

Bilateral Approach for Combined Chronic Total Occlusion in SFA ISR lesion and BTK lesion

Seung-Woon Rha, MD, PhD,
FACC, FAHA, FSCAI, FESC, FAPSCIC

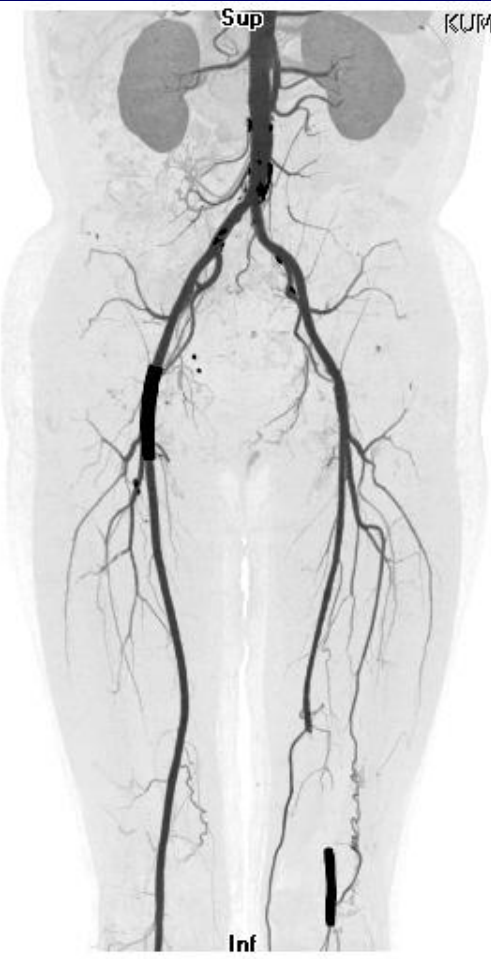
Div of Cardiovascular Intervention and Research
Cardiovascular Center,
Korea University Guro Hospital, Seoul, Korea

Patient's Baseline Data

1. A/S; 51/ Male
2. C.C.; Typical worsening claudication (onset; 1 year ago) and non-healing wound in left foot (since 1 month ago)
3. Past History
DM (+), Hypertension (-), Smoking (+)
Previous PTA (Dec 2, 2011, different hospital)
; Rt CFA- Wallstent 10.0X68mm
Lt popliteal a-Wallstent 6.0X59mm
4. Laboratory Finding
ABI-not done, Pre-PTA CT; total occlusion from Lt SFA

Baseline CT Angiography

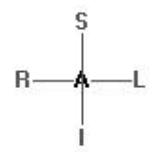
백형기(051Y / M)
01719193
2013-03-18
11:09:15



KUMC GURO HOSPITAL 백형기(051Y / M)
Voxar 3D 01719193
Srs:427454686 2013-03-18
Img:1 11:09:48

PP:FFS

LfRt



L:127
W:255



KUMC GURO HOSPITAL 백형기(051Y / M)
Voxar 3D 01719193
Srs:427454687 2013-03-18
Img:1 11:09:48

Lft

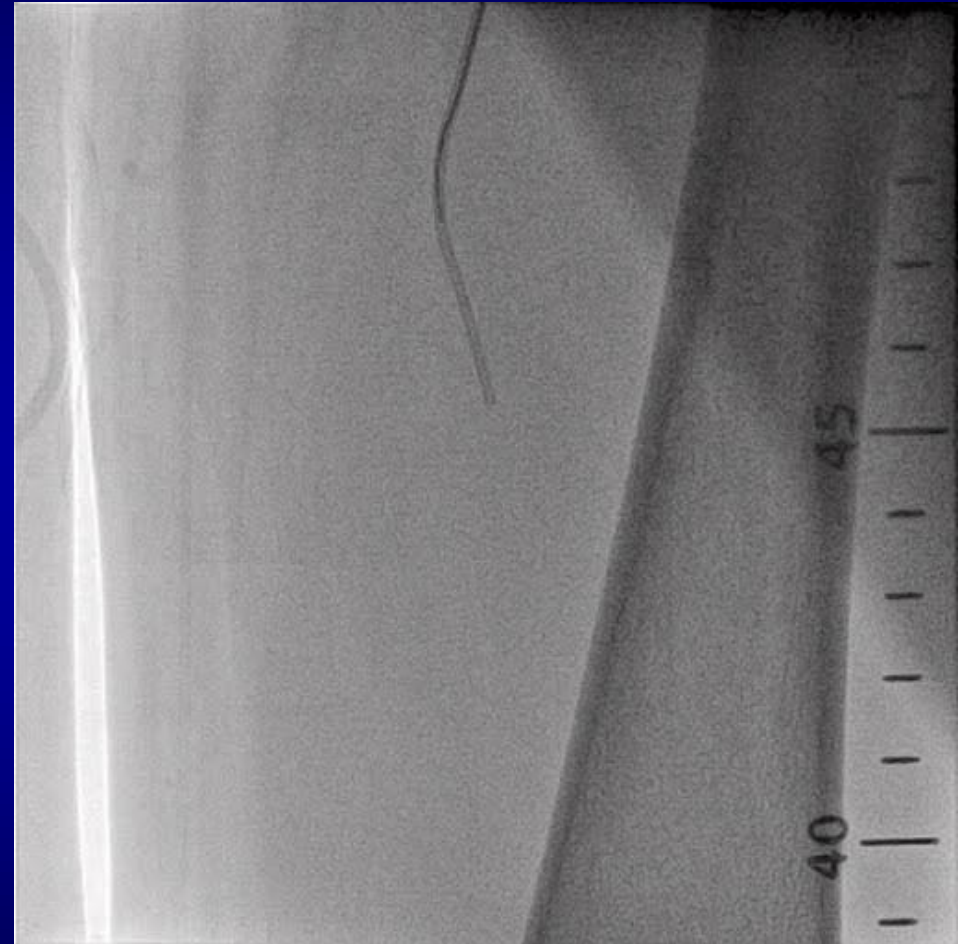
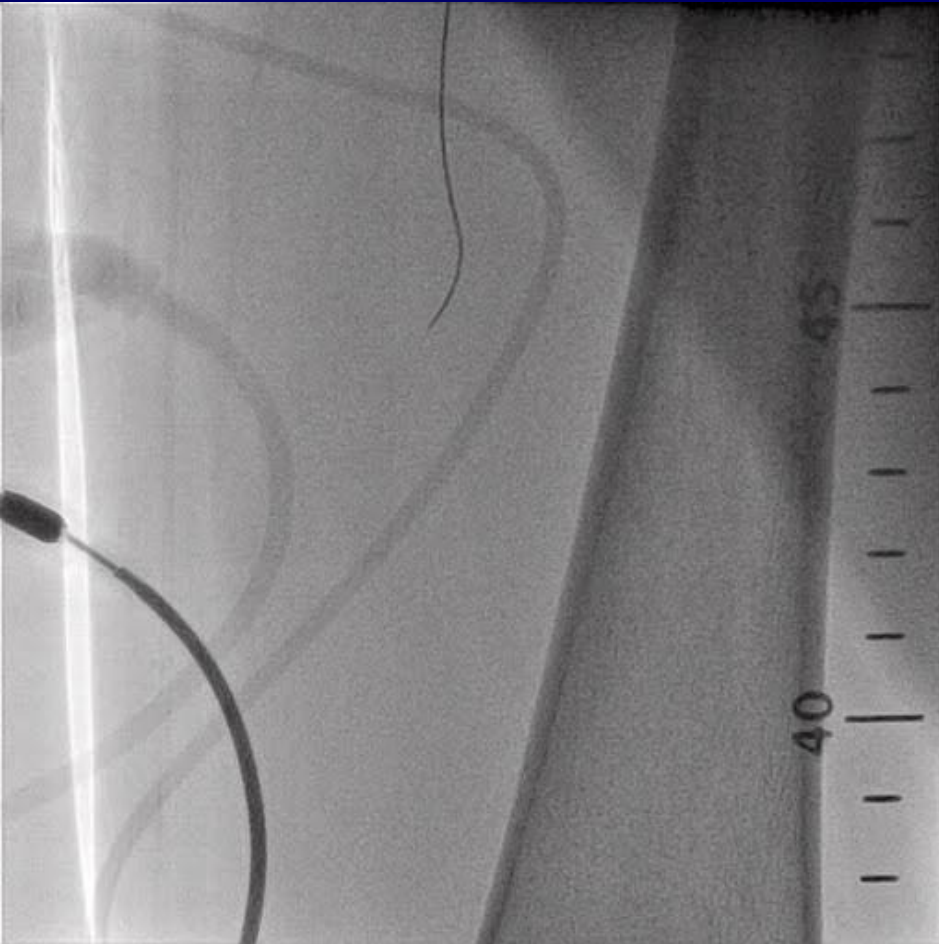


L:127
W:255

Baseline Angiography



5F MP-1 support



Wiring Strategy?

1. Ipsilateral anterograde vs. Retrograde?
2. Bilateral approach?
3. Subintimal vs. True lumen wiring?

Wiring Strategy?

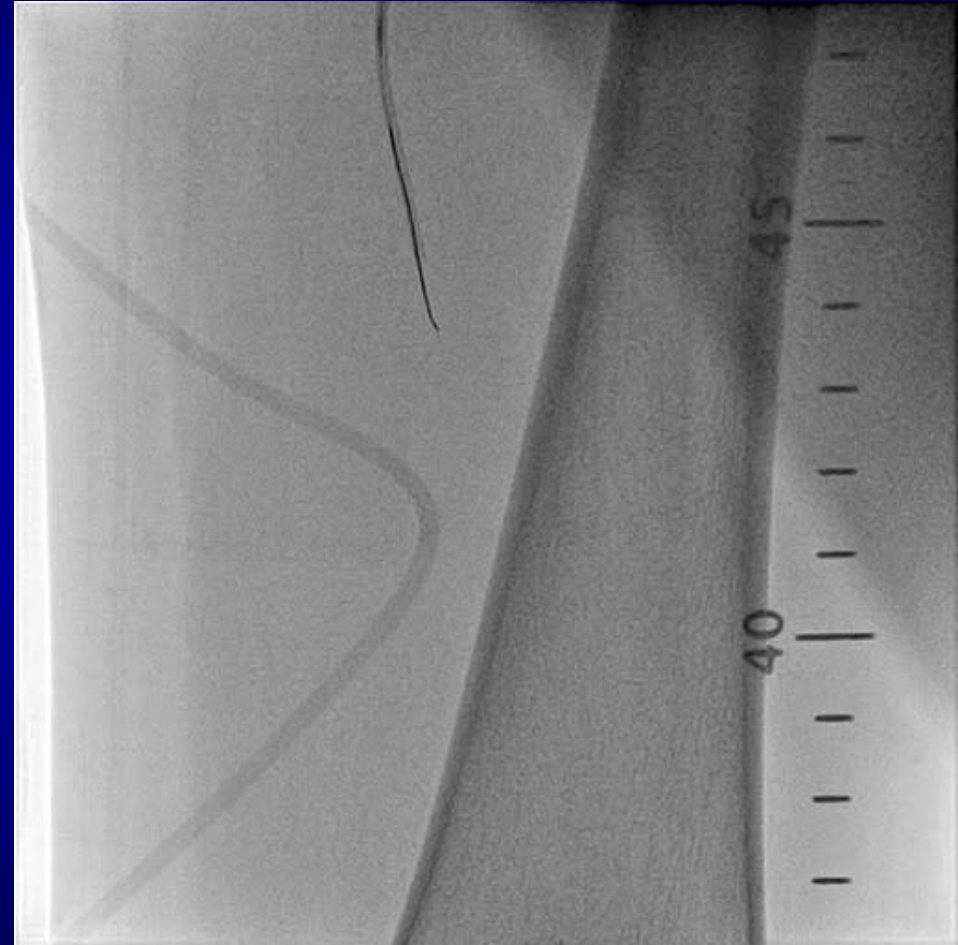
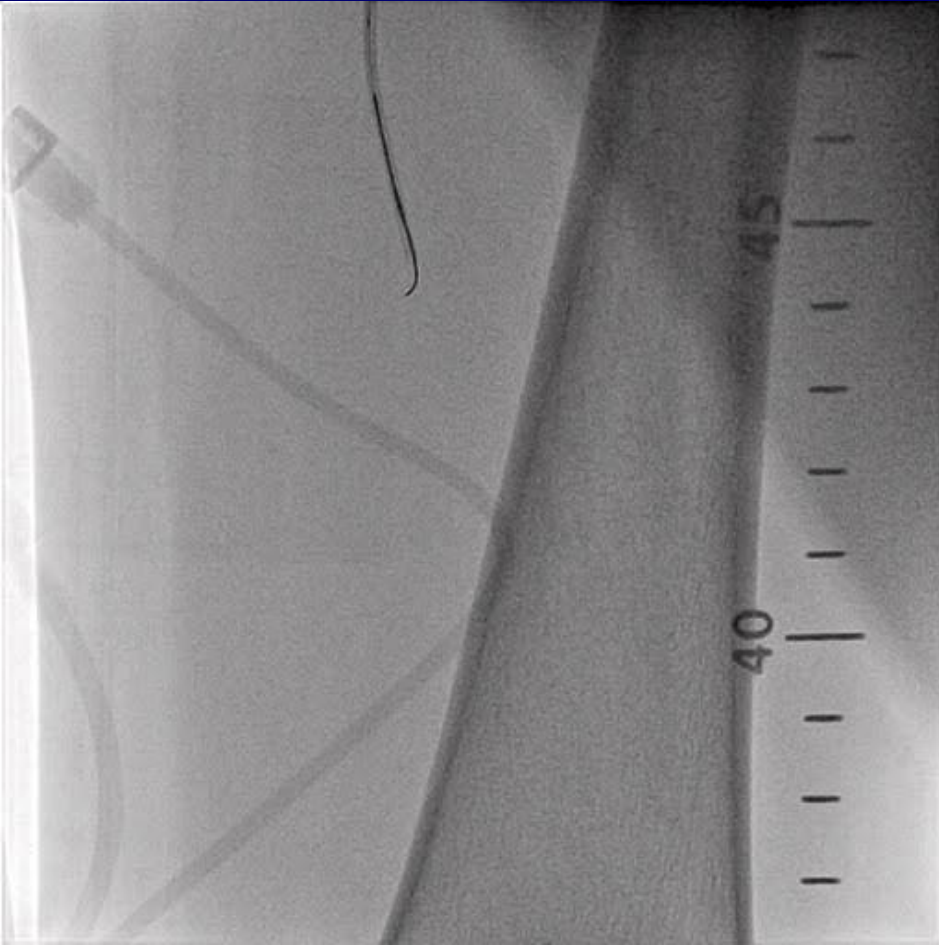
1. Subintimal wiring

- ; 5F MP-1 or 4-5F Glide catheter support
- 035 soft long Terumo (angled vs. 1.5J)

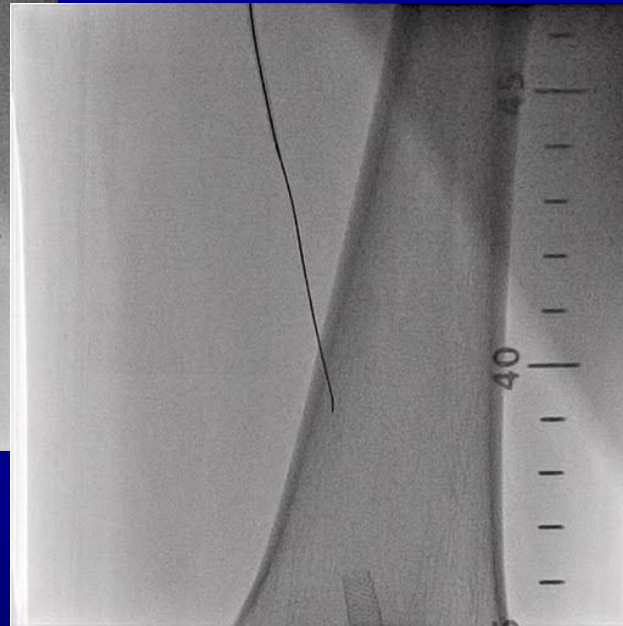
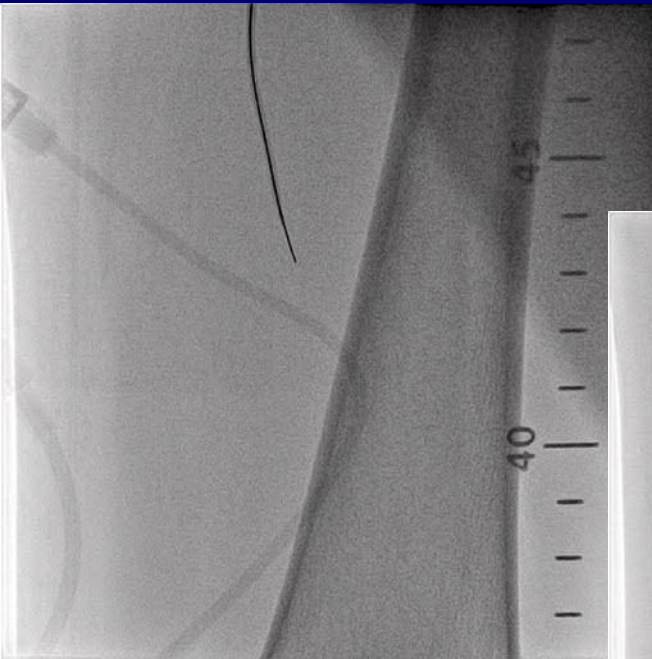
2. True lumen wiring

- ; Microcatheter support (CXI catheter et al)
- 018 (Treasure, V-18)
- 014 (Astato, Approach CTO, Winn, Connect)

Approach CTO 18g



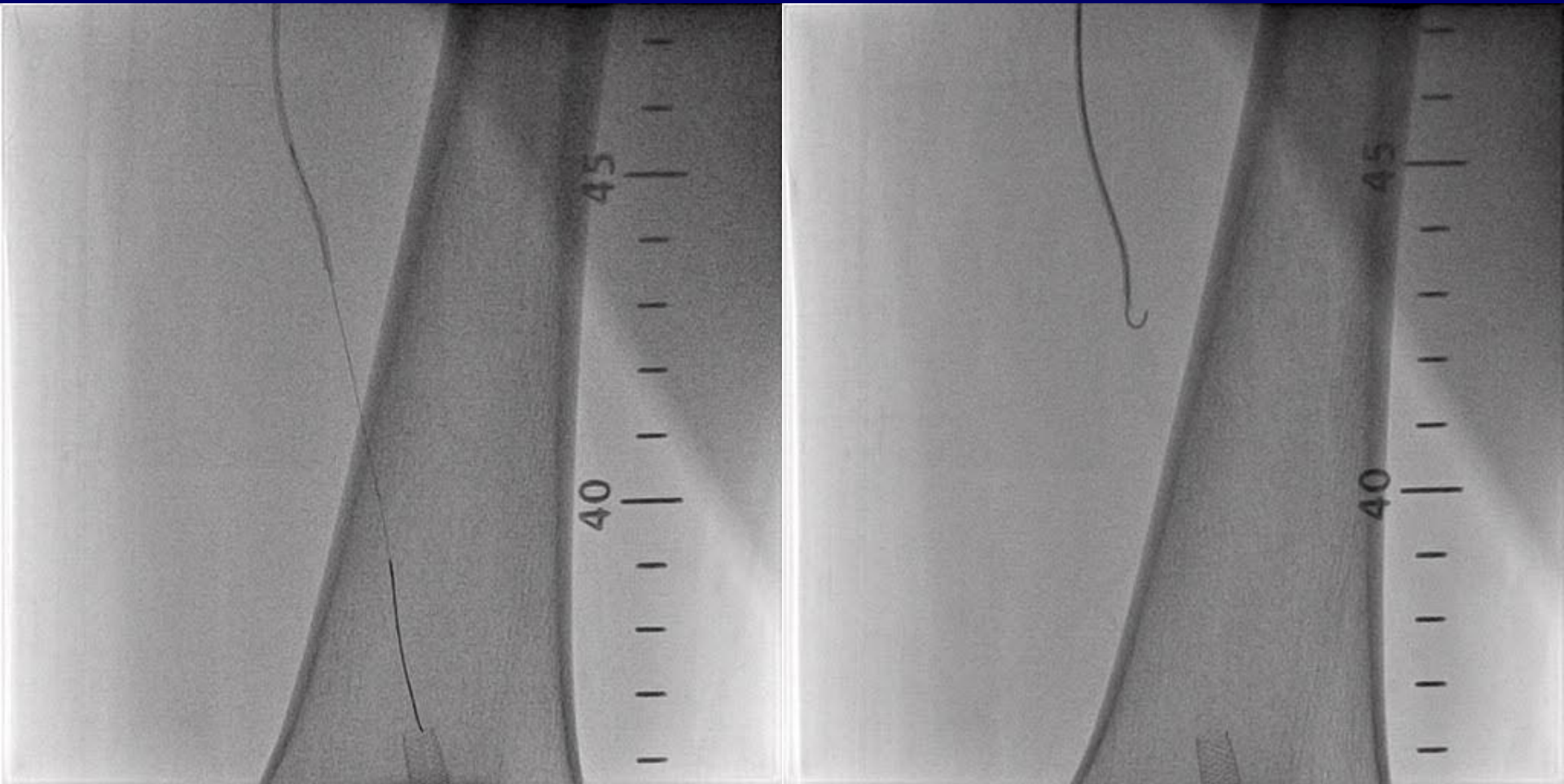
018 Treasure 12g



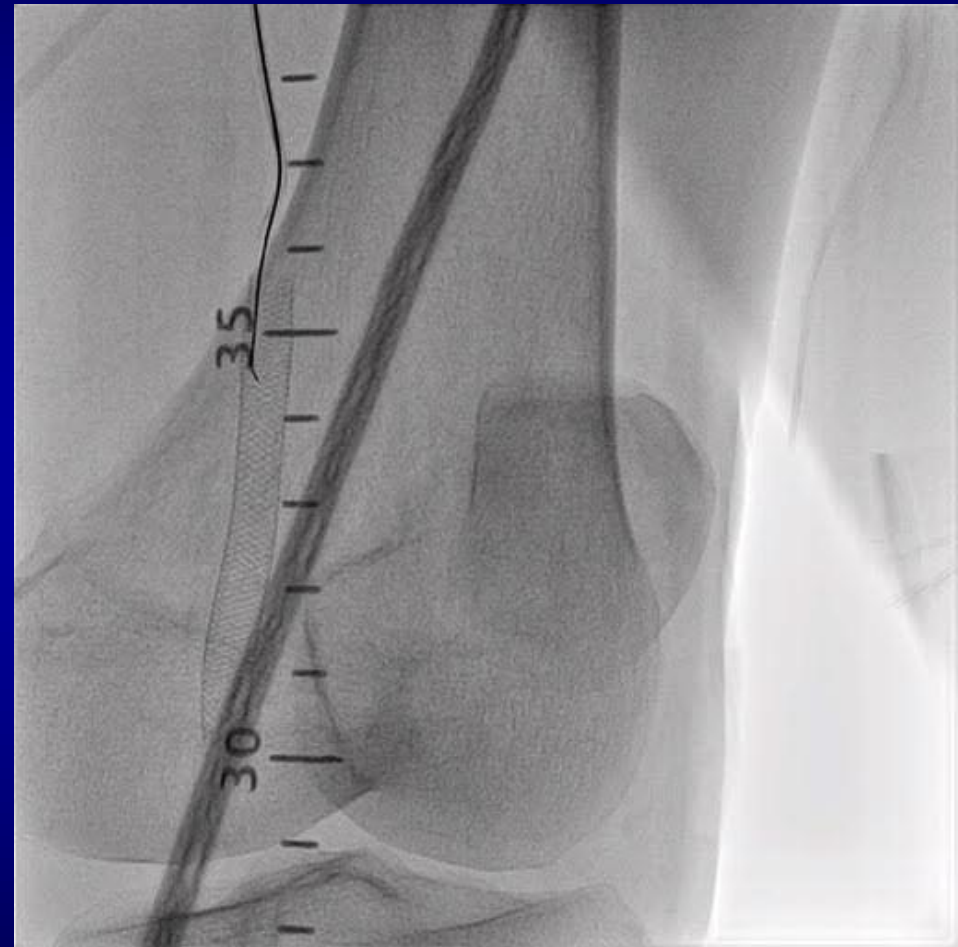
Fox SV 4.0X40mm



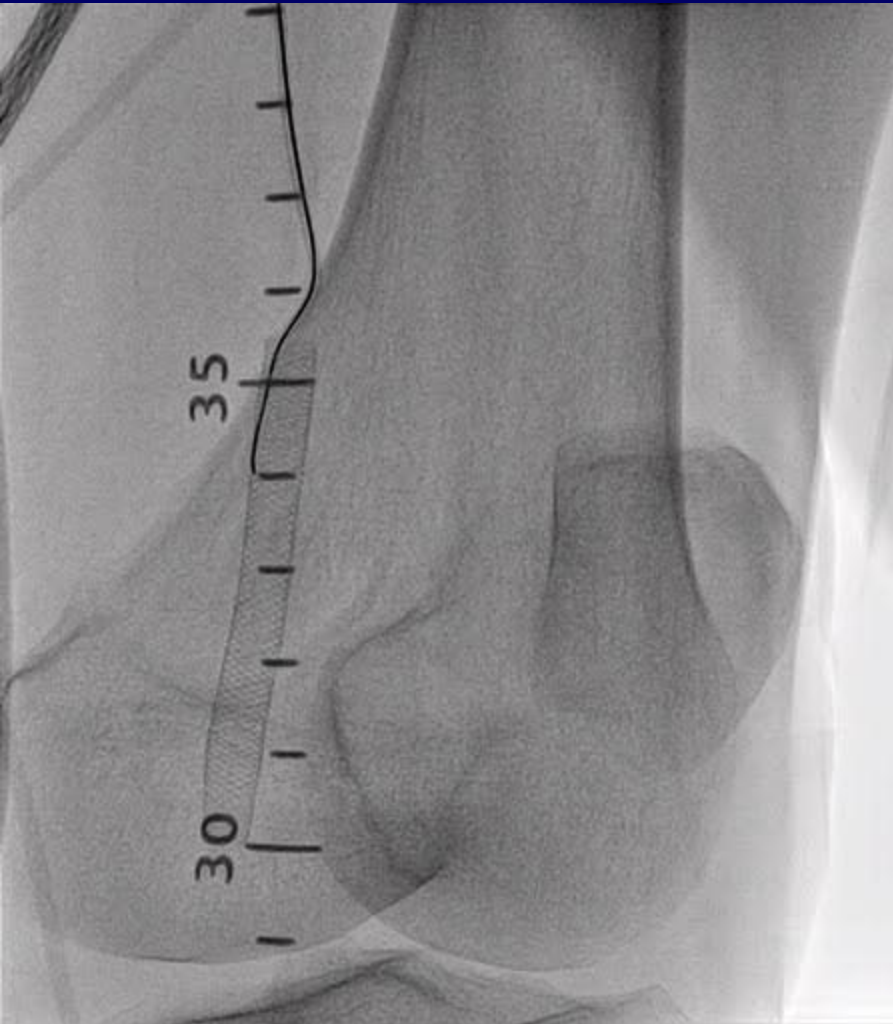
4F Glide Catheter/ 1.5J Terumo



4F Glide catheter/ 018 Astato 30



Astato 30 Wiring



Winn 200T Wire



All available dedicated CTO wires-failed to pass the stented CTO lesion

Failed Anterograde Wiring

What will be next strategy?

1. Retrograde approach and/or bilateral approach

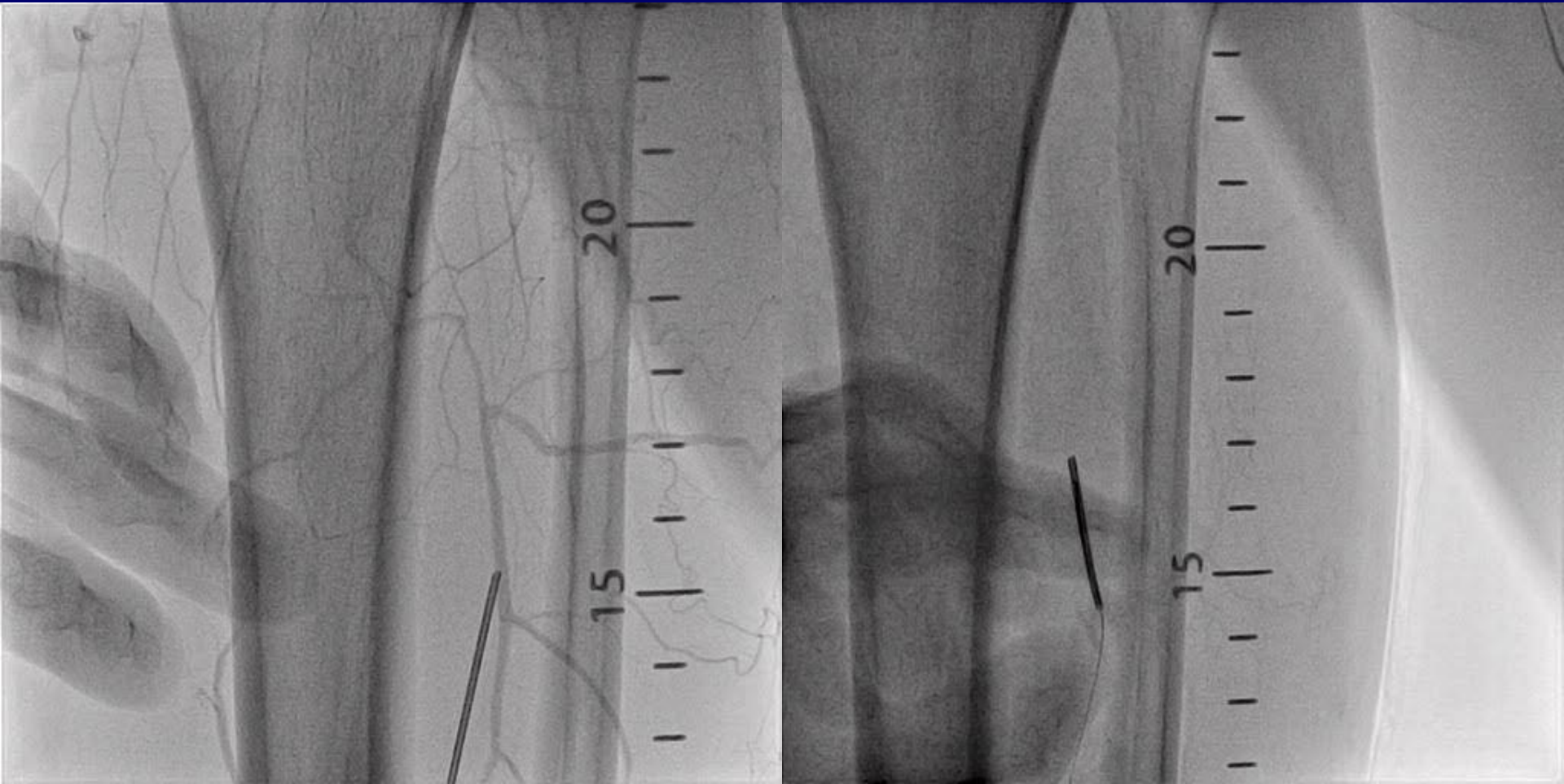
2. Retrograde vascular access?

1) Popliteal

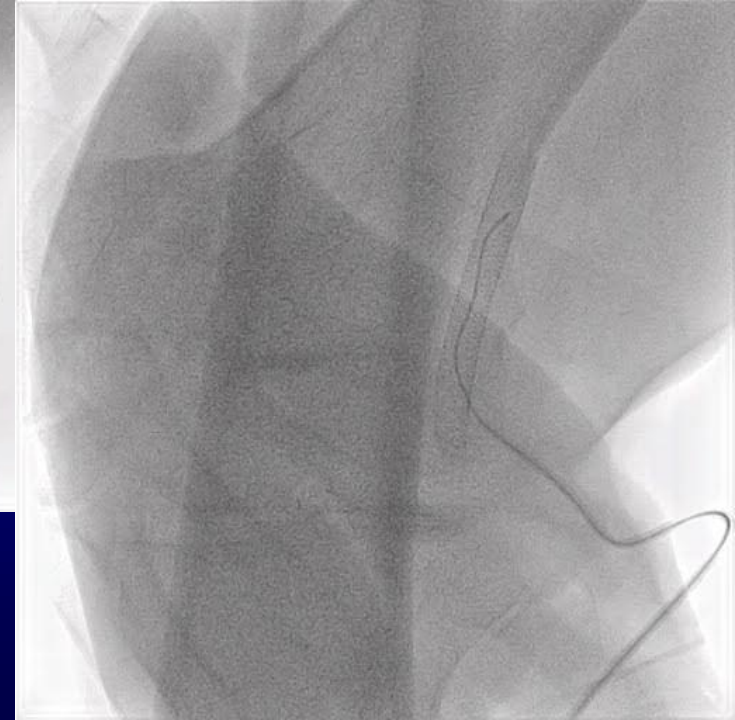
2) Prox tibial

3) Pedal

Proximal Tibial Puncture



Popliteal Puncture



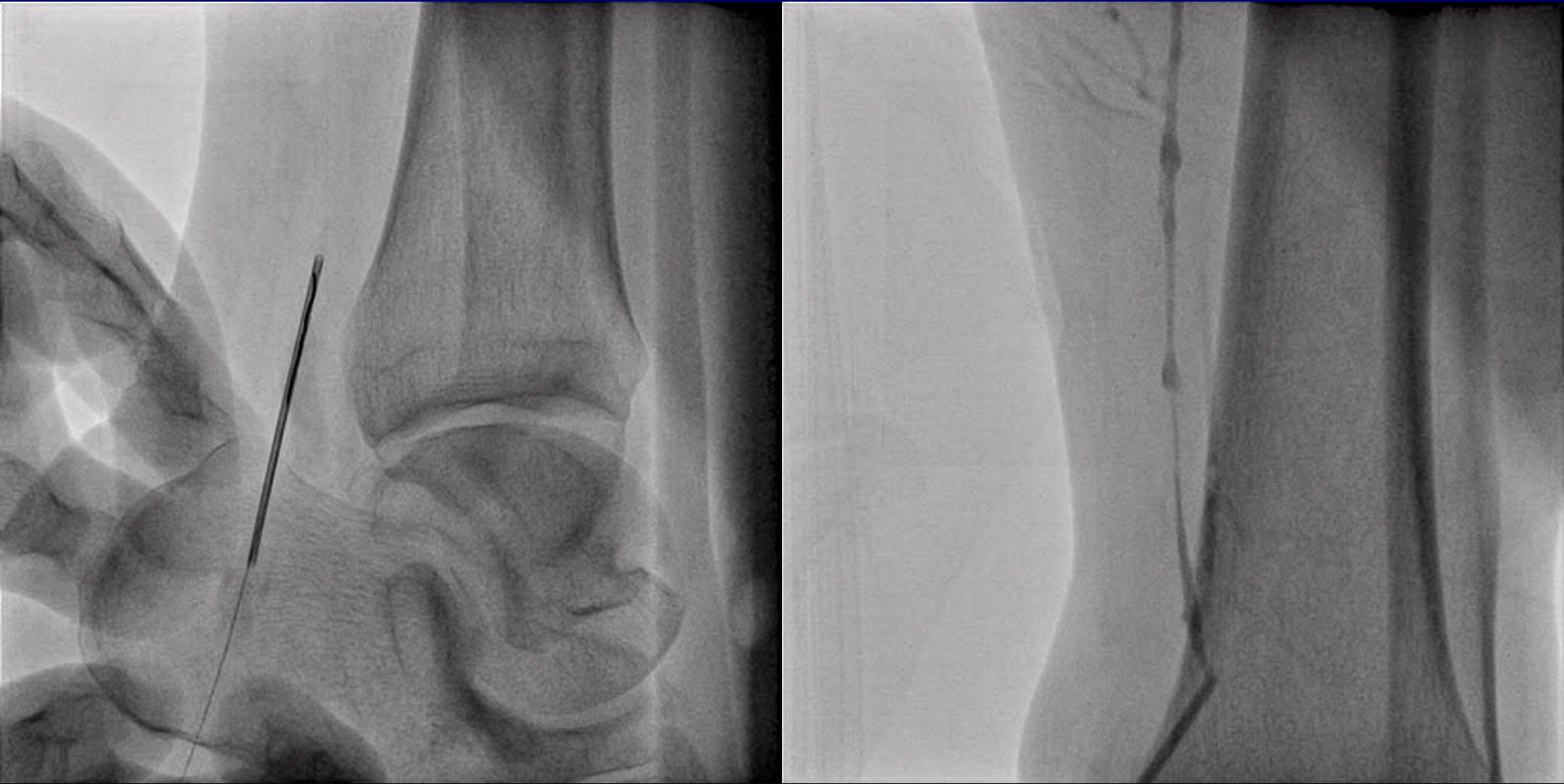
Both Proximal Tibial and Popliteal Access

1. Primary success in puncture and wire insertion but sheath access failure.
2. Importance of specialized micropuncture set and sheath introducer set for retrograde approach

Pedal Puncture-Post Tibial A



However, vein puncture



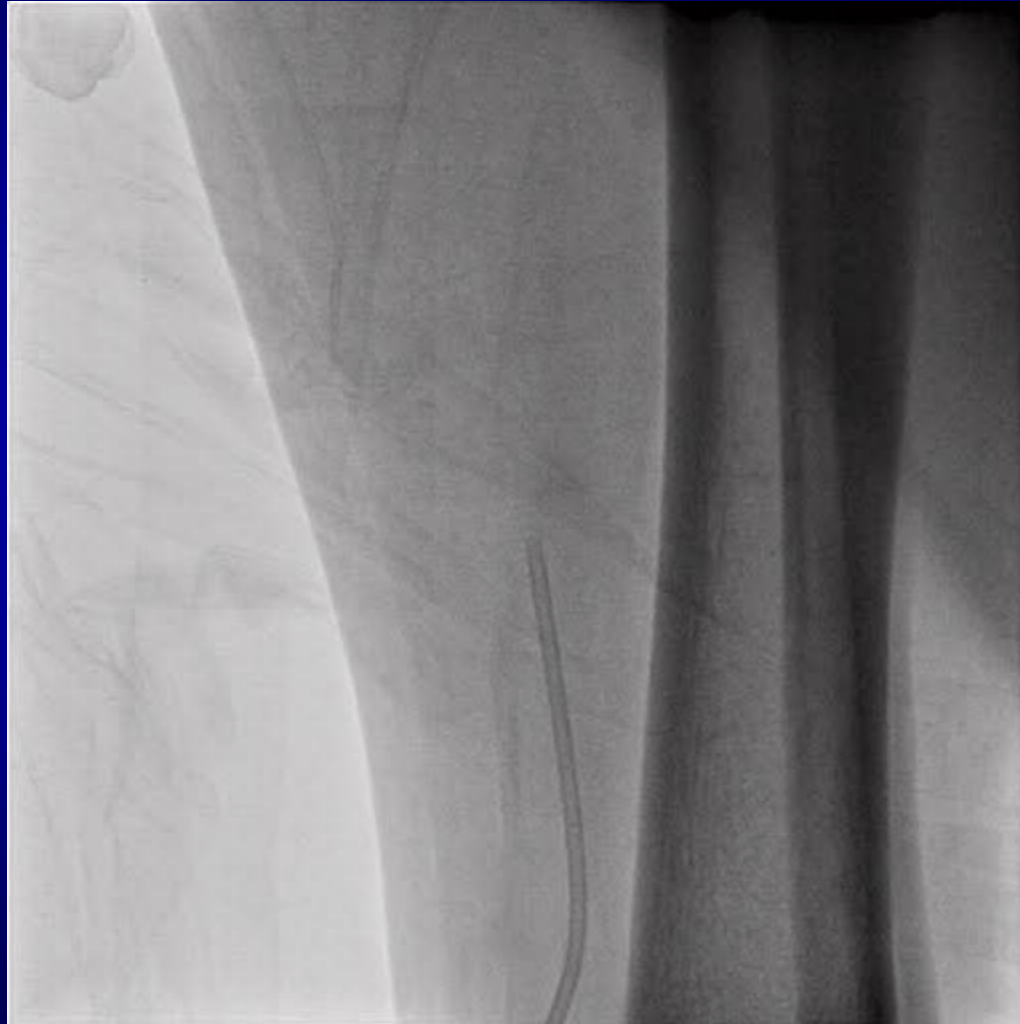
PTA arterial puncture and confirmation



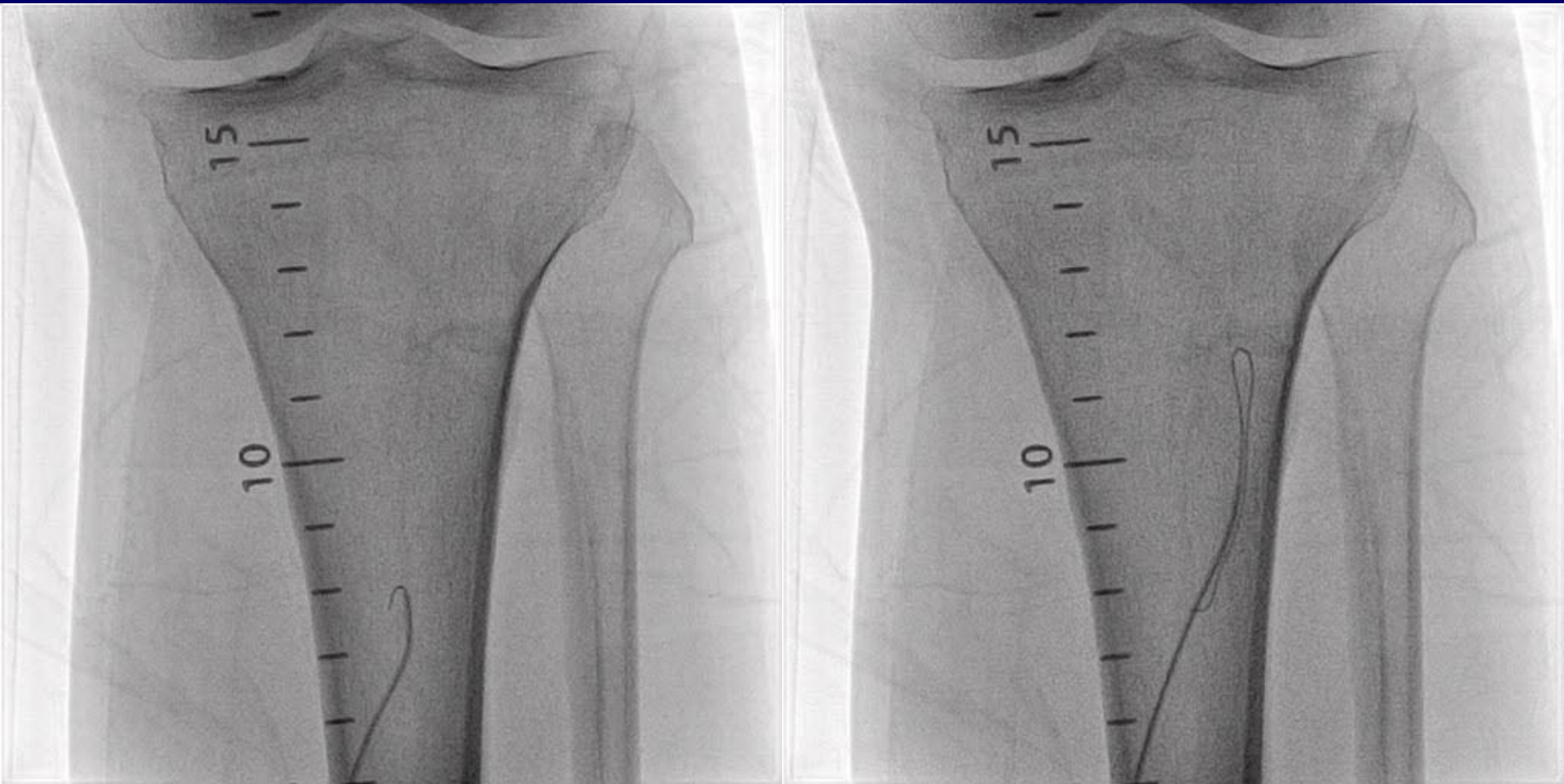
Terumo 4F radial sheath



Baseline Image at Retrograde Injection

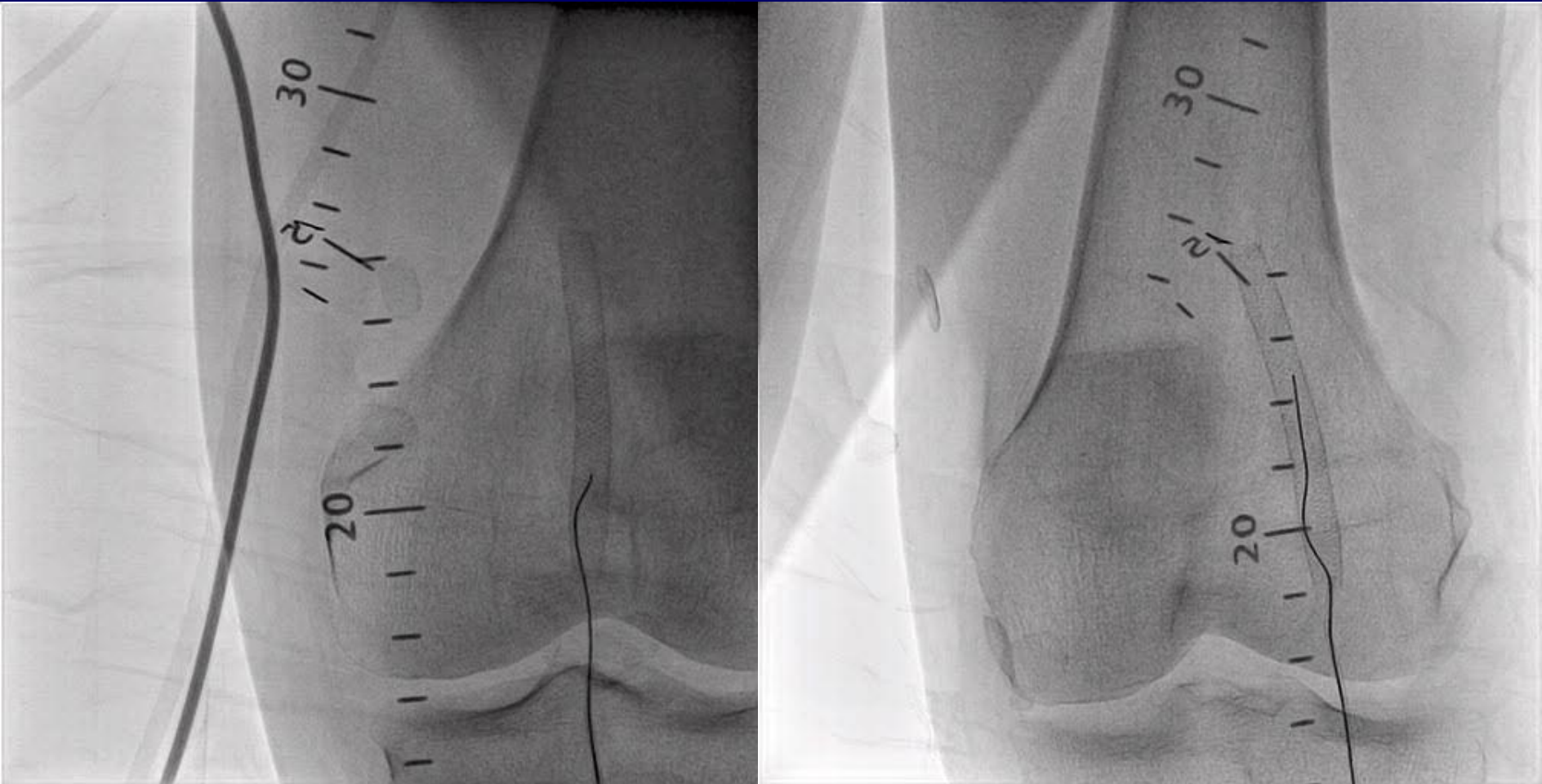


Retrograde subintimal wiring



4F Glide catheter, 035 Soft Terumo 1.5J

Retrograde Controlled Wiring

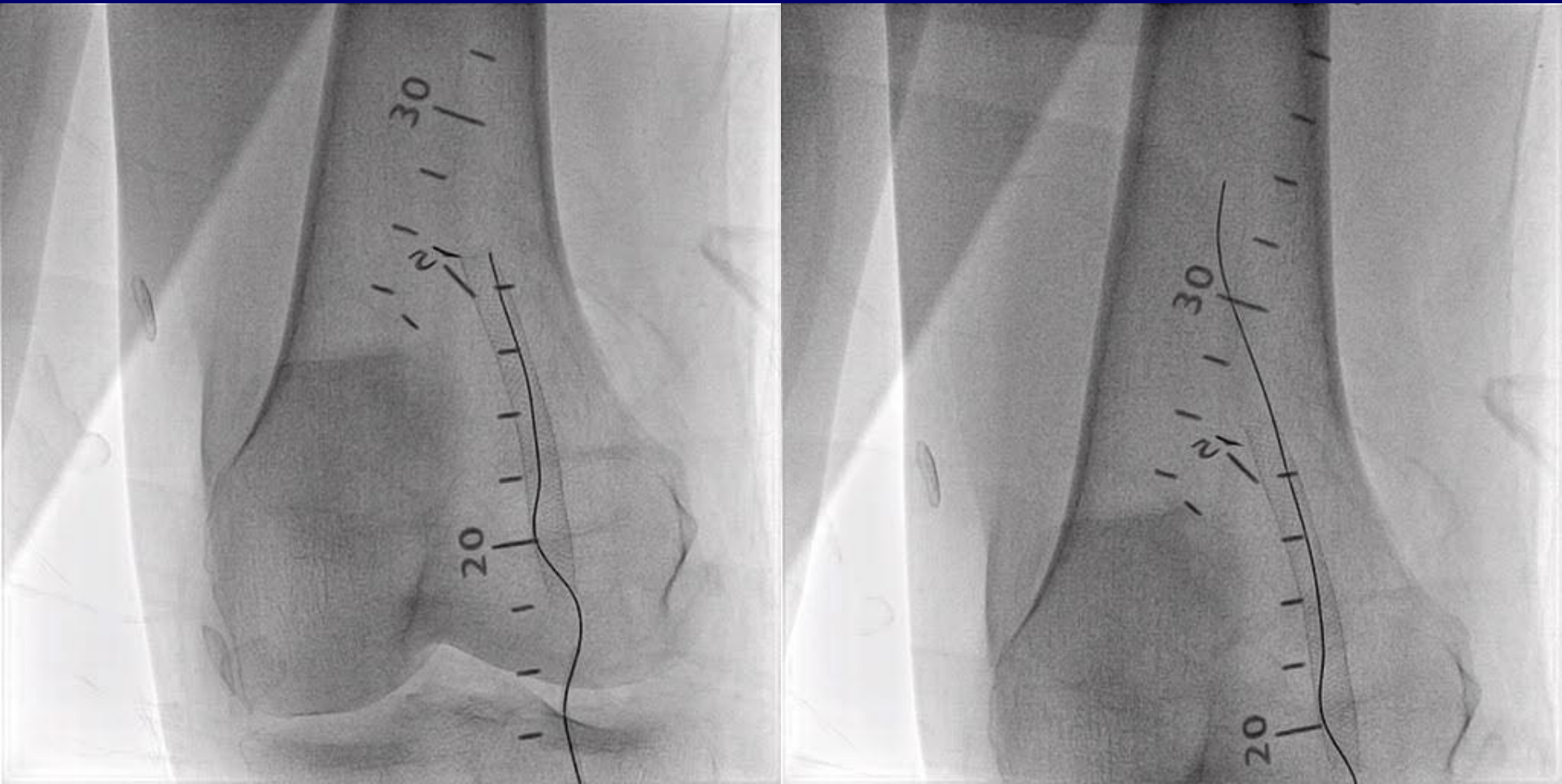


4F Glide Catheter, 018 Treasure 12g

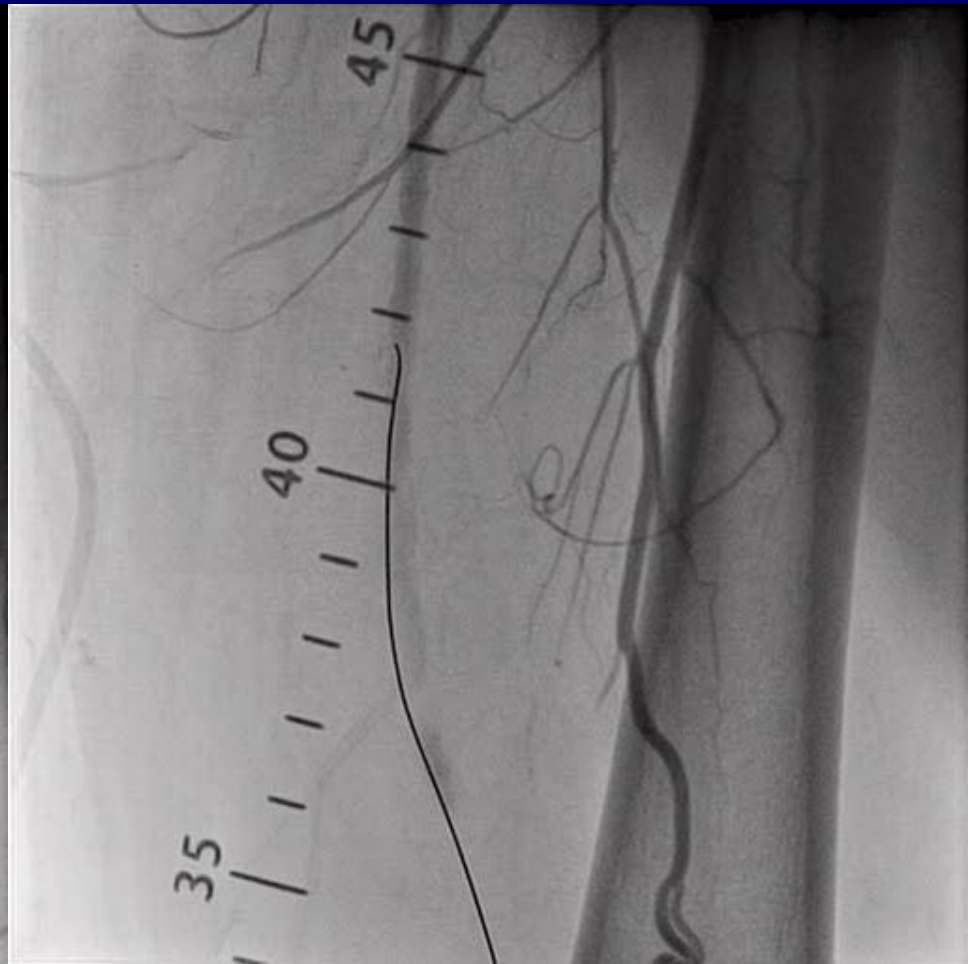
Retrograde CTO wiring (2)



Retrograde CTO wiring (3)



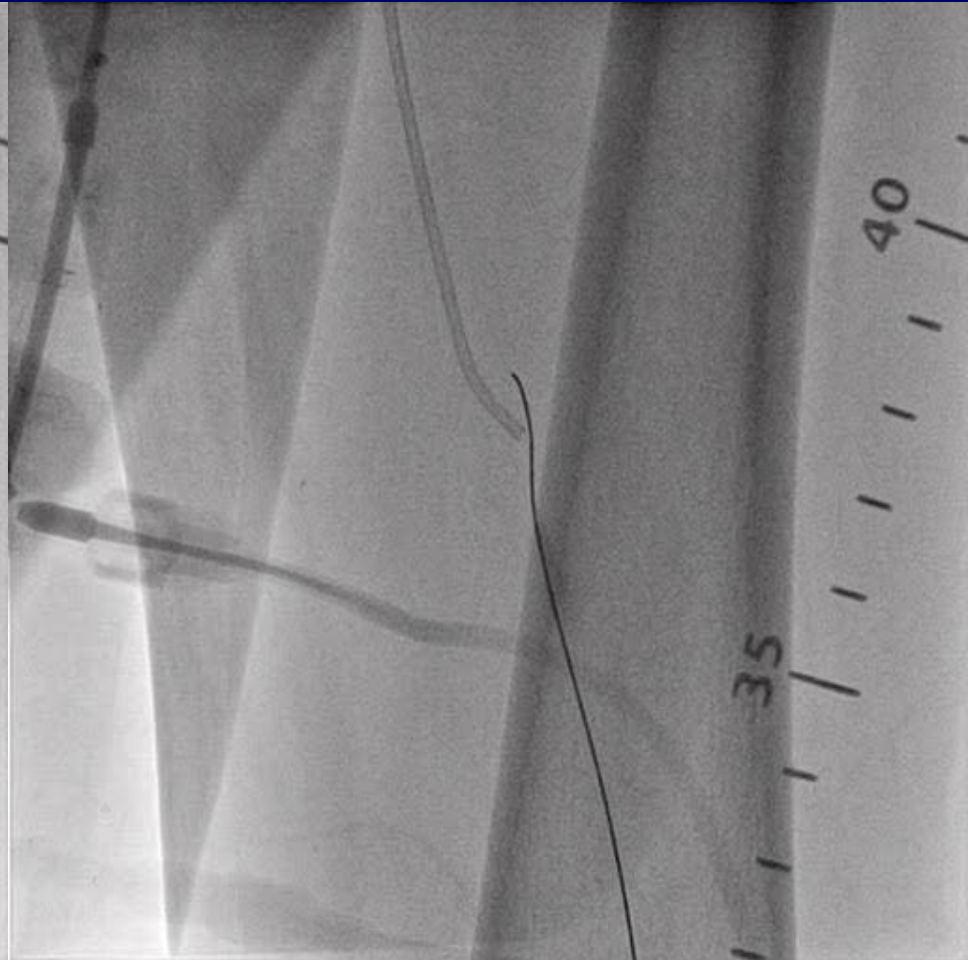
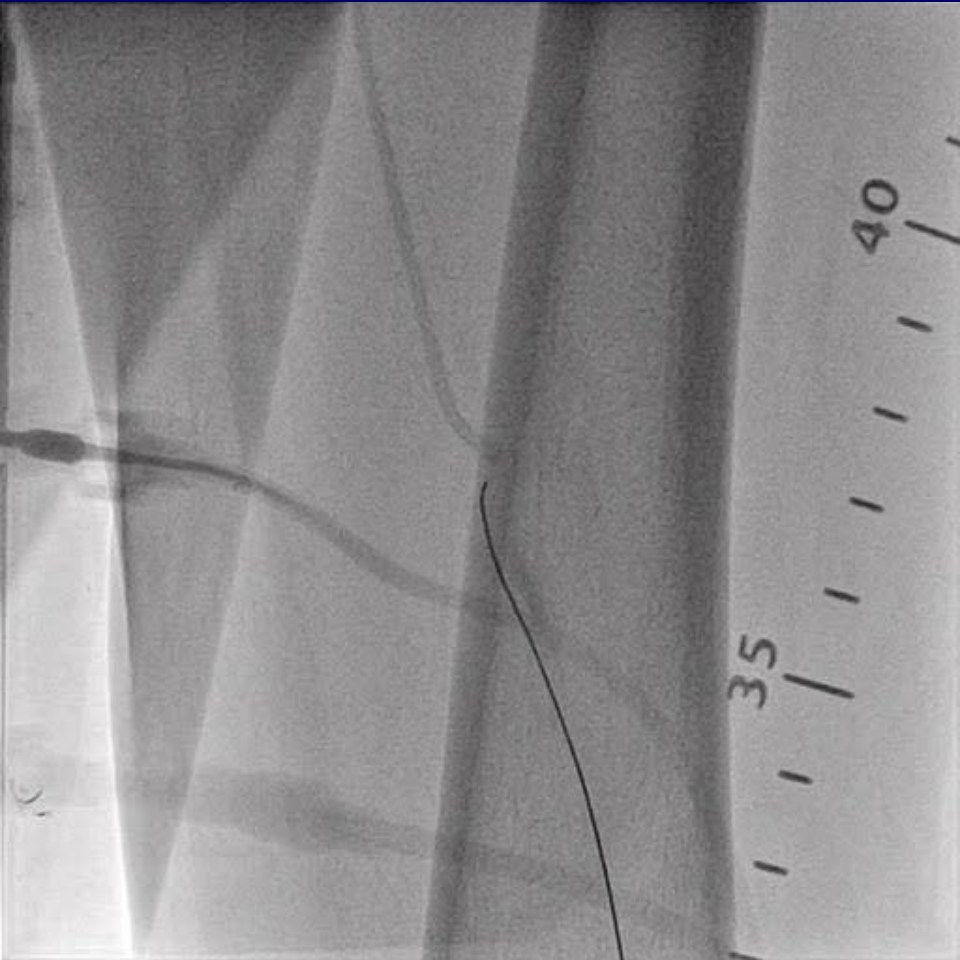
Retrograde Wiring Alone



Attempting Kissing Wiring



Attempting Wire Externalization

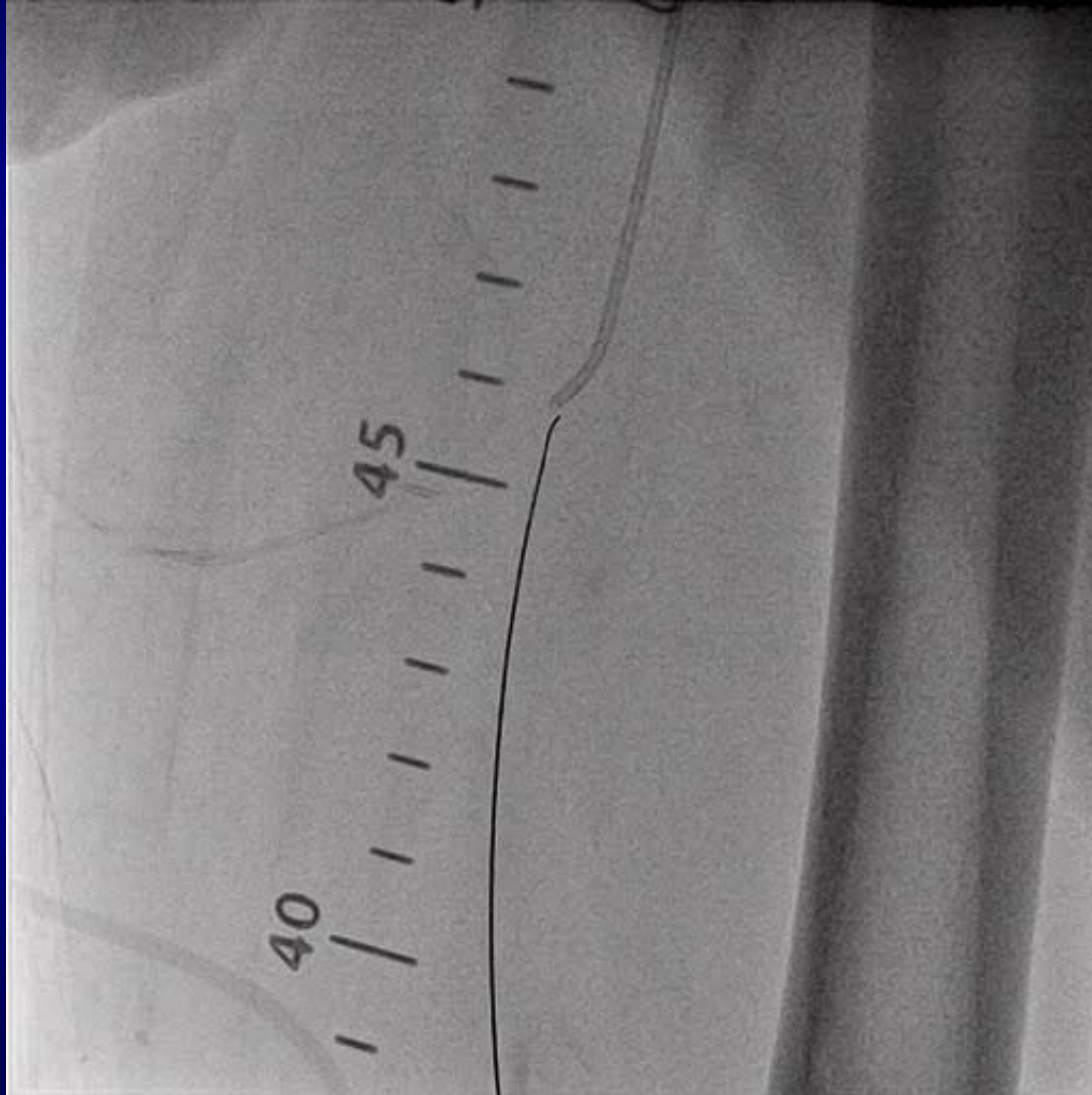


CART for Kissing Wiring

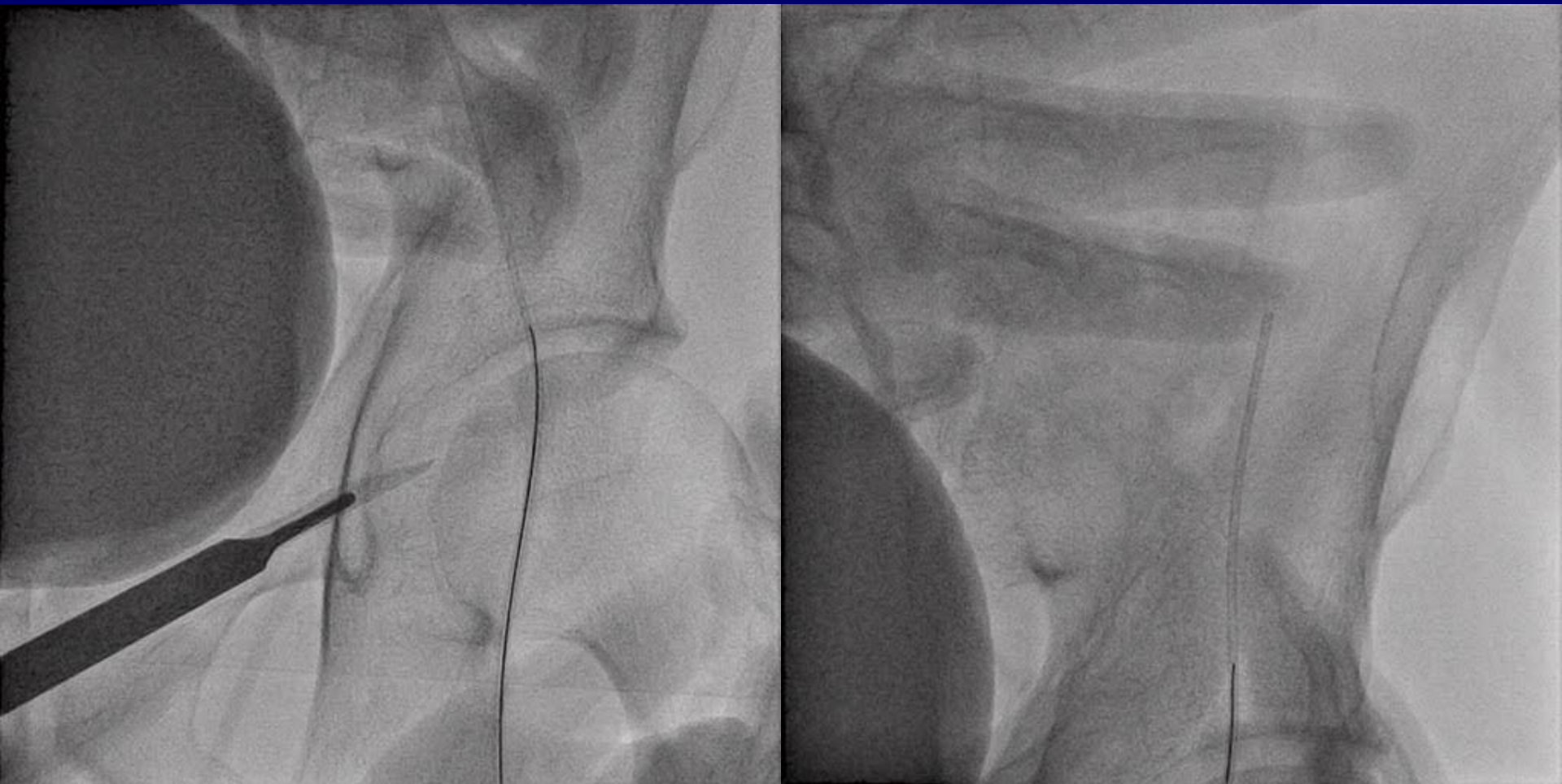


Controlled Anterograde and Retrograde Subintimal Tracking

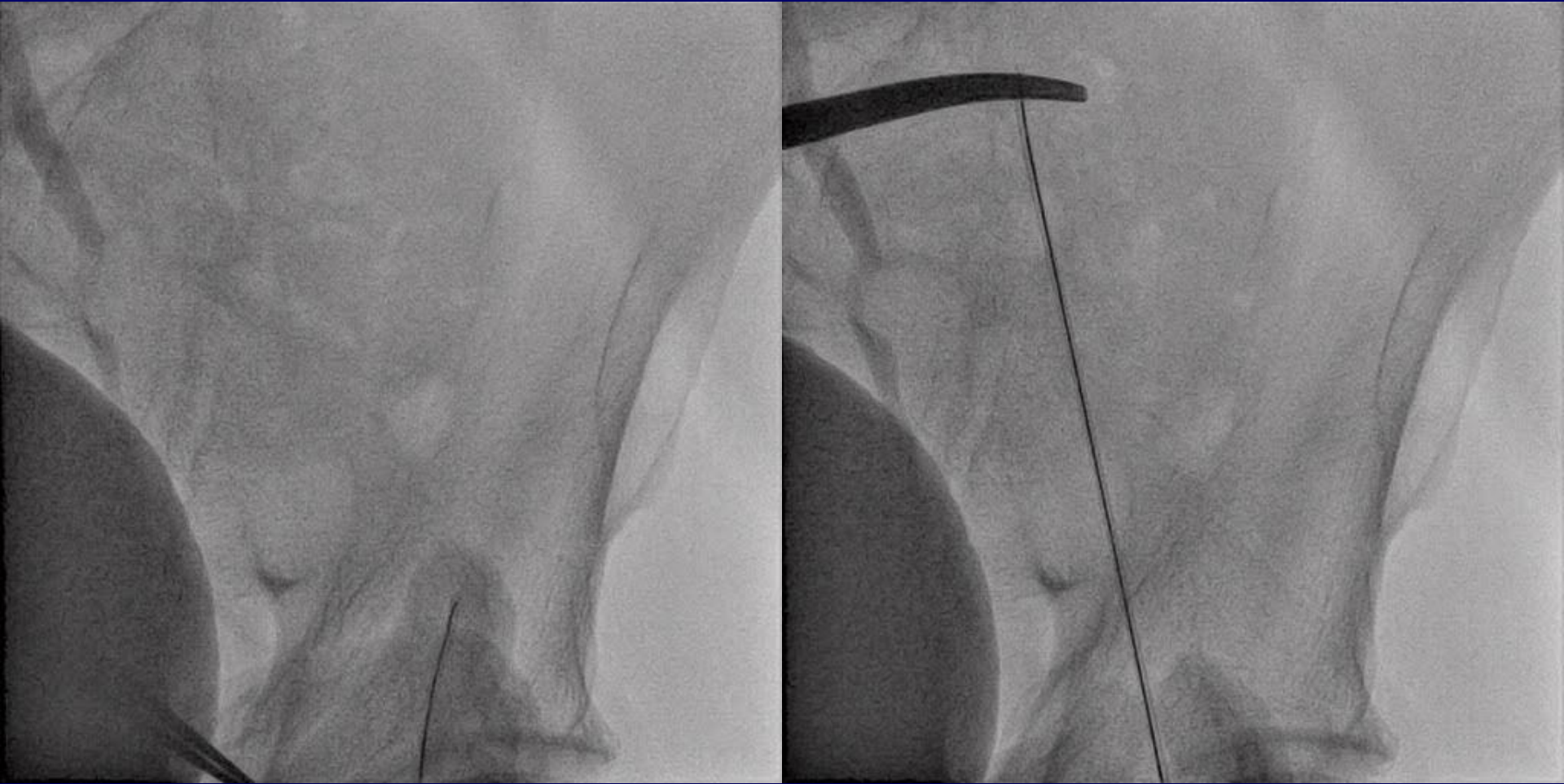
Wire Externalization into 5F JR



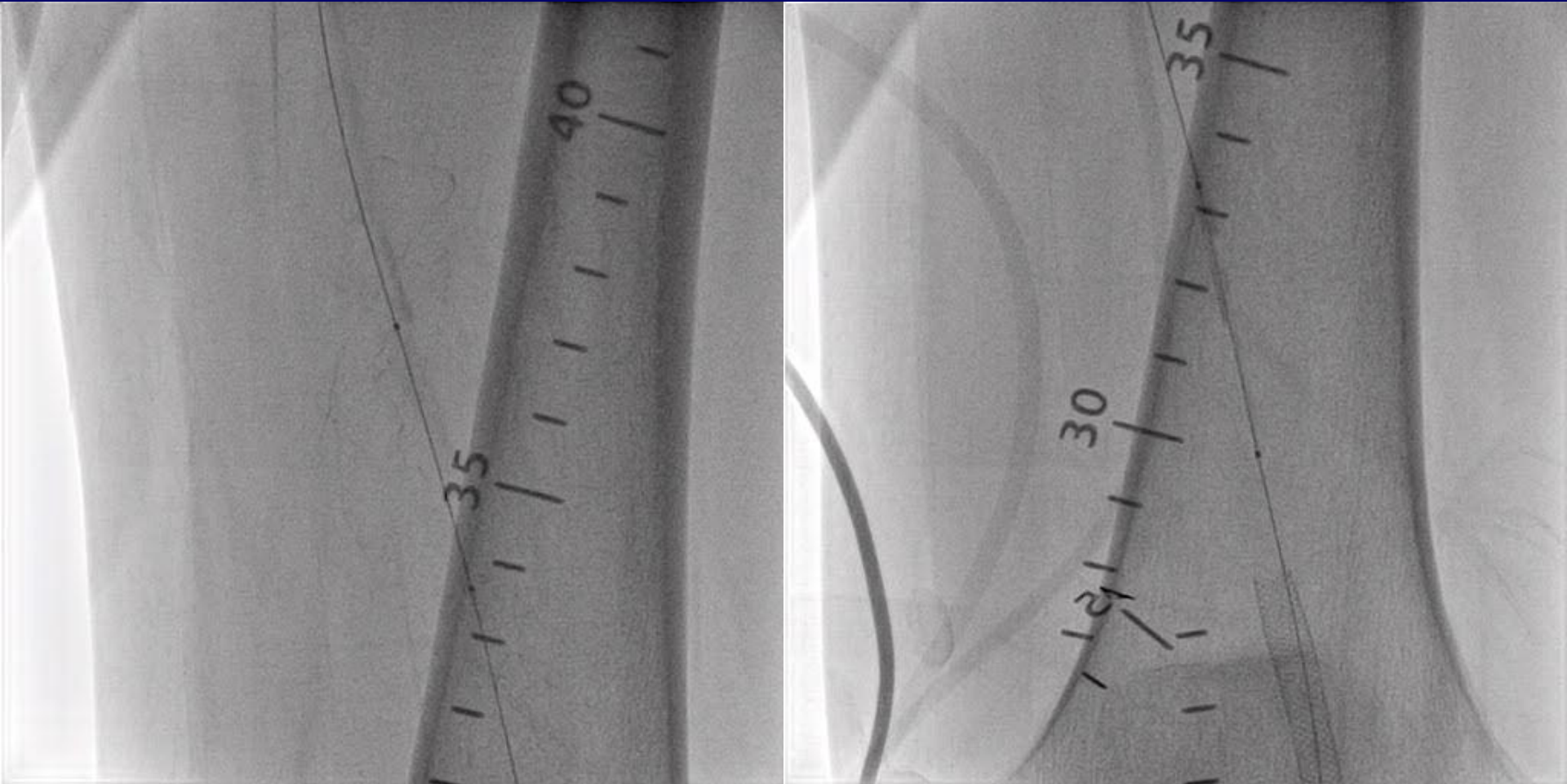
Wire Externalization (1)



Wire Externalization (2)

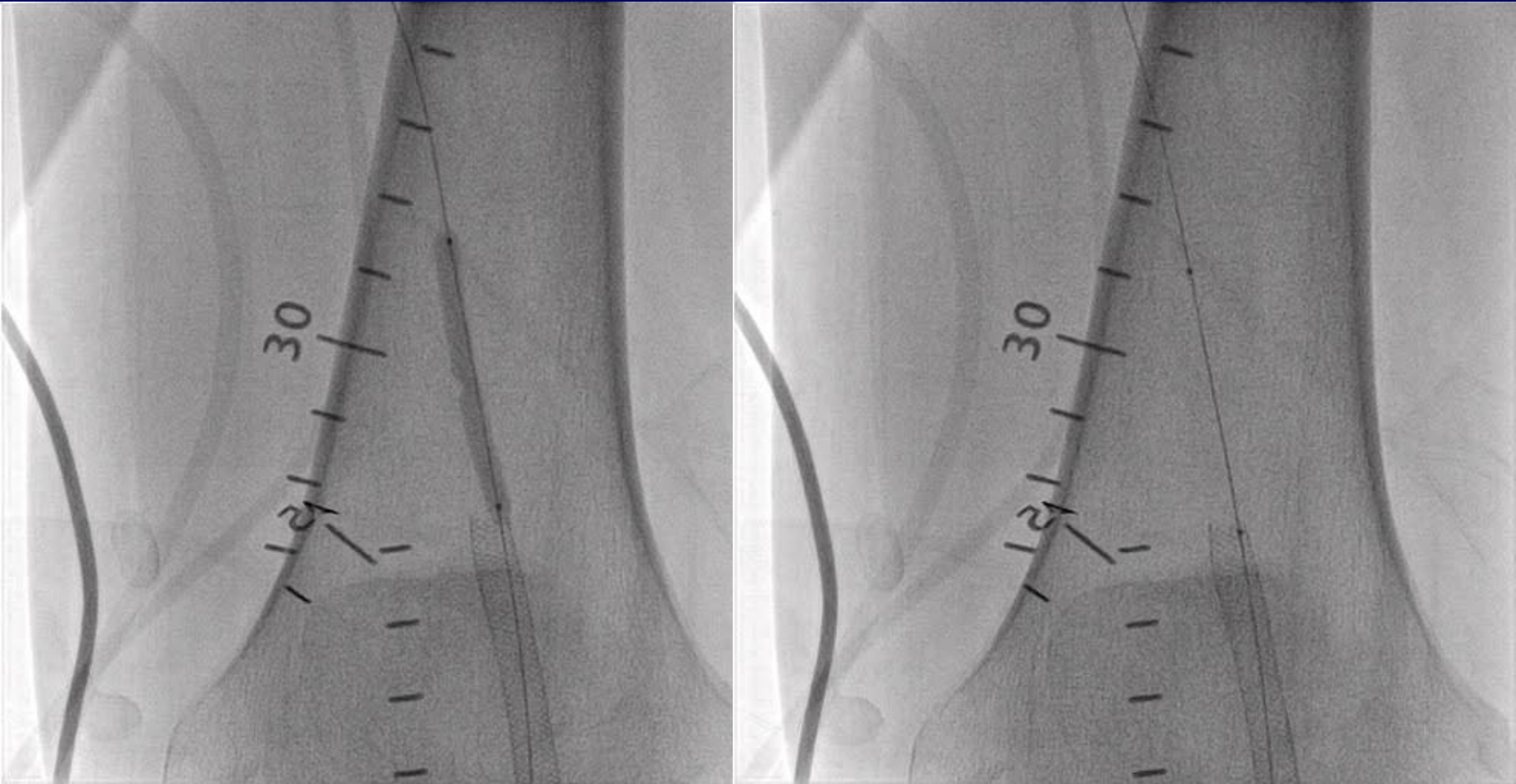


Anterograde POBA (1)



Fox SV 4.0X40mm

Anterograde POBA (2)



Fox SV 4.0X40mm

Intra-stent Confirmation



Intra-stent POBA



Fox SV 3.0X20mm

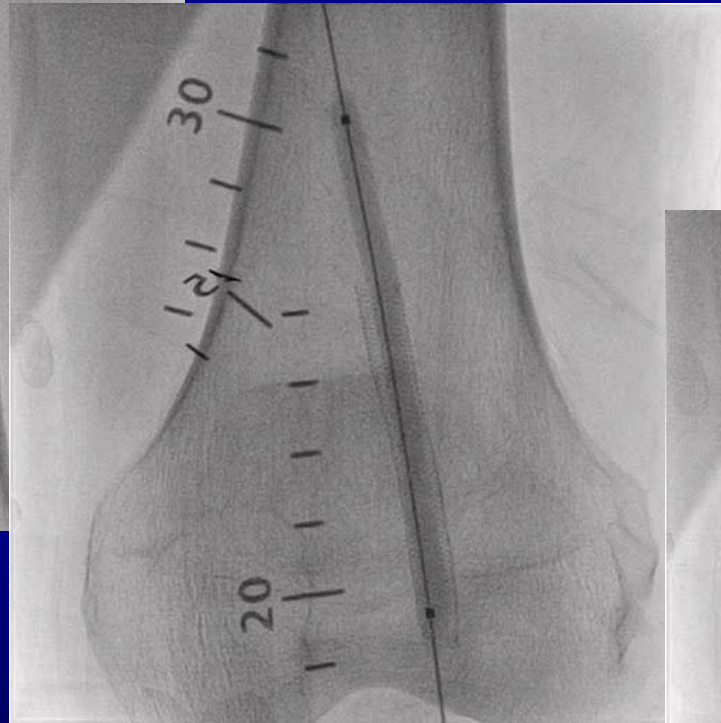
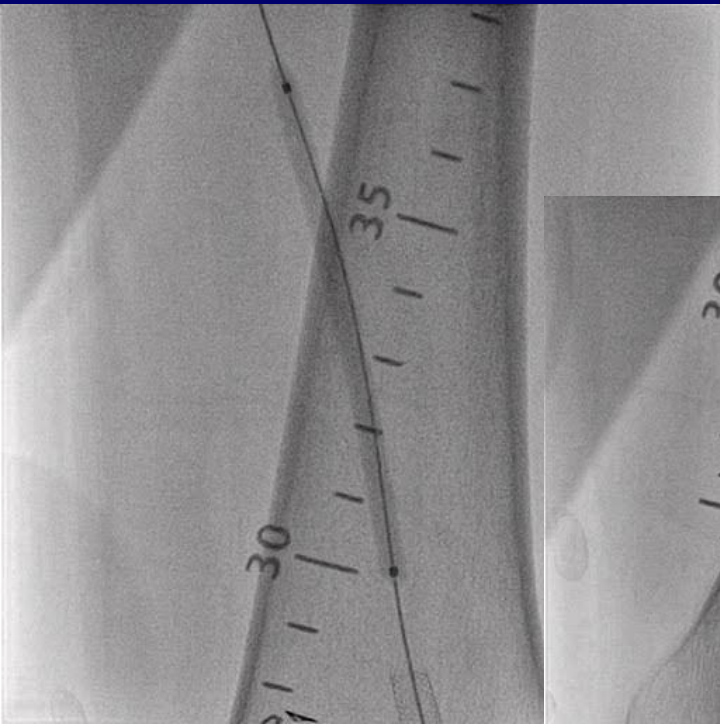
Post-Small Balloon



Checking Distal Perfusion



Further Ballooning

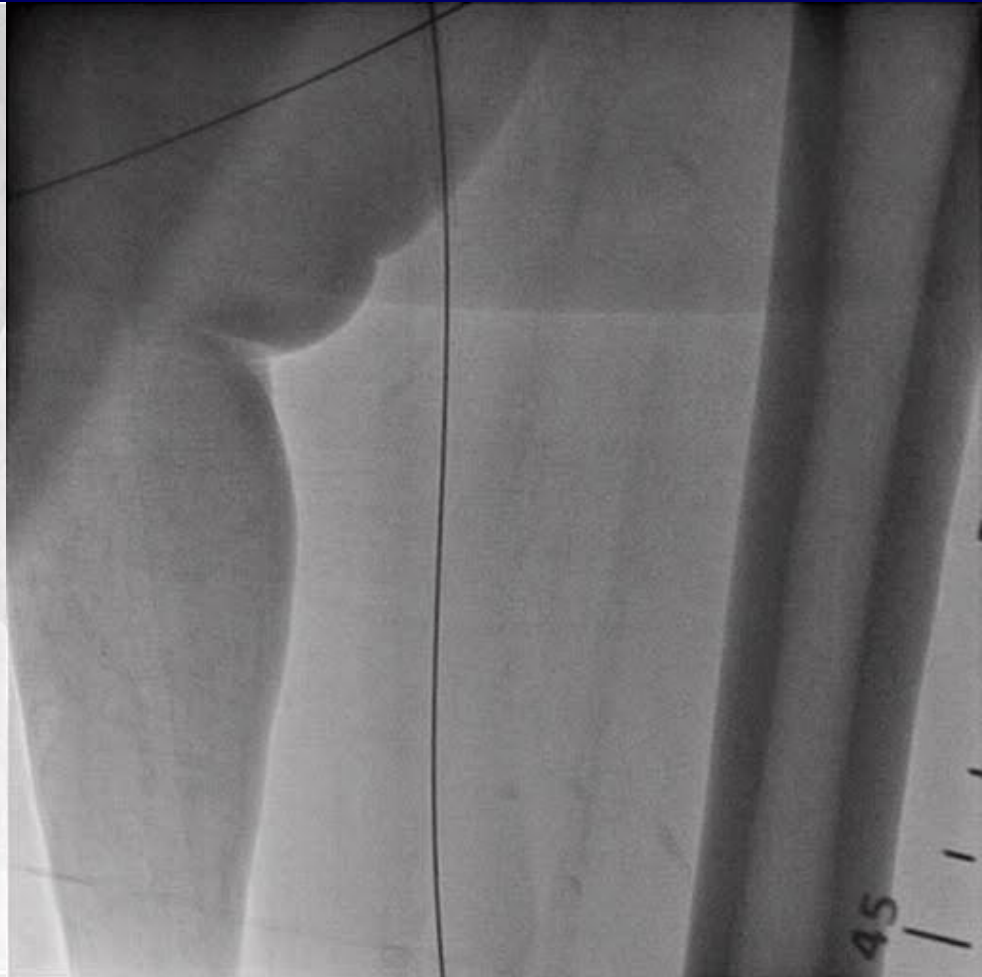


Pheron 5.0X80mm

Post SFA to popliteal balloon



SFA Stenting



BTK angiogram-Baseline



ATA Selection



5F MP-1 catheter, 035 soft Terumo (angled)

ATA-subintimal wiring (1)



ATA-subintimal wiring (2)



Post-Wiring Angiography



ATA-POBA



Advance LP 2.5X200mm

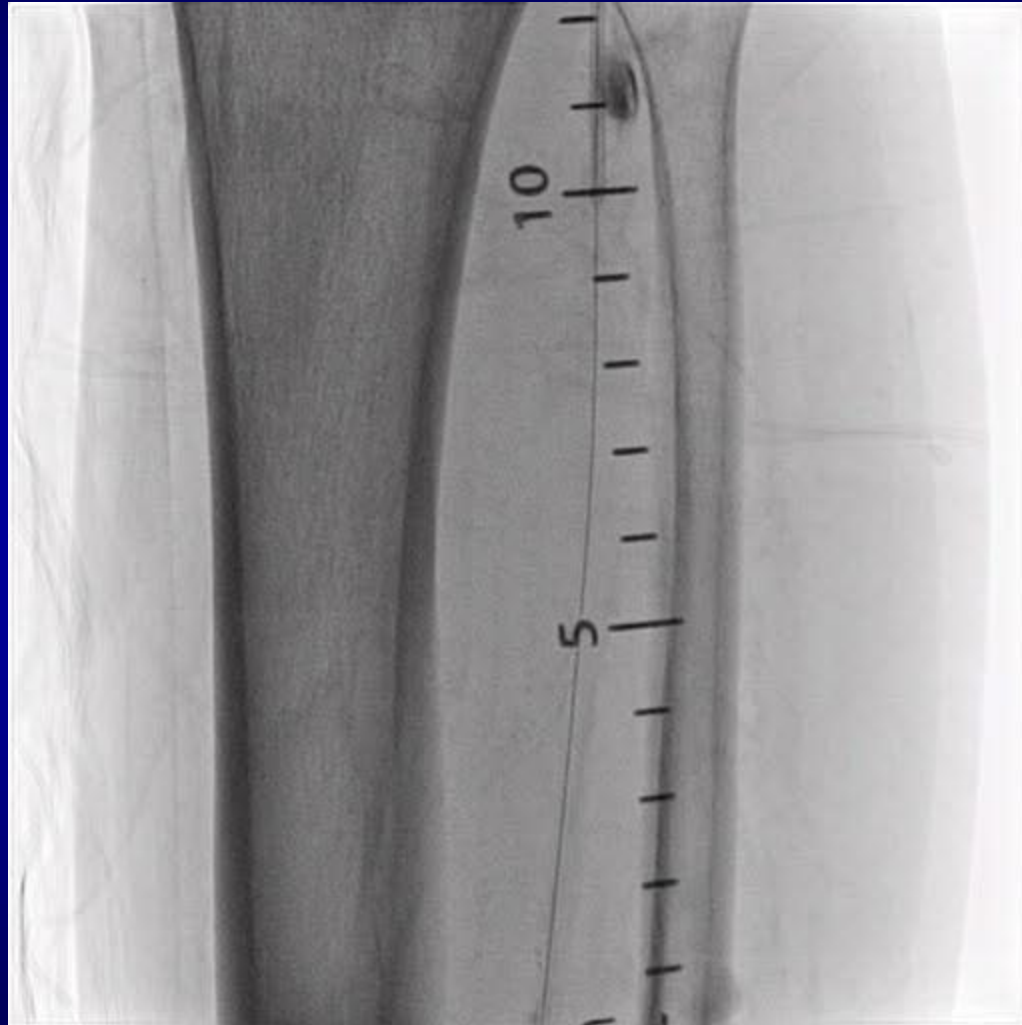


Sleek 2.0X150mm

ATA-POBA (2)



ATA-post POBA



Incomplete Distal Perfusion

Incomplete Distal Perfusion after ATA ballooning

1. Multiple ATA and pedal puncture attempt
→ extravasation in mid to distal ATA area
2. Limited far distal vascularity causing
incomplete washout of anterograde flow

Repeat SFA Angiogram



Adjuvant SFA stenting



Absolute Pro 7.0X60mm

Post SFA Stenting



What will be the next strategy?

1. Thrombus aspiration?
2. Adjuvant ballooning?
3. Adjuvant stenting?
4. Medical therapy?

Further Low Pressure Ballooning



Final Angiogram



Discussion

1. For complex ISR reintervention, multiple devices should be ready.
2. Multiple vascular access should be considered in complex ISR total lesion revascularization.
3. Operator's attitude for limb salvage
; perseverance and endurance...
'Never give up spirit'