

*Optimal imaging in
retrograde access*

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Diabetic Foot Center
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HUMANITAS
GAVAZZENI

Vincenzo Foppa, 1462
“The miracle of the salvaged foot”
Cappella Portinari, S. Eustorgio Church
Milan, Italy

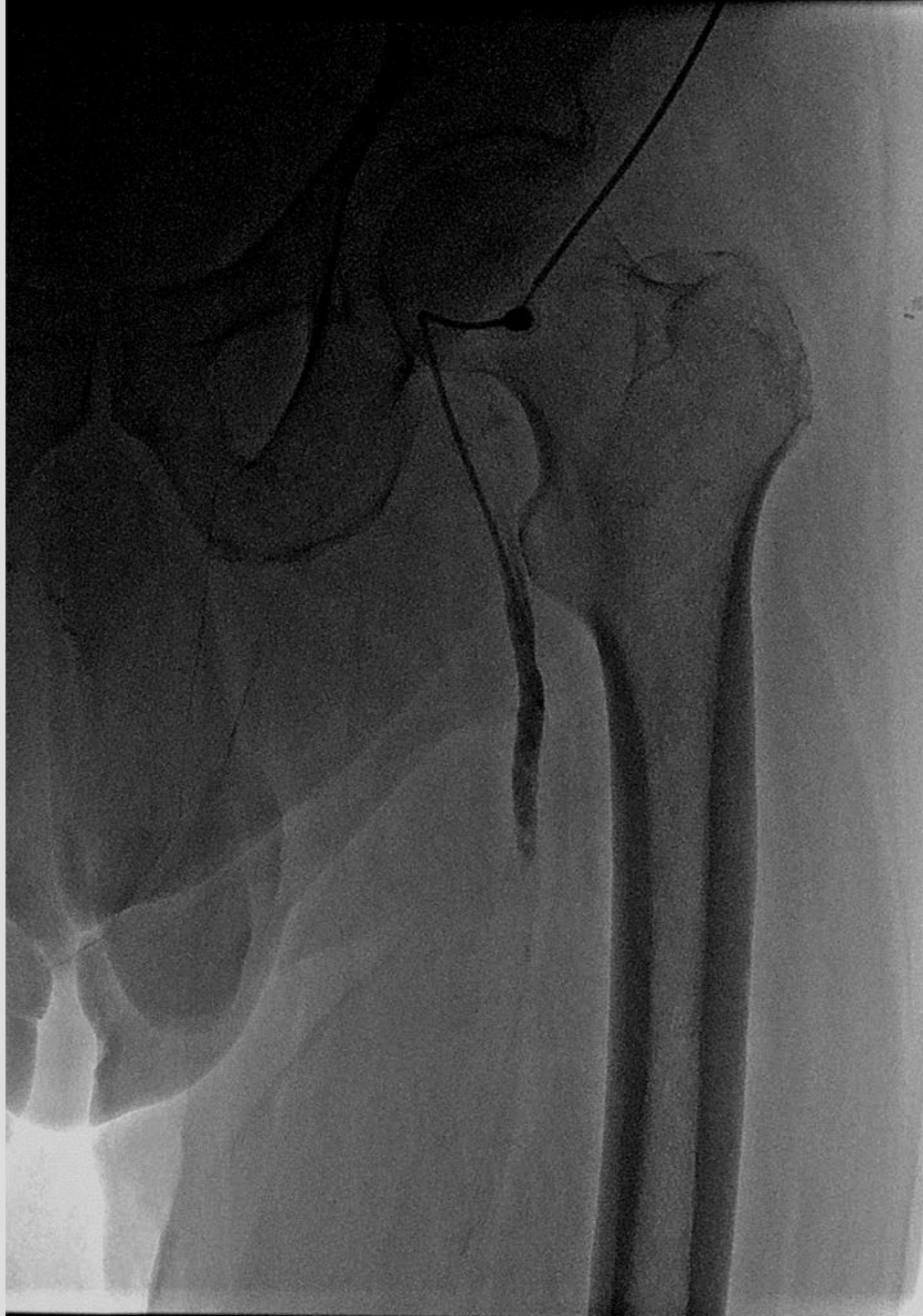
**Optimal imaging in
retrograde access**

1. General principle of angio-study

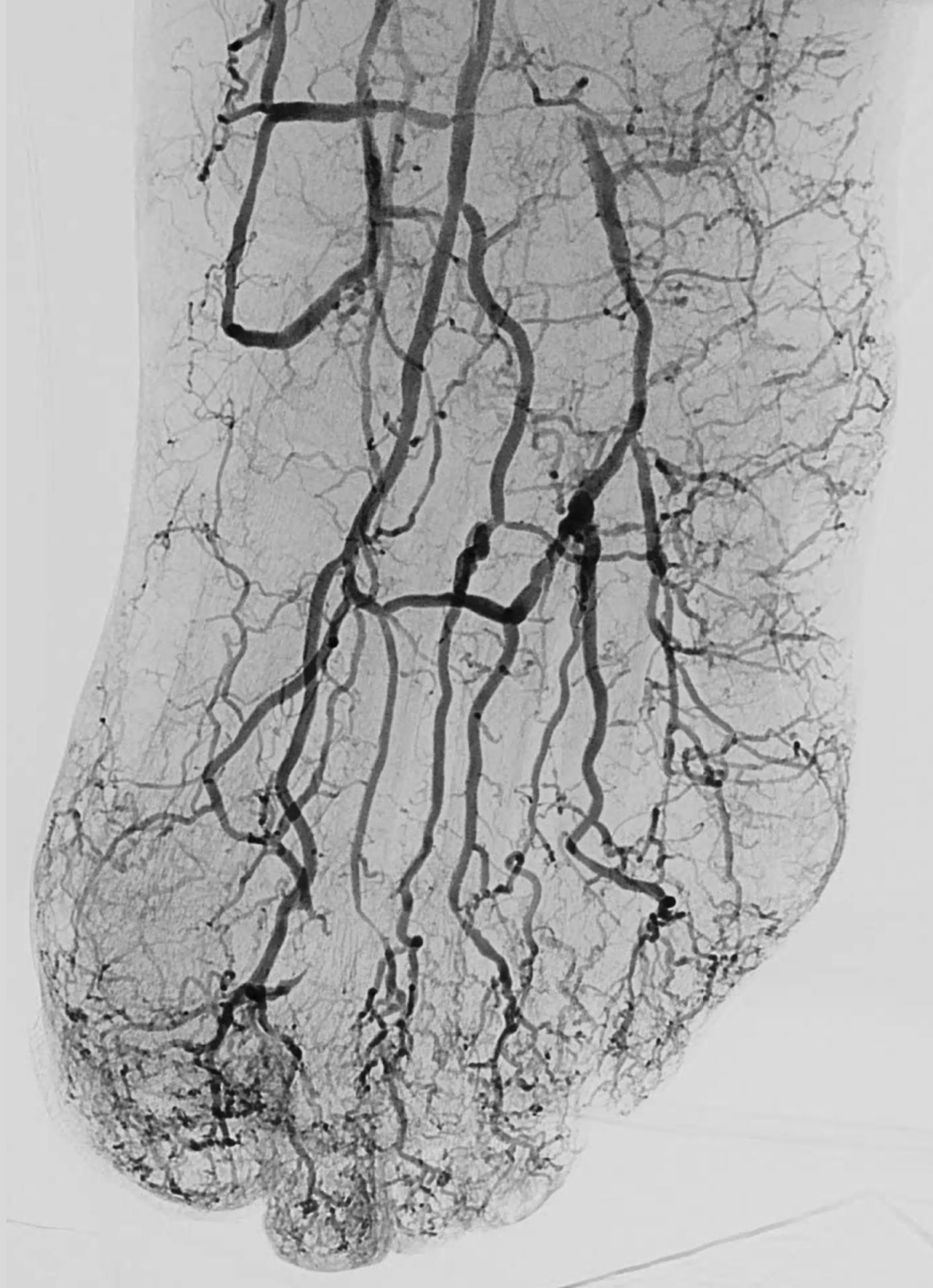
2. Retrograde approaches

- SFA**
- POP-TPT-PER**
- ATA-DPA**
- PTA-Plant**
- Distal**

- 400 mA
- 70 kV
- 10 FPS
- 10 mL Visipaque 320













- Use proper radiological programs & projections
- CO2 angiography can help

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Step-by-step approach in CTOs crossing strategy

❑ Antegrade approach

1. Endoluminal
2. Subintimal



Failure

❑ Retrograde puncture

❑ Transcollateral

1. Pedal-plantar loop technique
2. Peroneal artery branches PTA

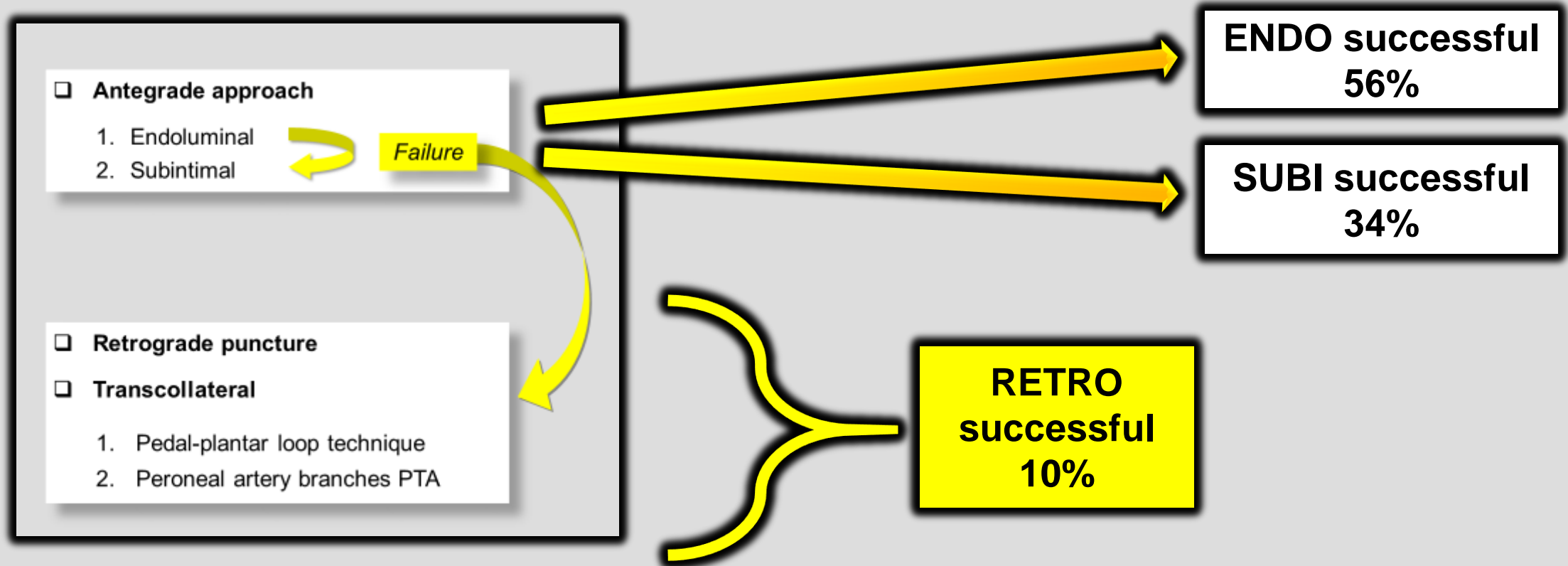


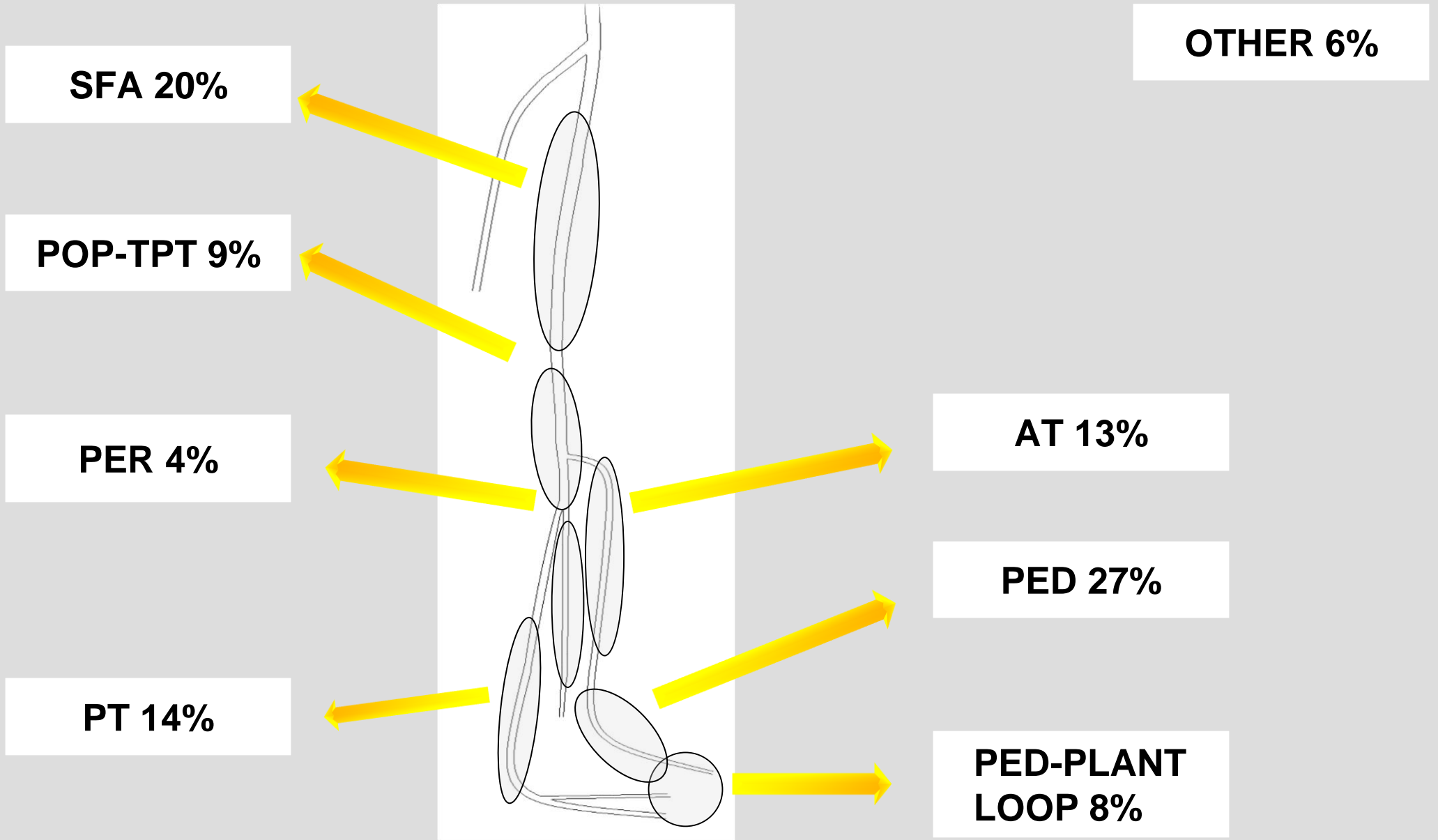
J CARDIOVASC SURG 2013;54:685-711

Tips and tricks for a correct “endo approach”

R. FERRARESI¹, L. M. PALENA², G. MAURI³, M. MANZI⁴

Step-by-step approach in CTOs crossing strategy





Optimal imaging in retrograde access

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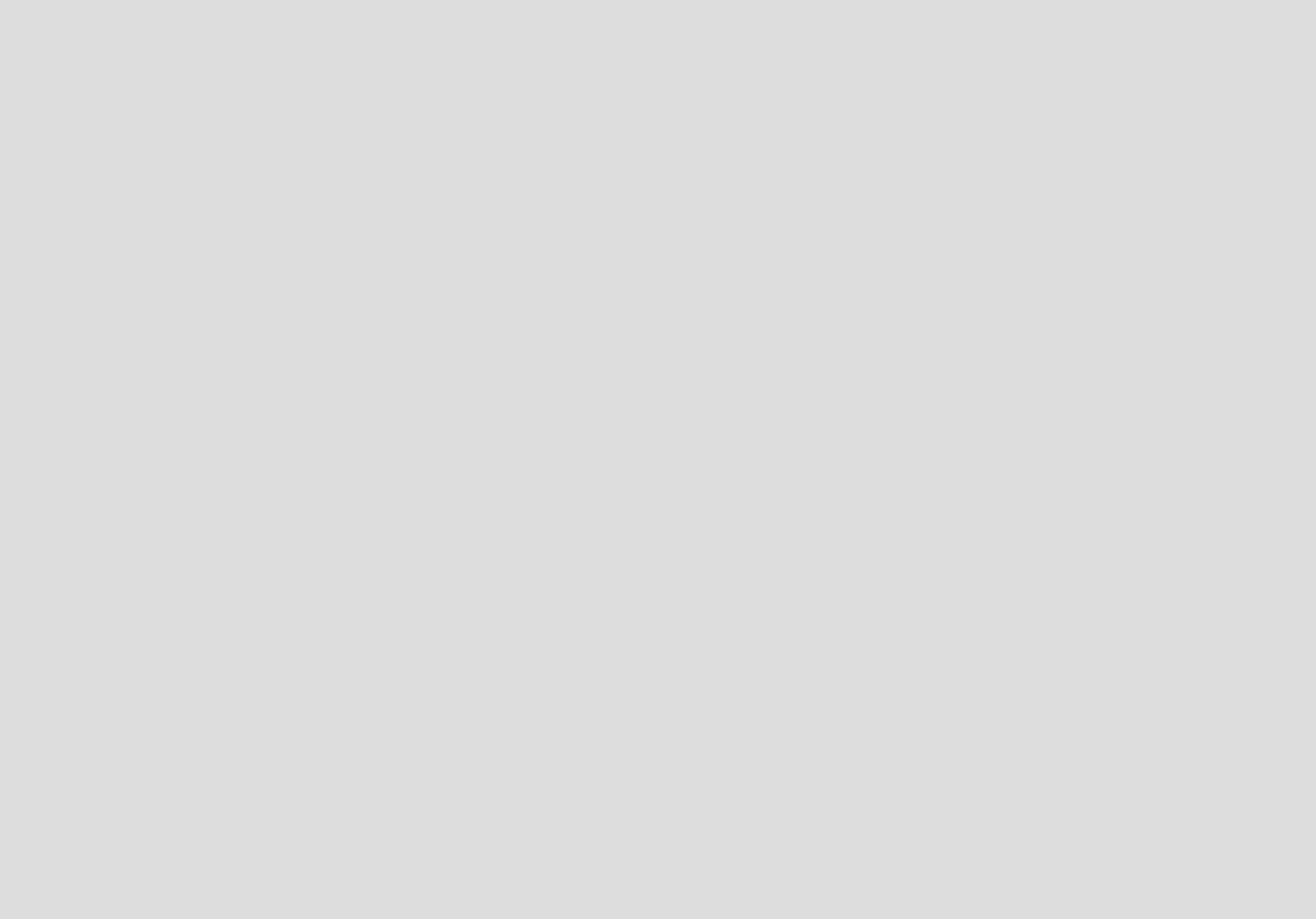
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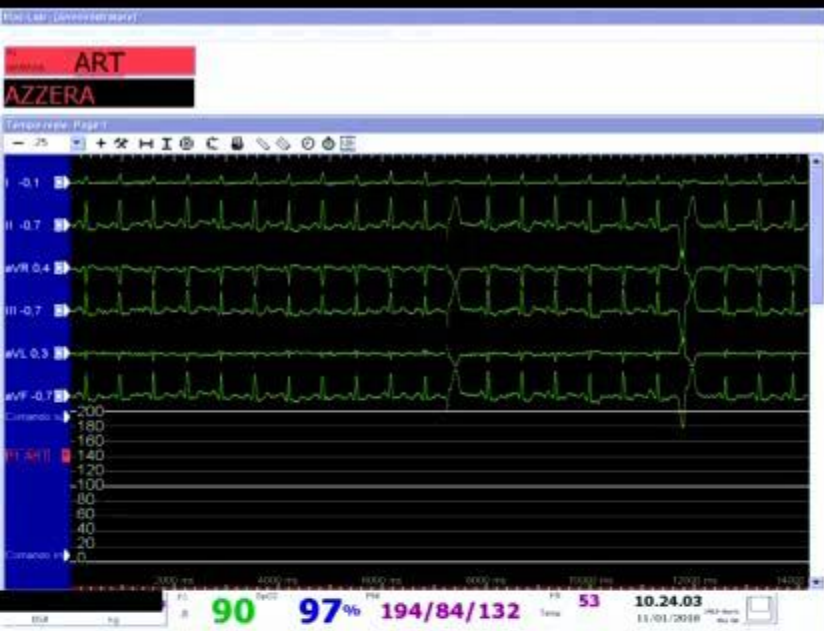
— POP-TPT-PER

— ATA-DPA

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— Distal





Patient Acquisition Options Help

JITO

455163
* 27/05/1955
11/01/2018
10:27:41

cm 16
LAO 19° / CAUD 1°



mGy A: 361
mGy/min A: 2

ARTI INFERIORI

DR VFR Time

Bolus Chasing

kV 67.4
mA 422.7

Measure Field

ms 6.0

Focus

Time

Cu mm 0.1
f/s 15

Dilatation 00:00

Σ A+B 005.6

FL Enh. Con.

kV 63.0
mA 111.7
ms 12.9
Cu mm 0.6
p/s 7.5 p/s

Heat Unit % 14 %



Send successfully complete...

Examination

PostProc

Quant



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Anterolateral retrograde access to the distal popliteal artery and to the tibioperoneal trunk for recanalization of femoropopliteal chronic total occlusions

Michele Silvestro, MD,^a Luis Mariano Palena, MD,^b Marco Manzi, MD,^b Efrem Gómez-Jabalera, MD,^b Deepak Vishwanath, MD,^b Andrea Casini, MD,^a and Roberto Ferraresi, MD,^a Bergamo and Abano Terme, Italy

J Vasc Surg. 2018 Dec;68(6):1824-1832

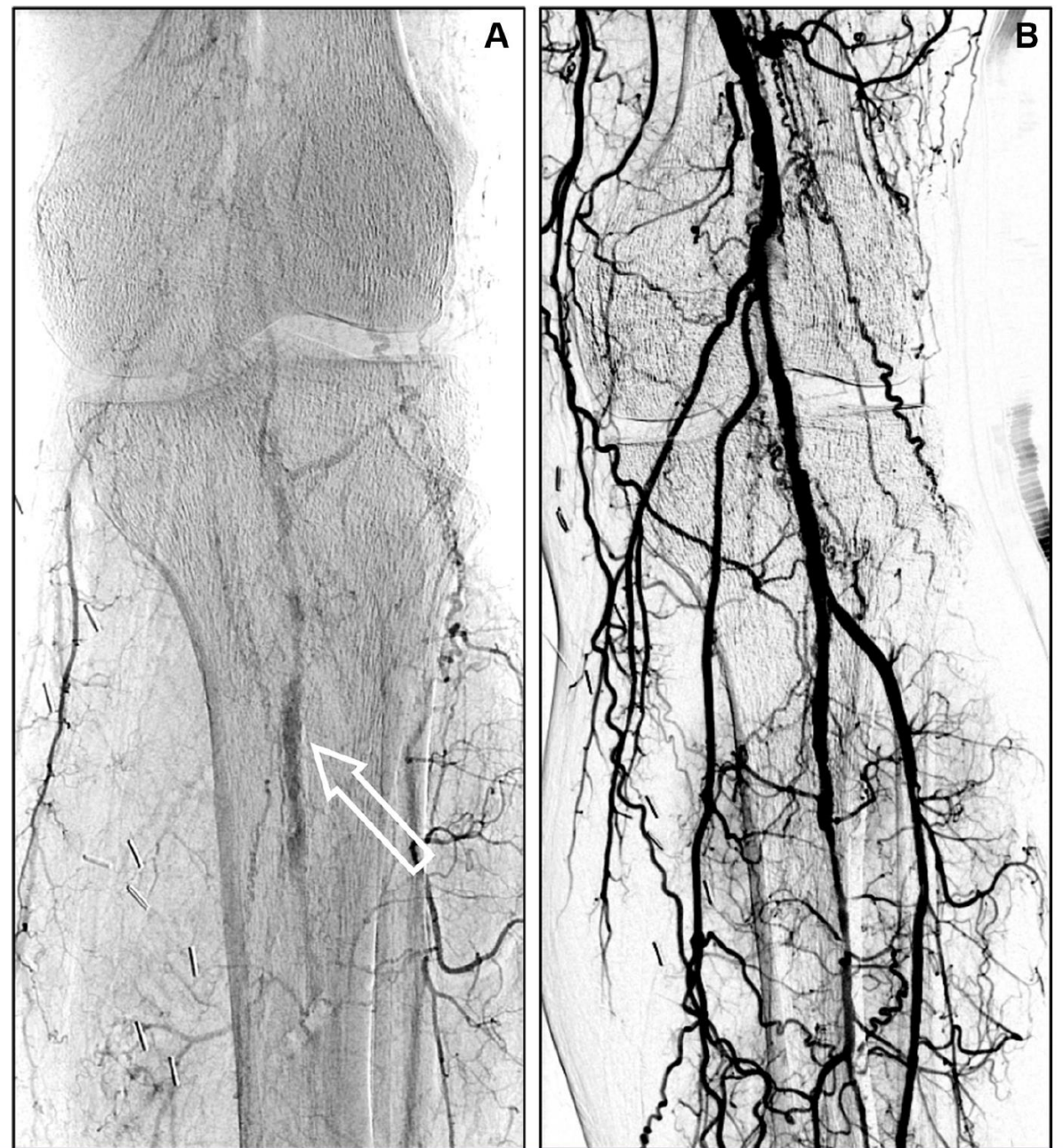
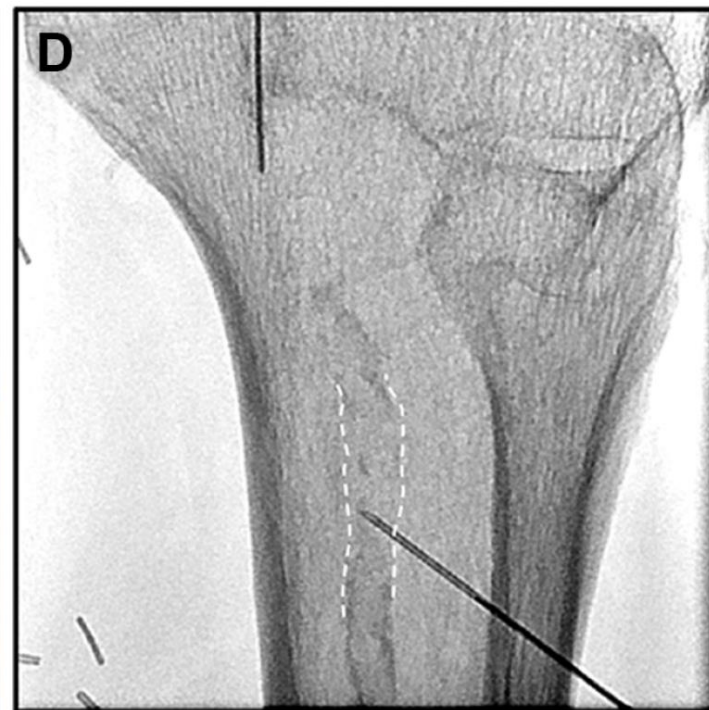
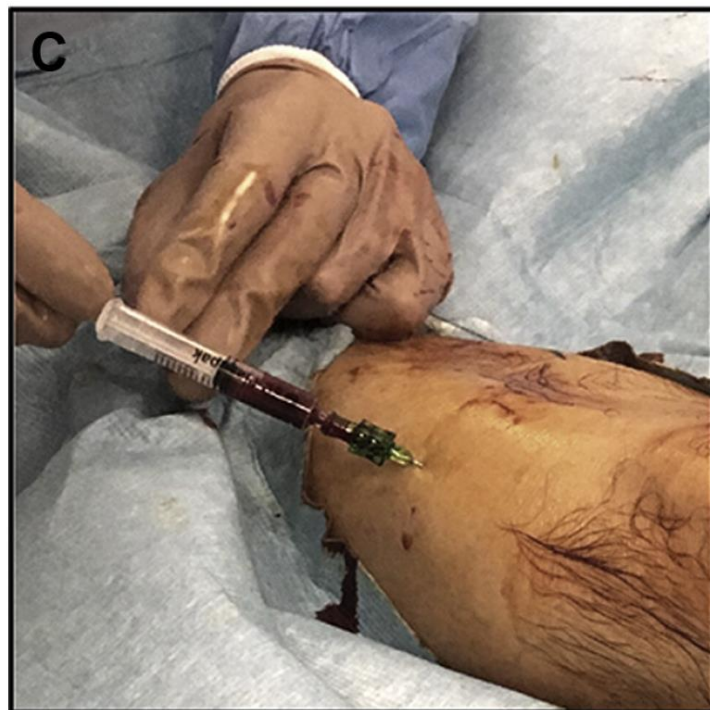
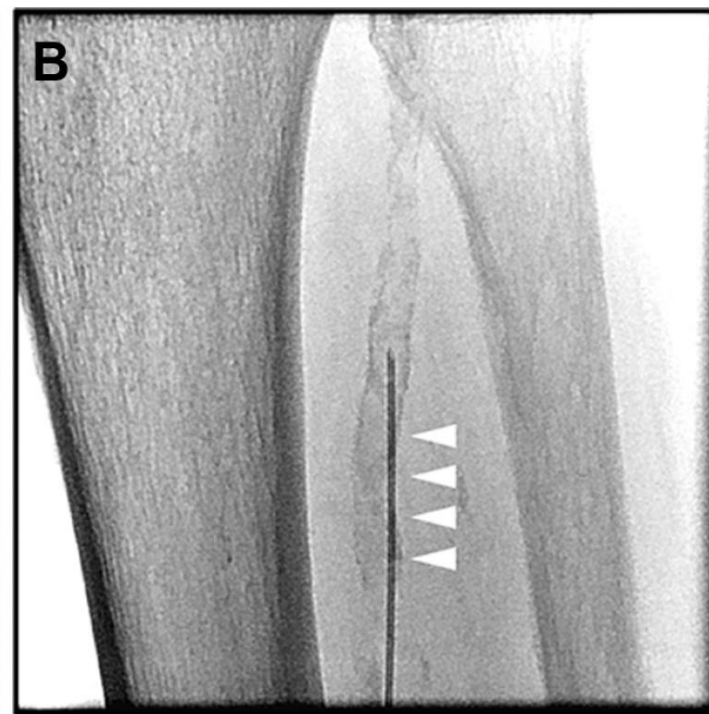
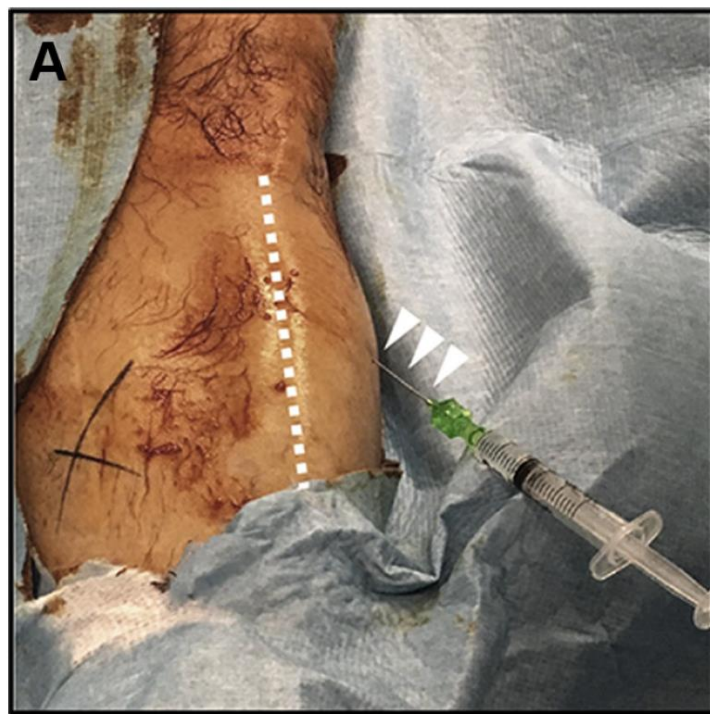
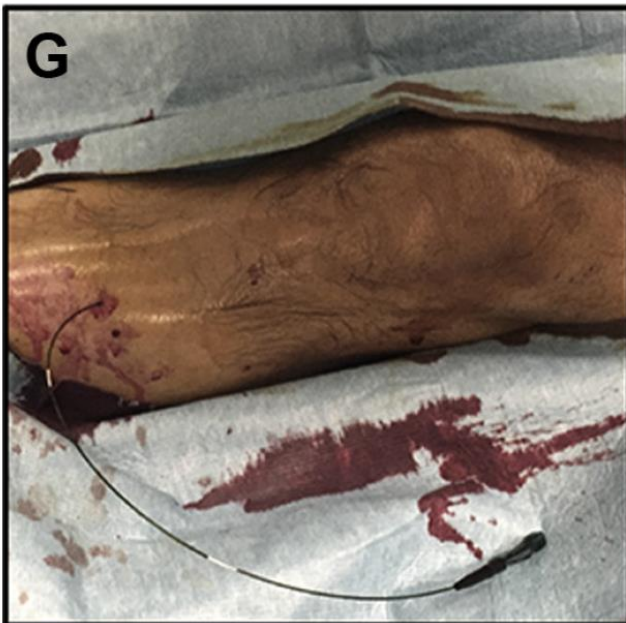
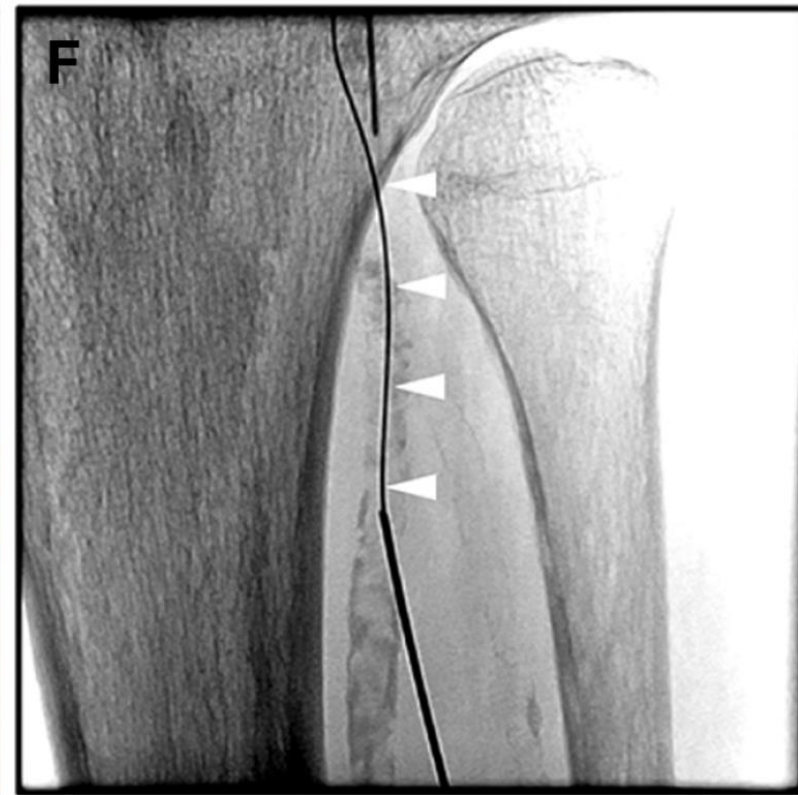
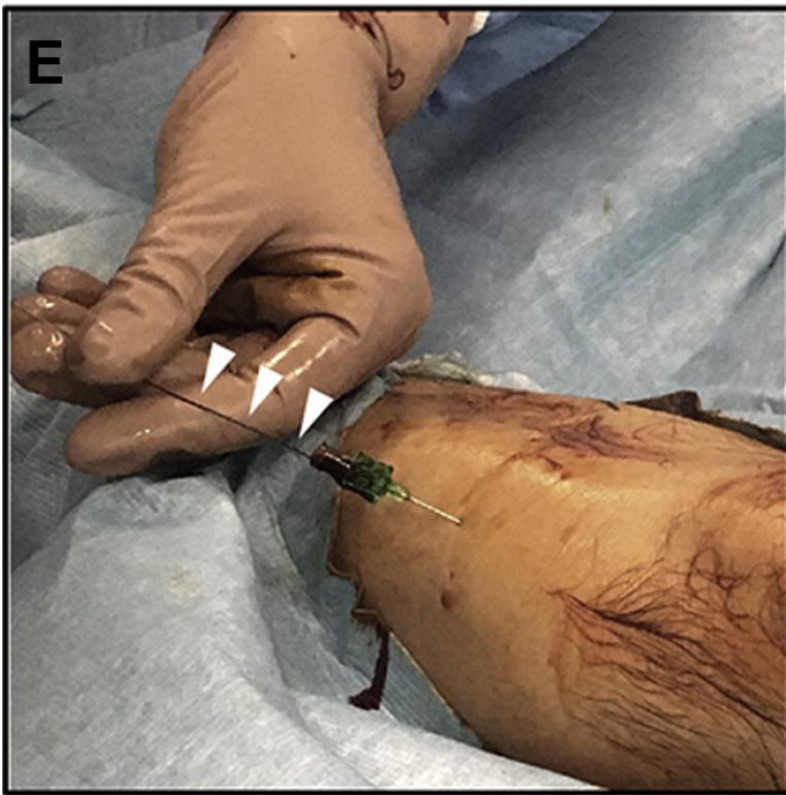
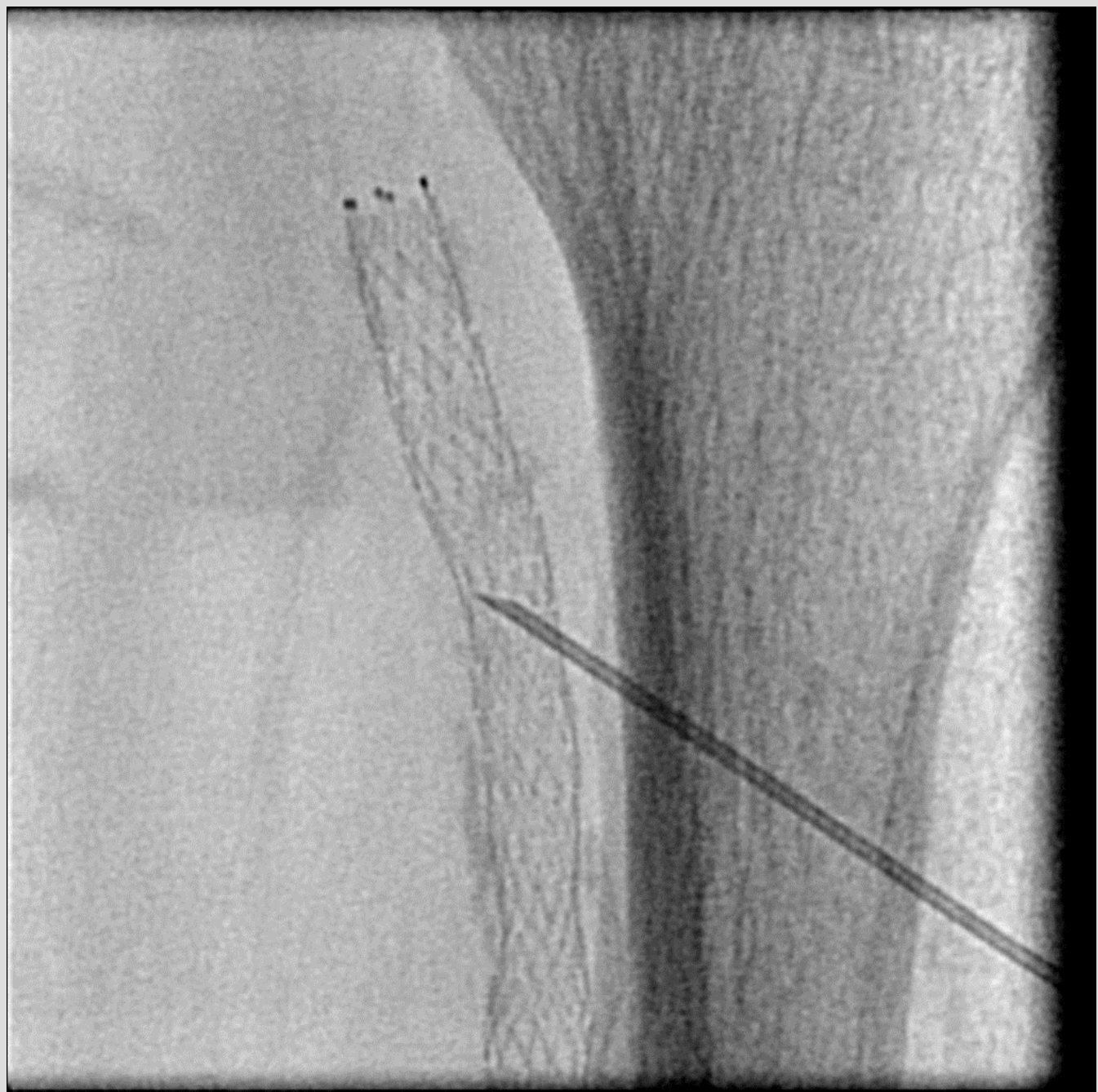
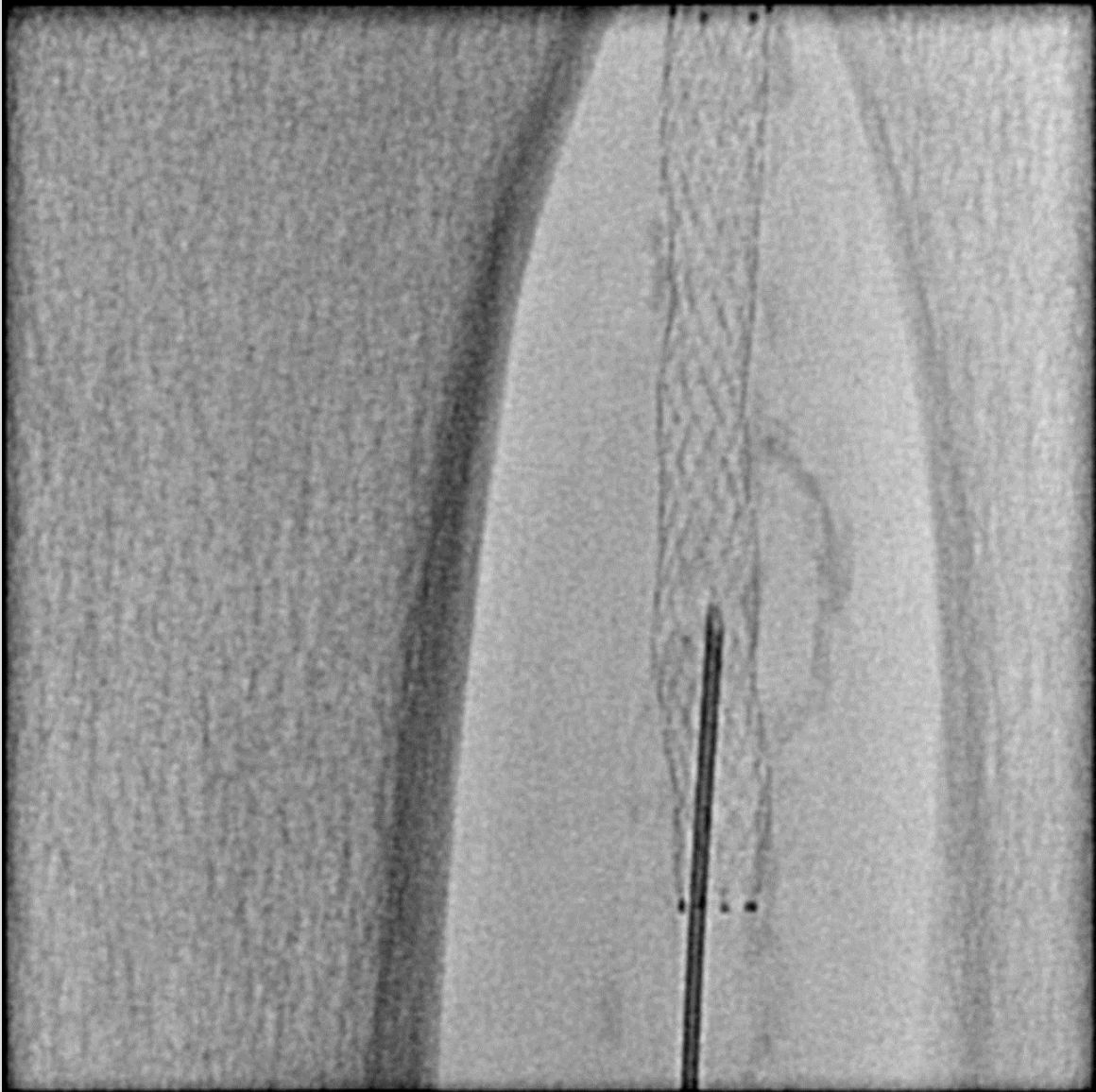


Fig 1. A, Baseline anteroposterior arteriography of a left lower limb. The *open arrow* indicates the entry site and the direction of the angiographic needle to the tibioperoneal trunk (TPT). As shown, the target vessel is oftentimes visible only in very delayed frames because of the tiny collateral inflow. **B,** Completion arteriography after the retrograde approach and the subsequent antegrade angioplasty.











Optimal imaging in retrograde access

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2. Retrograde approaches

— SFA

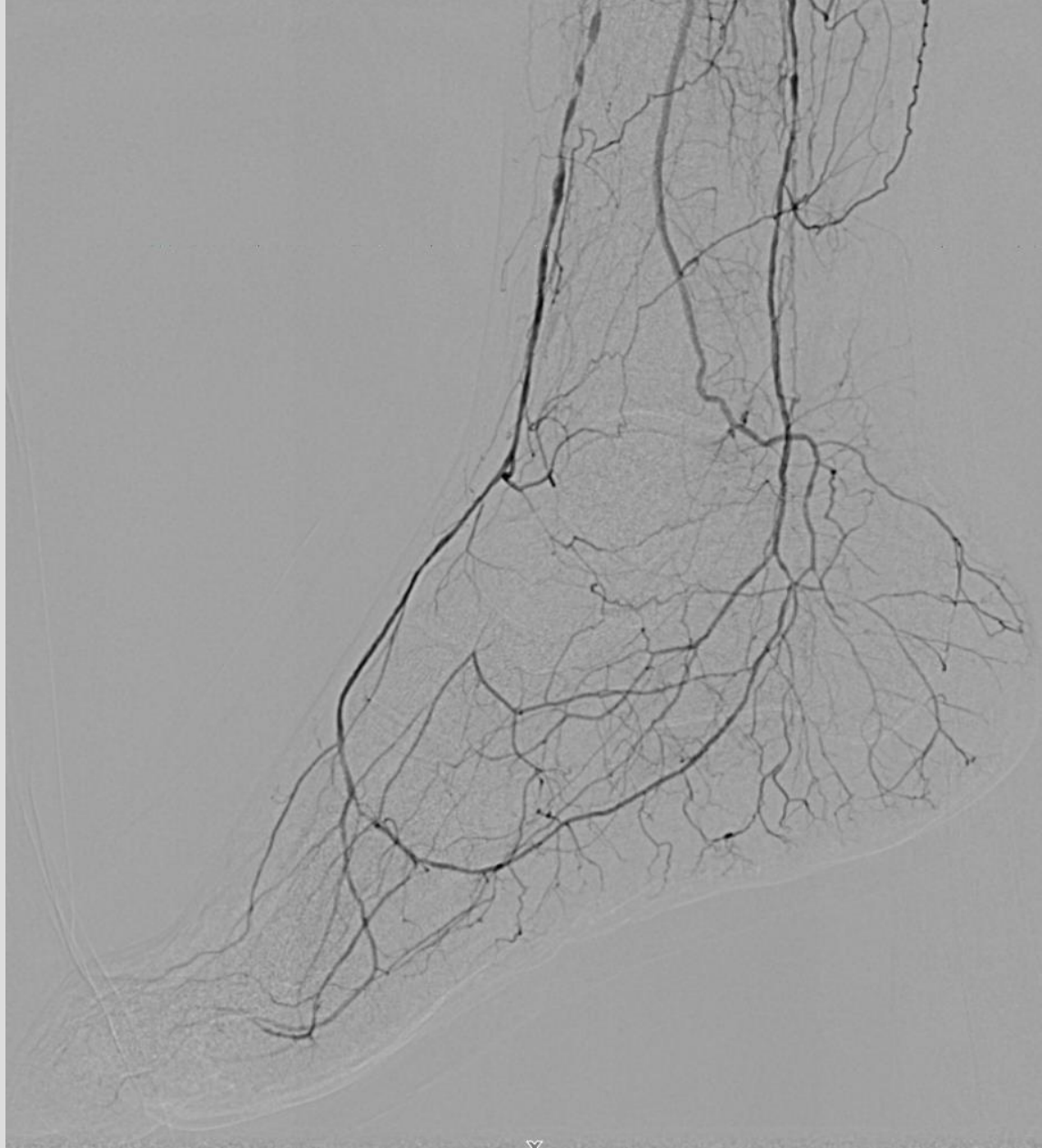
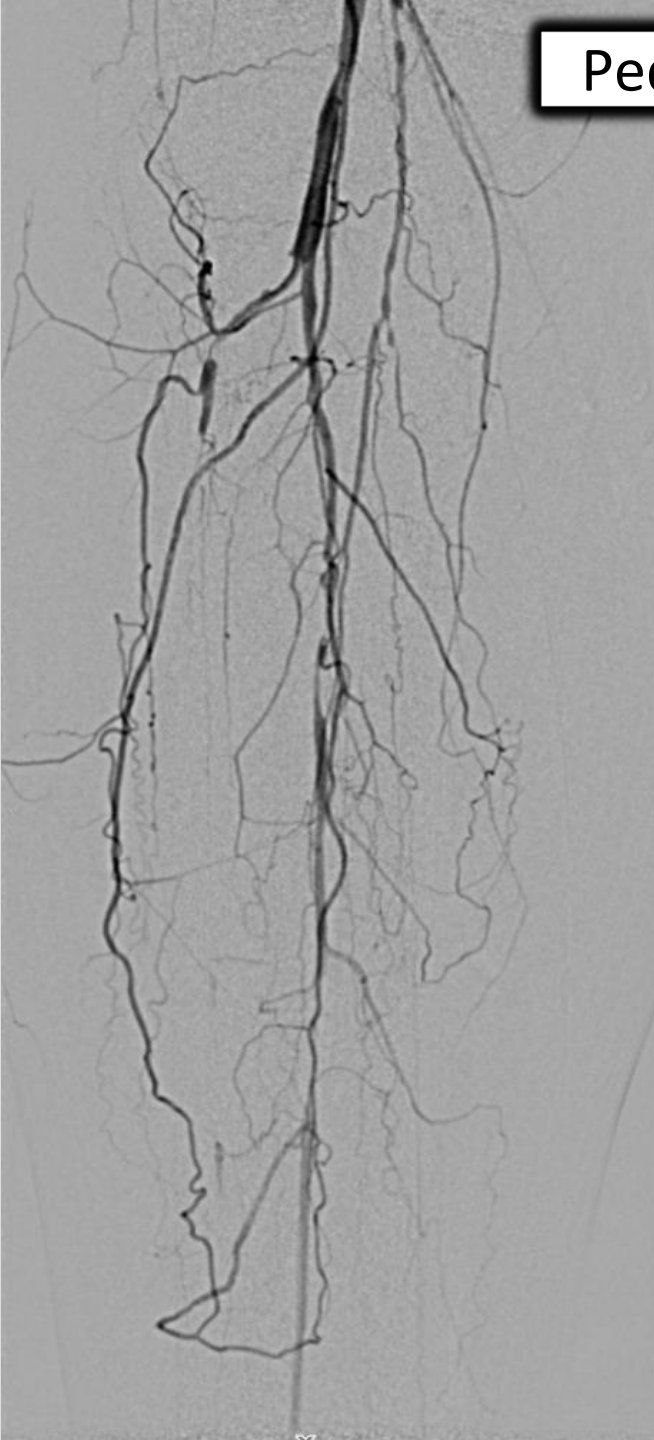
— POP-TPT-PER

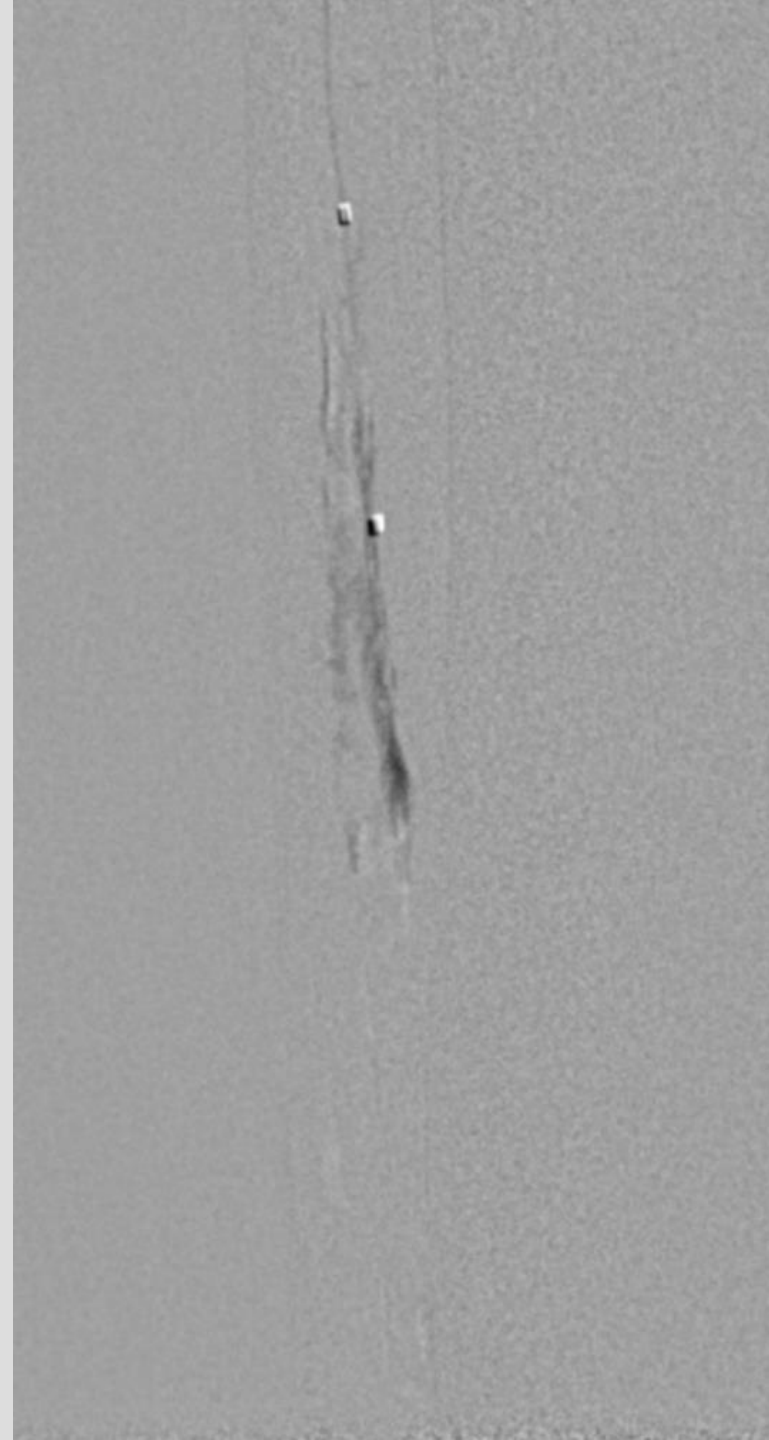
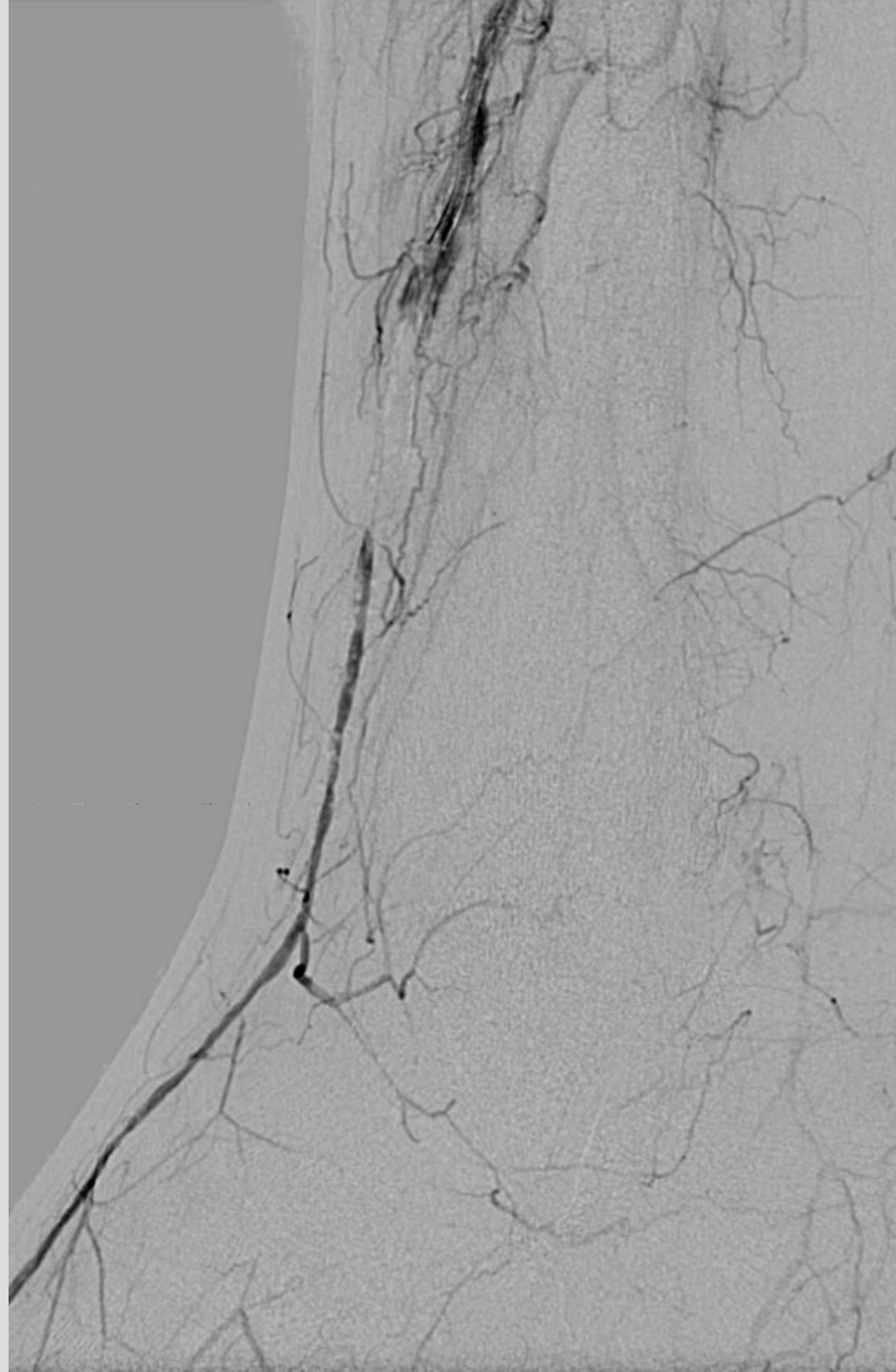
— **ATA-DPA**

— PTA-Plant

— Distal

Pedal puncture after failed subintimal dissection



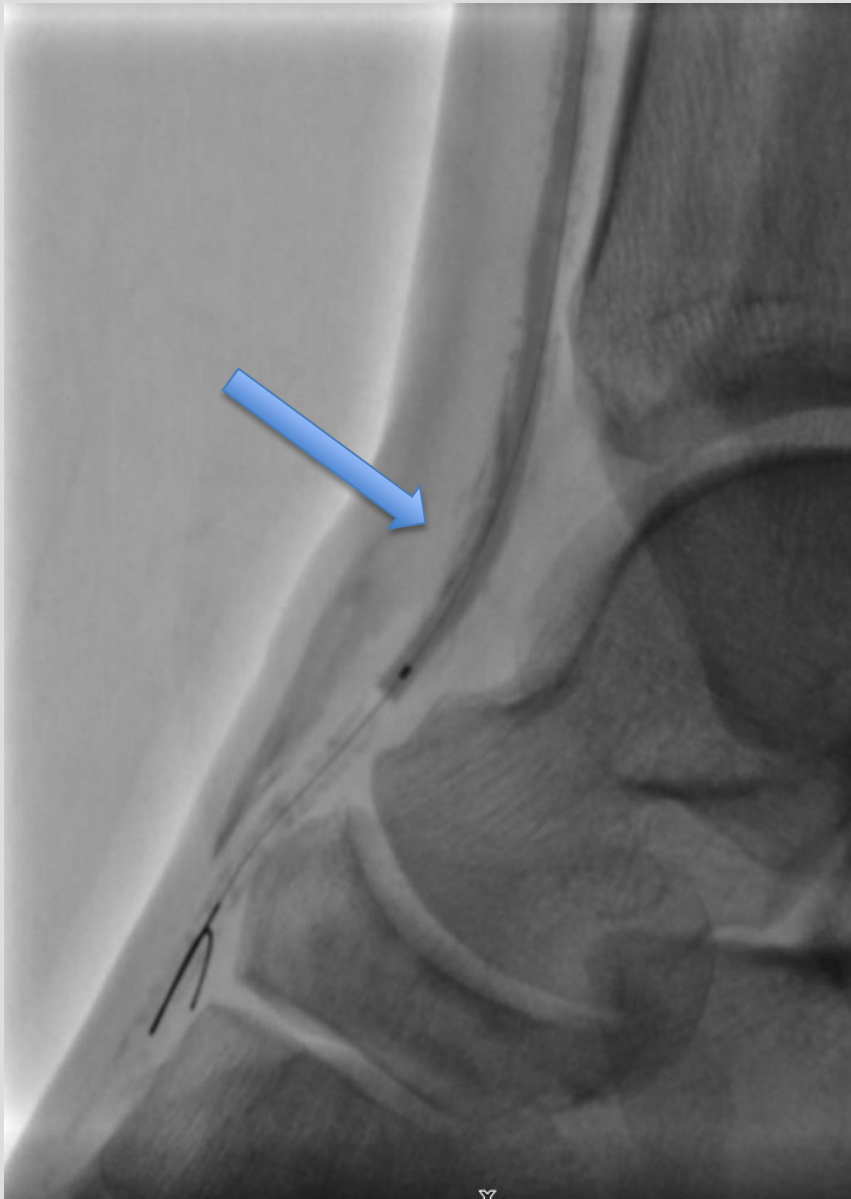


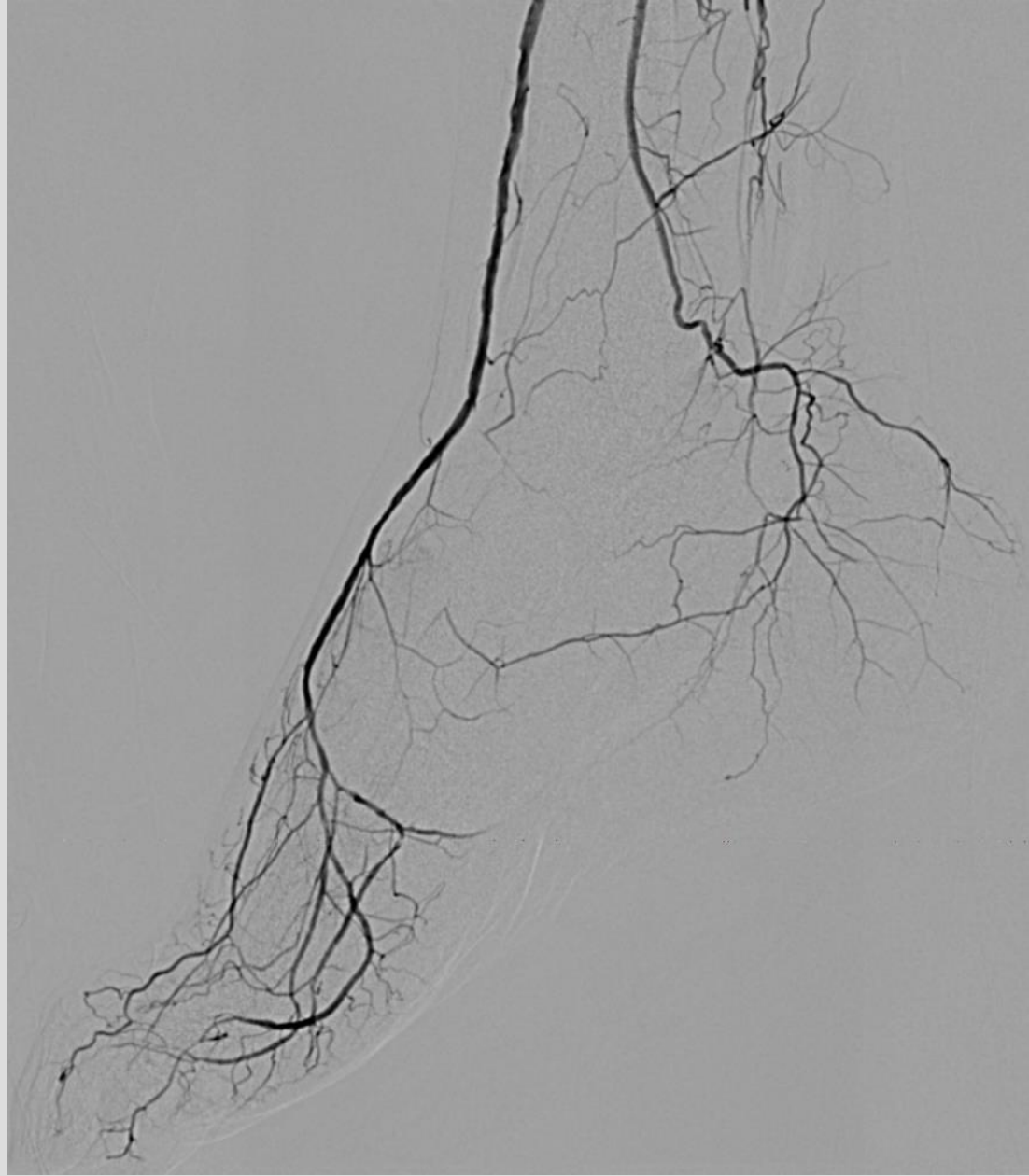


Dorsalis pedis artery puncture

- **Use correct radiological projections**
- **Intra-arterial and/or peri-arterial TNT**
- **21G Needle**
- **Needle and artery must be allined!**
- **0.018" wires (Command 18) for stronger support**

Sealing of the punctur hole





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Jun 0
1

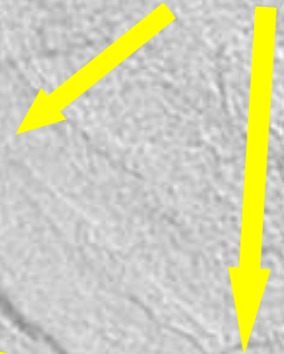
FRAME =
MA

2048

antegrade wire



Med plantar artery (occluded)



Lat plantar artery



NONAME DU

Jun 07 2011

11:38:22

(FILE 5)

Seq: 1

FRAME = 79 / 91

MASK = 1

W: 4096 WL: 2048

NONAME 001

Jun 07 2010
11:54:29

(Filt 6)

Seq: 9
FRAME = 1 / 79

Jun 07 2014
12:39:03

(Flt 6)

Seq: 17
FRAME = 9/14

256WL: 128

NONAME.D0

Jun 07 2011
12:51:09

(File 5)

Seq: 20
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MASK = 3

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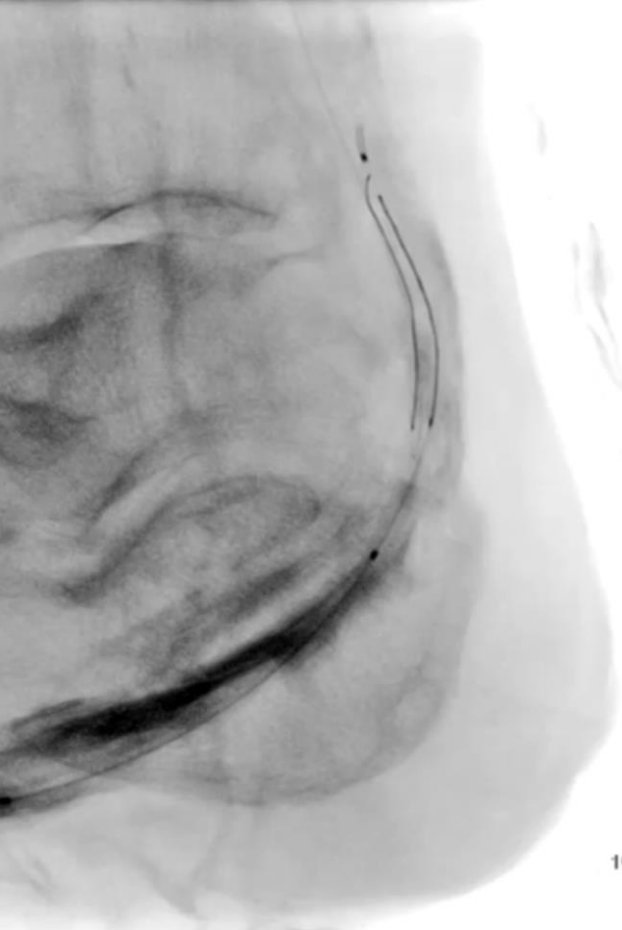
— PTA-Plant

— Distal

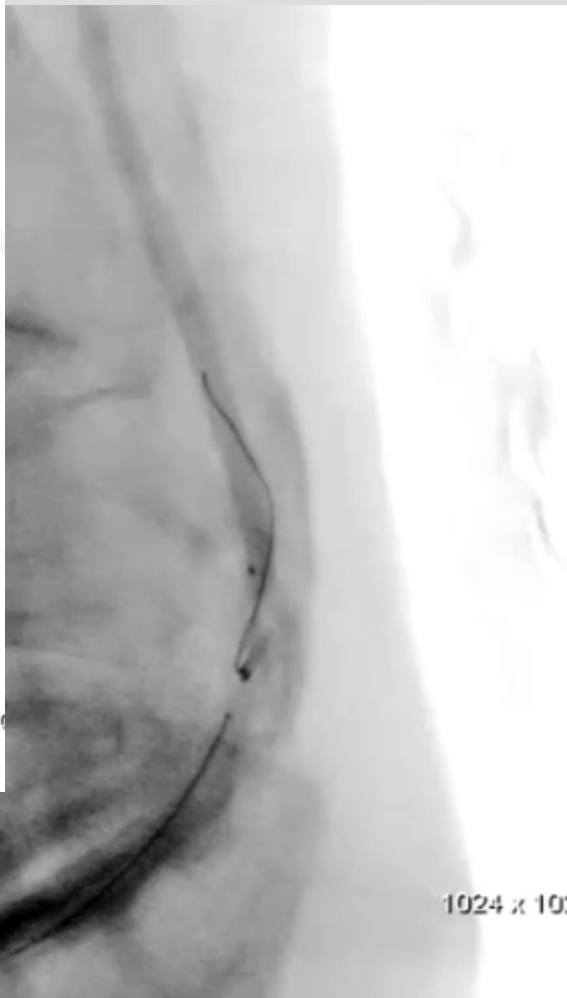








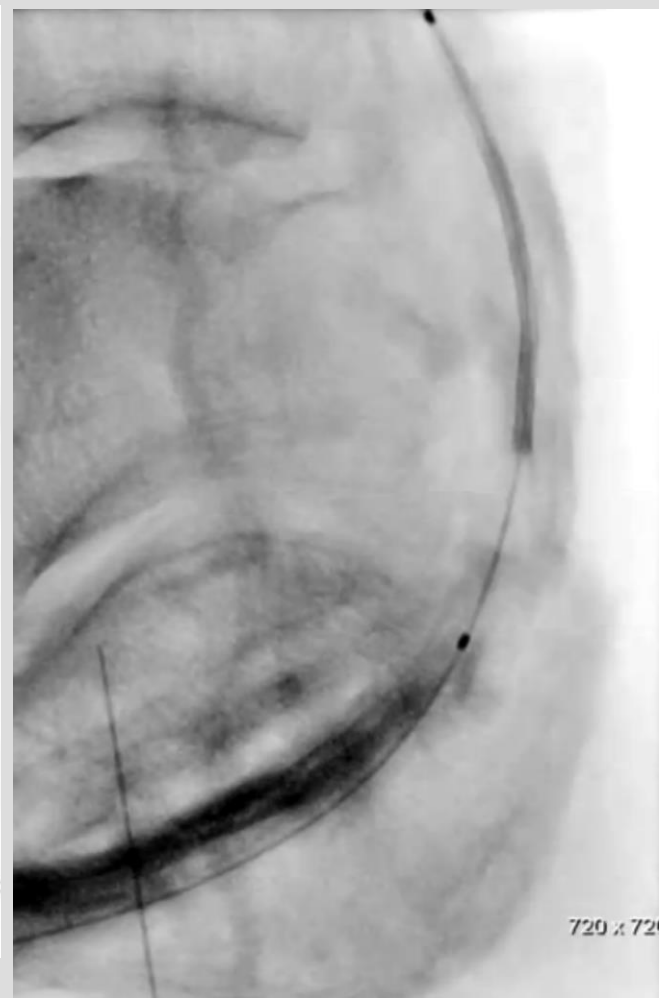
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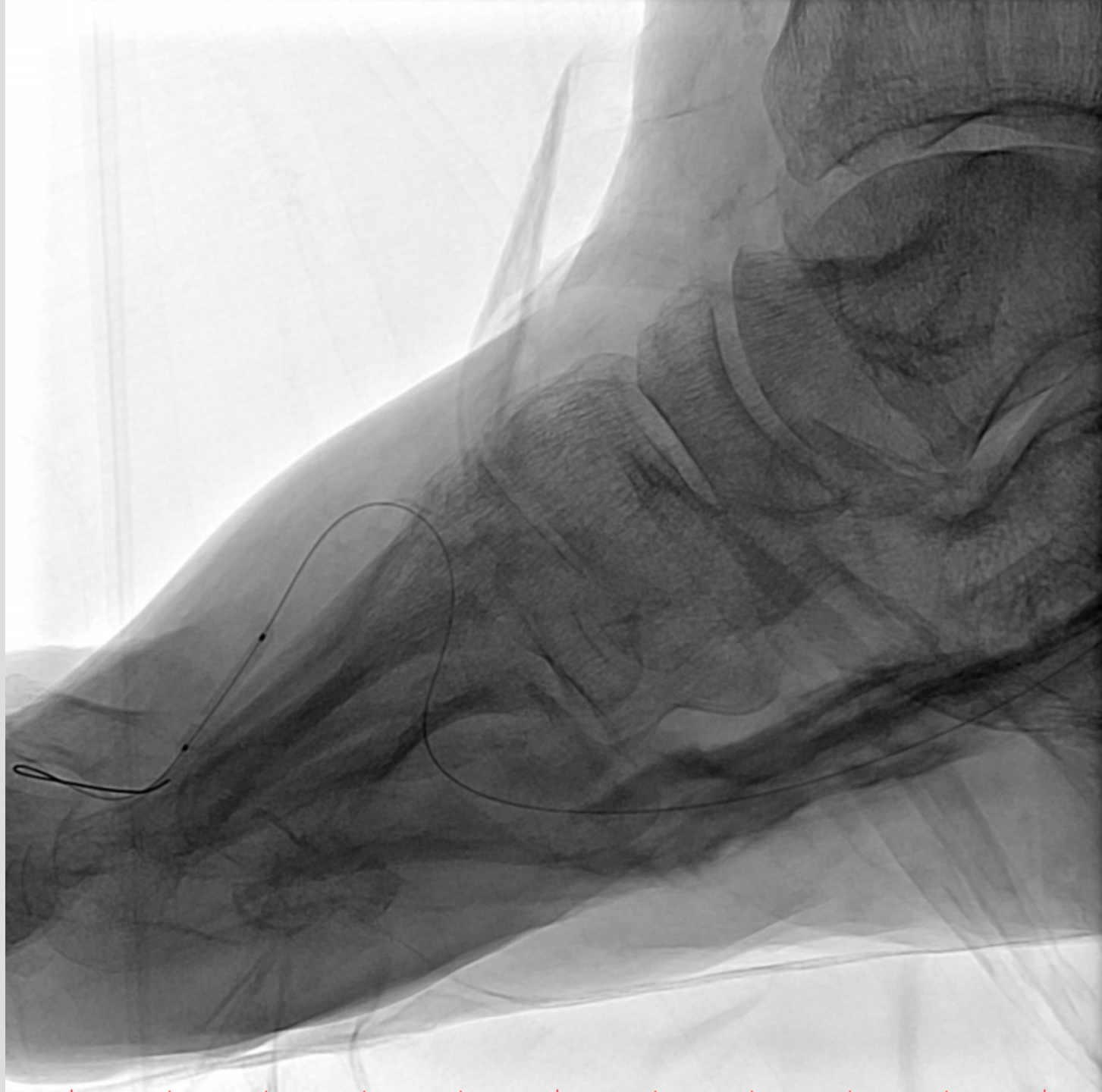
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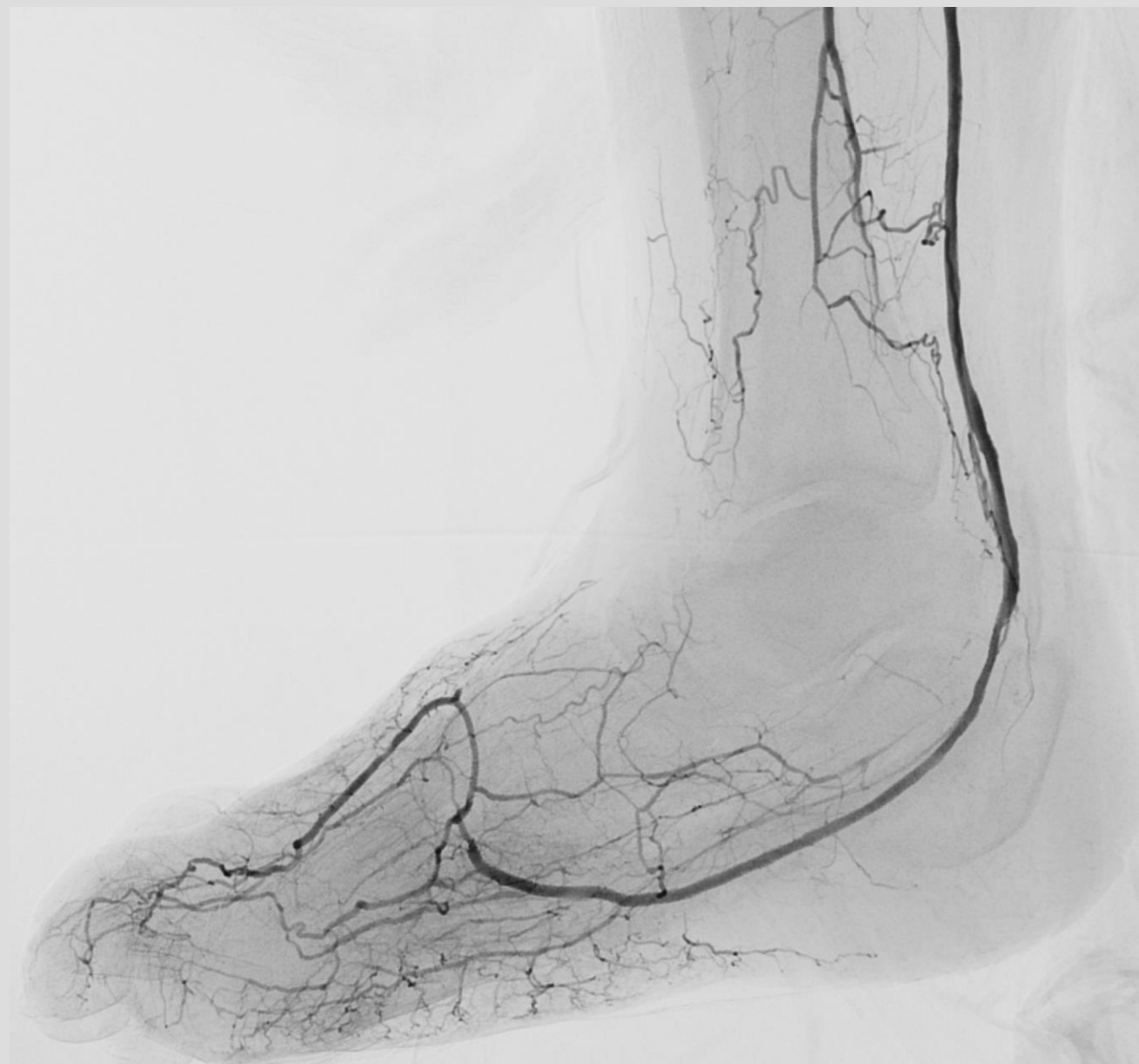


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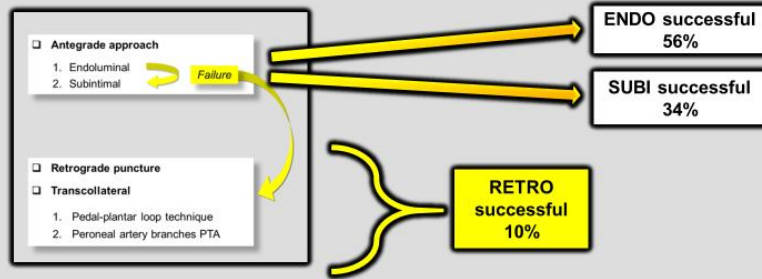


720 x 720





Step-by-step approach in CTOs crossing strategy



Retrograde approaches are a key point in CLI-PTA because they:

- Increase success rate
- Respect landing zone
- With the proper techniques no collateral effects

