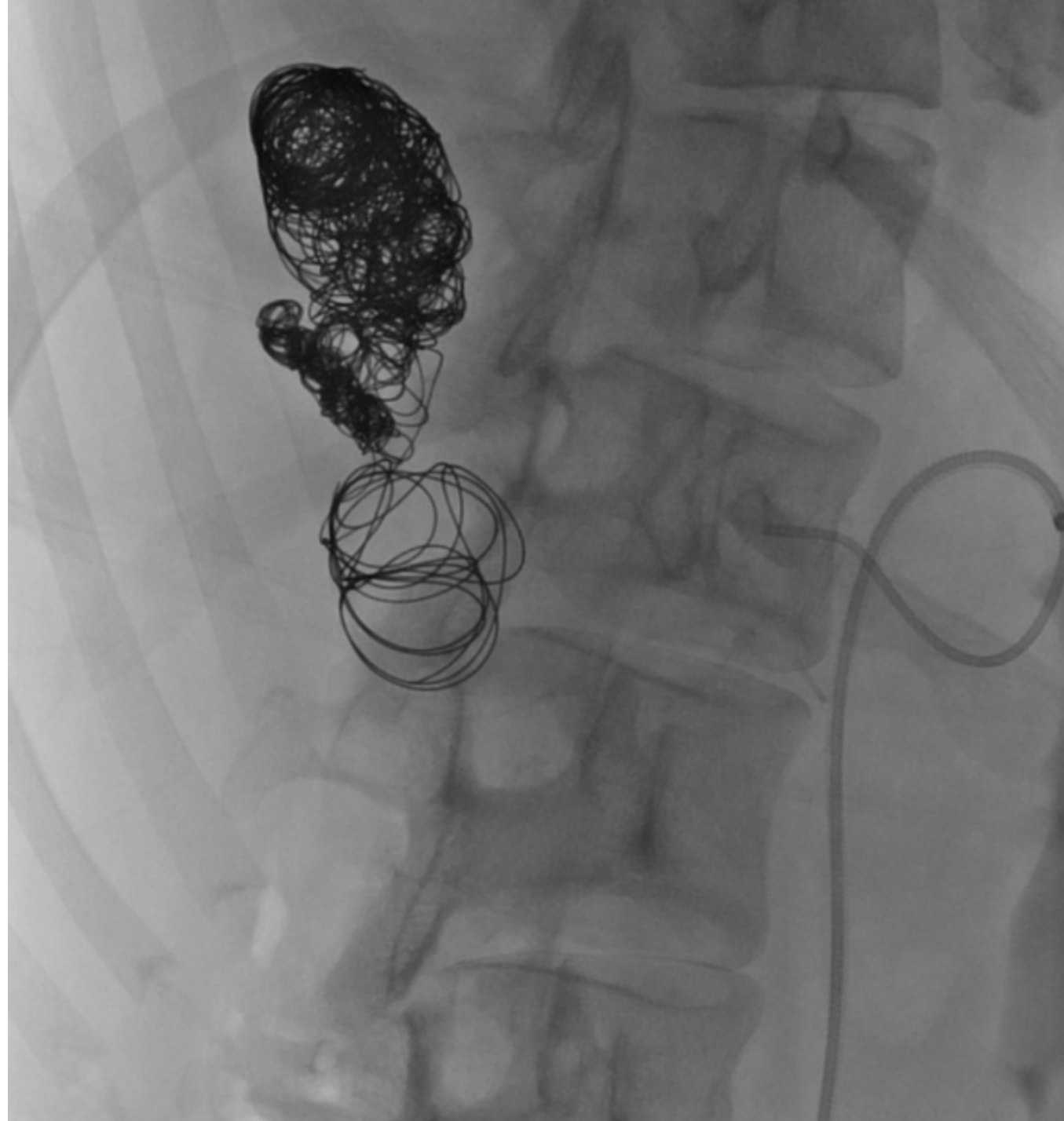
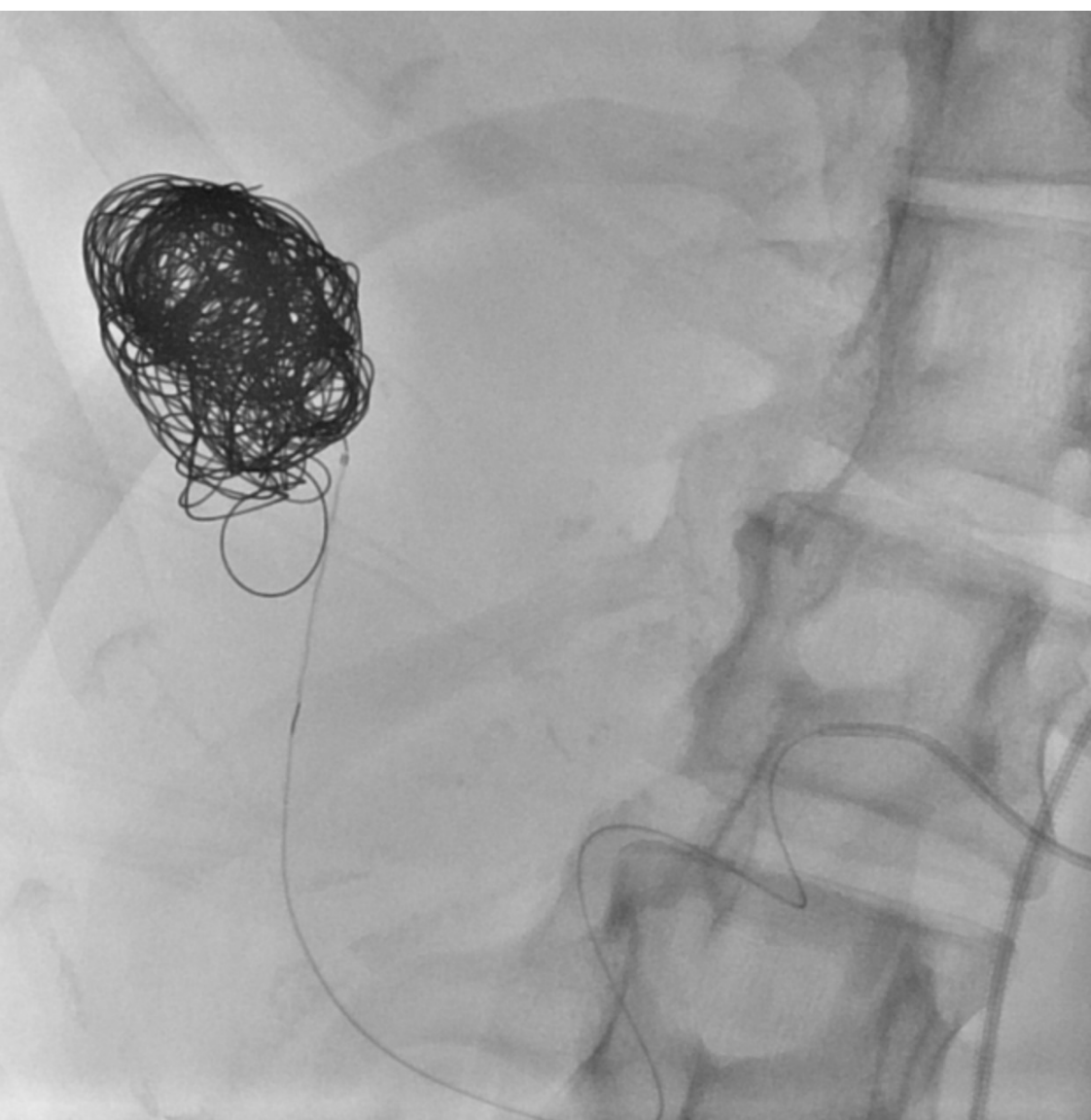


Framing and Packing coils

- Multiple different types and brands
- Frame “1:1” in the aneurysm
 - Not always possible
 - Look at outflow
- Follow with smaller size coils or packing



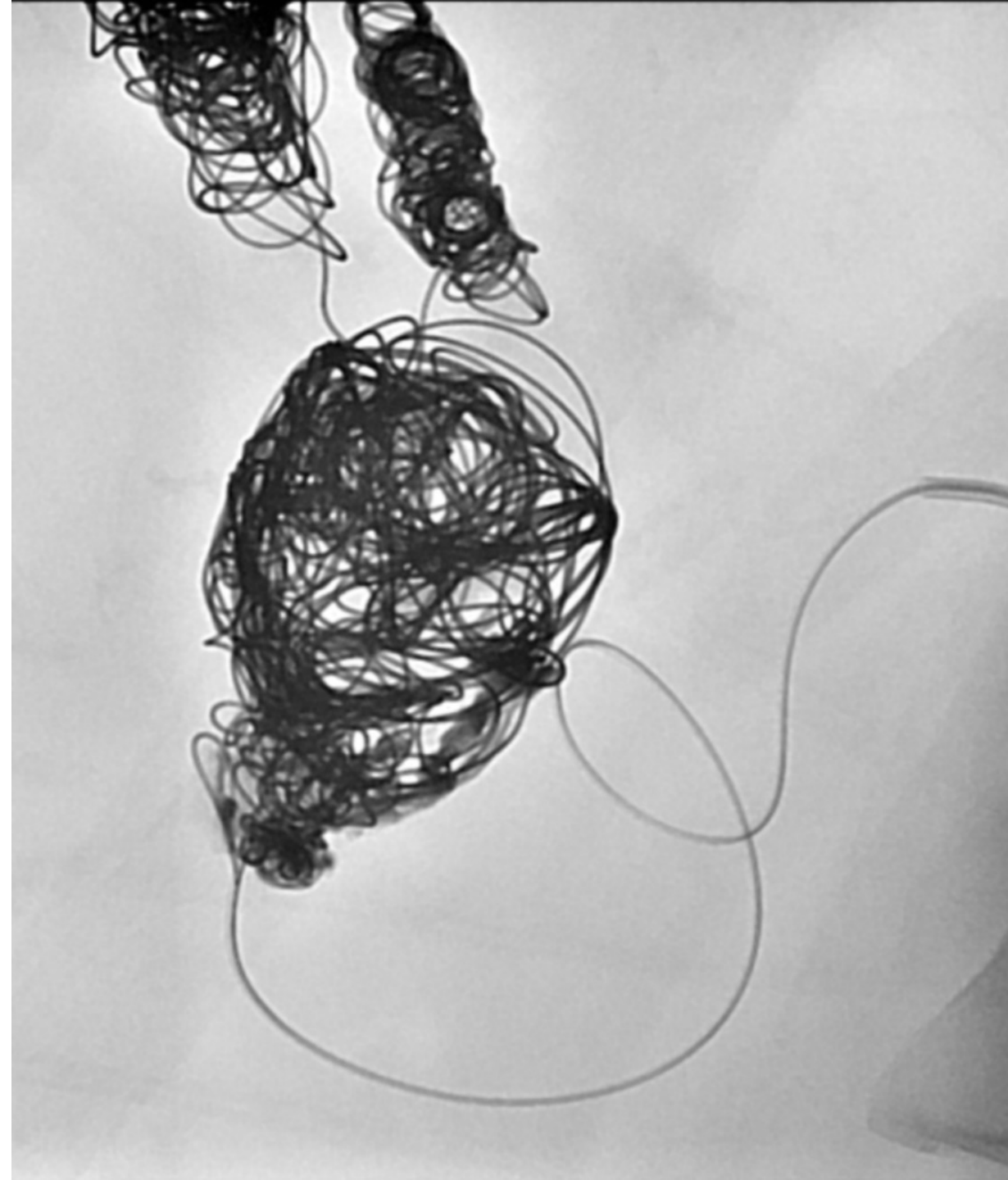






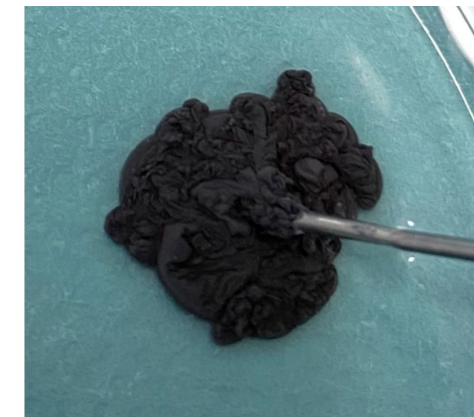
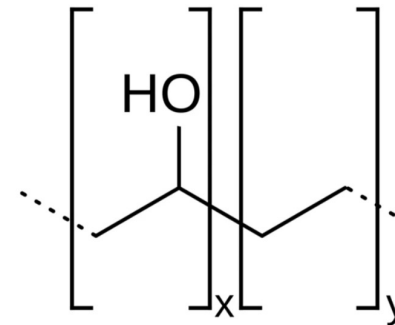
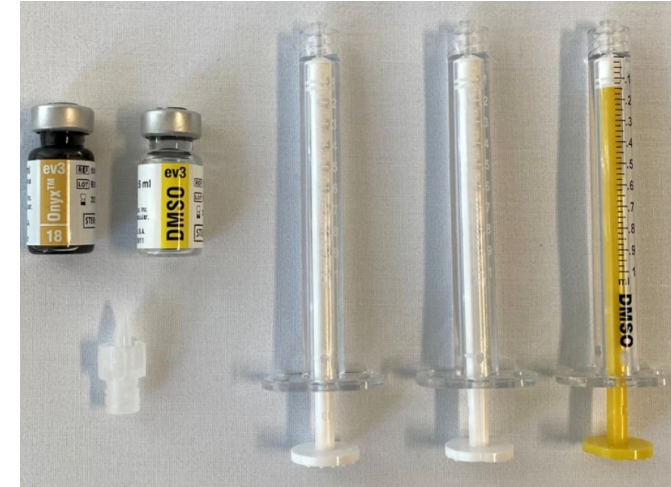
Options?

- Continue to pack
- Try a fibered coil
- Liquid embolic
- Gelfoam



Onyx, Squid, LAVA

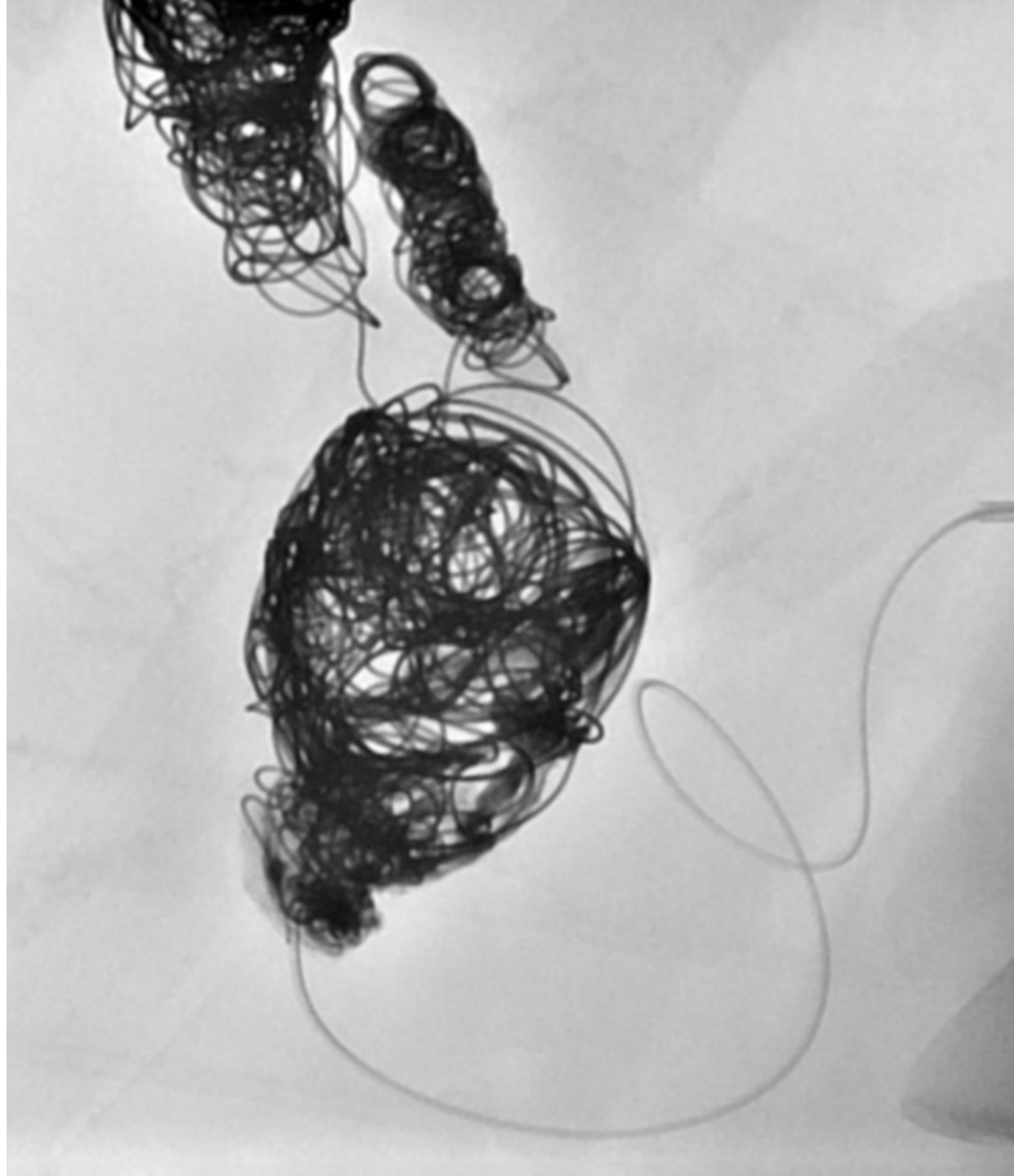
- Non-adhesive liquid embolic agents
- Ethylene vinyl alcohol (EVOH) copolymer mixed with tantalum
- Flush catheter with DMSO
 - Dimethyl sulfoxide
- Think of behavior like Lava
- Different viscosities



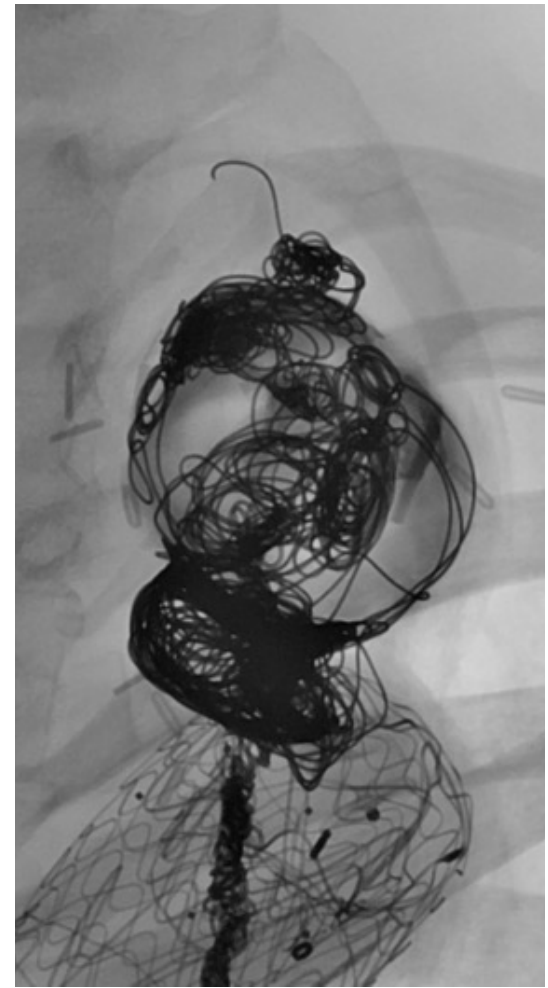
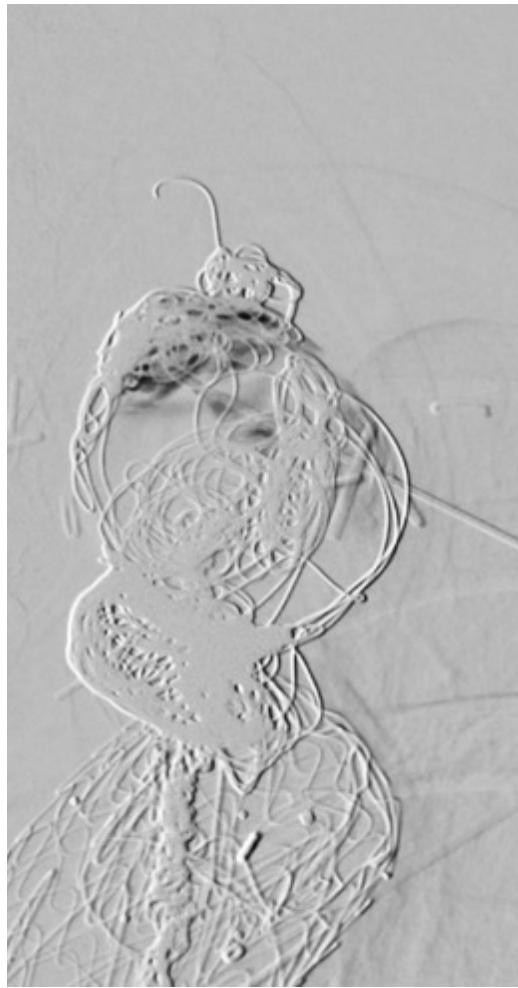
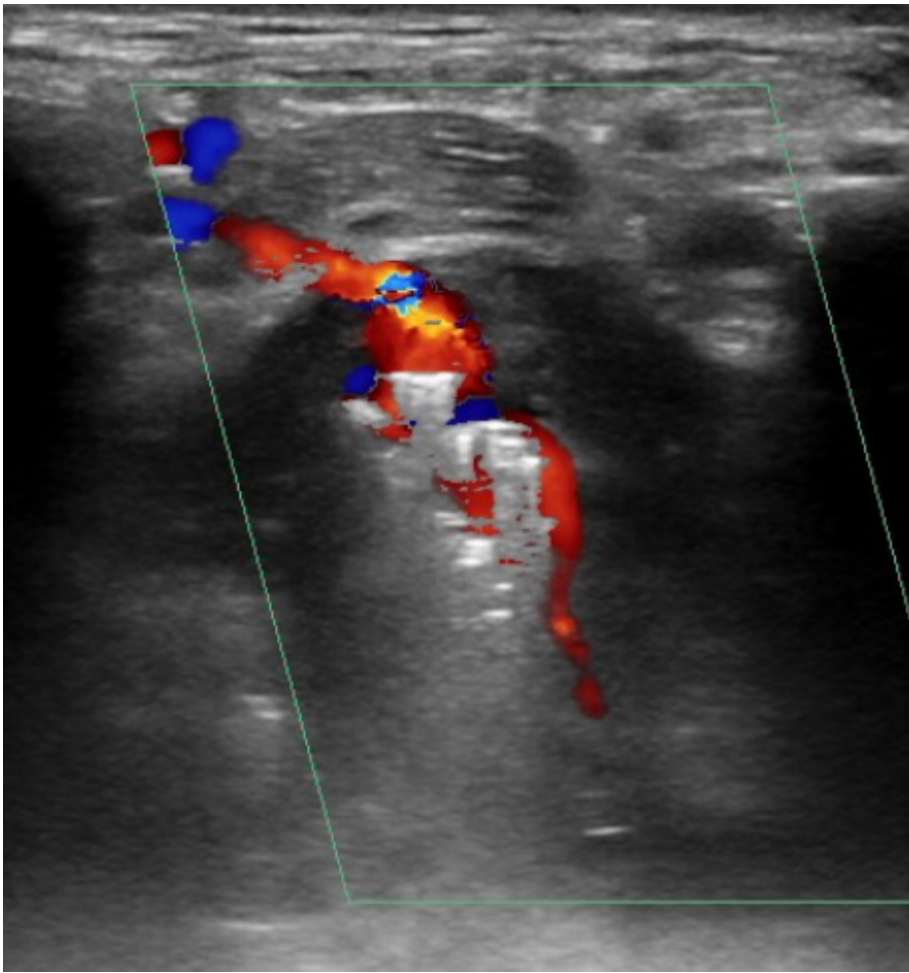
Glue - cyanoacrylate

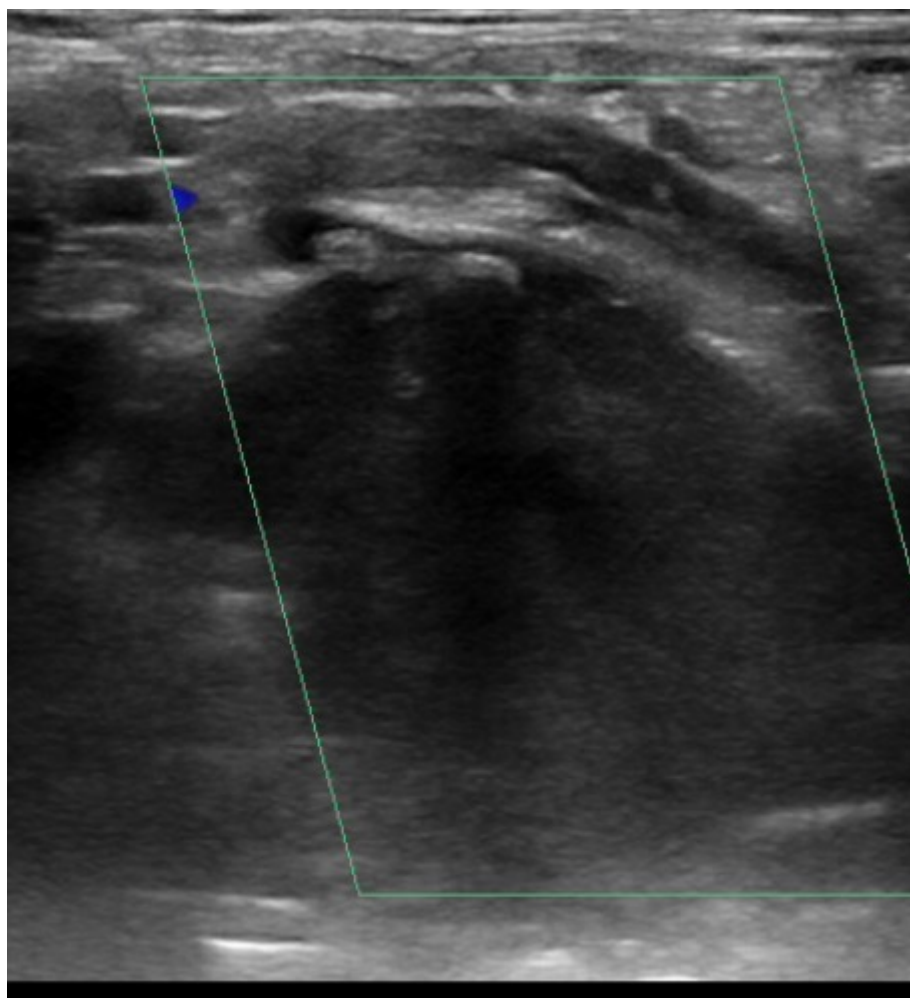
- Mix with Lipiodol
 - Dilution for desired viscosity
- Flush catheter with D5
- Can “pulse” or bolus
 - Chase with D5
- Risks
 - Non-target embolization
 - Occlusion in catheter













Questions?