Single or Multiple vessels?
aradigms and Practice of Infrapoplit
Endovascular Revascularisation.

Sven Braeunlich, MD
Center of Vascular Medicine

- Not all CLI is created equally.

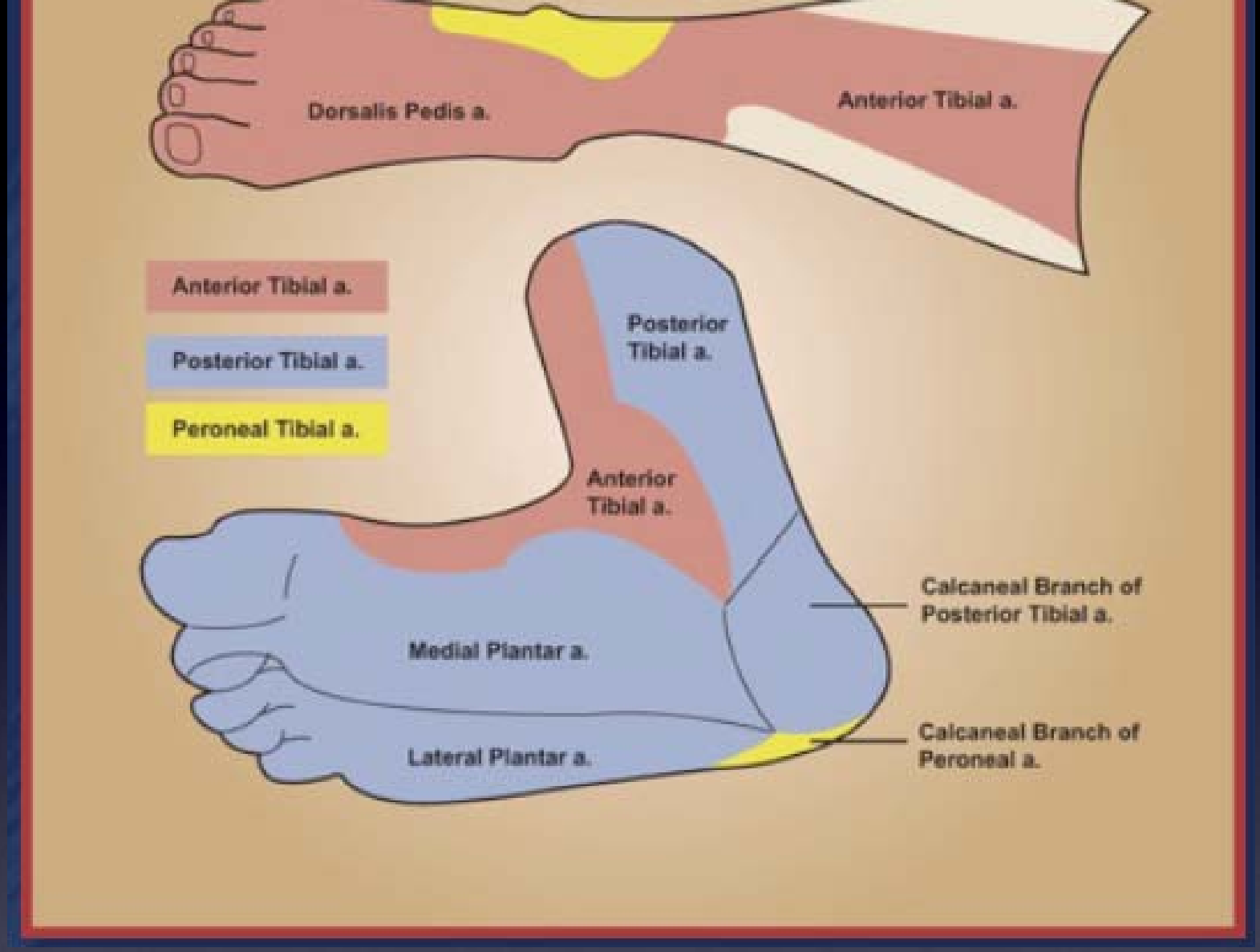
- Complex systemic and local problem.

- Not all CLI is created equally

- Complex systemic and local

- Successful CLI therapy requires ‘in line’ flow to the foot in consideration o the localisation of the wound i relationship to the supplying artery.

- Thus the initial differentation is

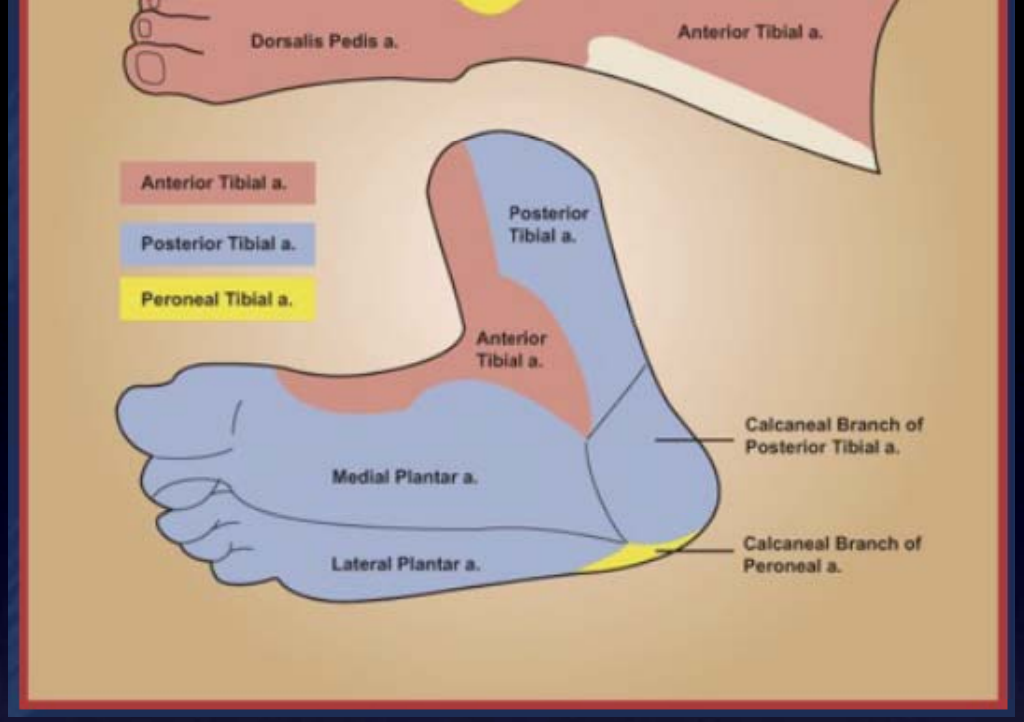


onal Tissue Perfusion: The ‘Angiosome’ Concept

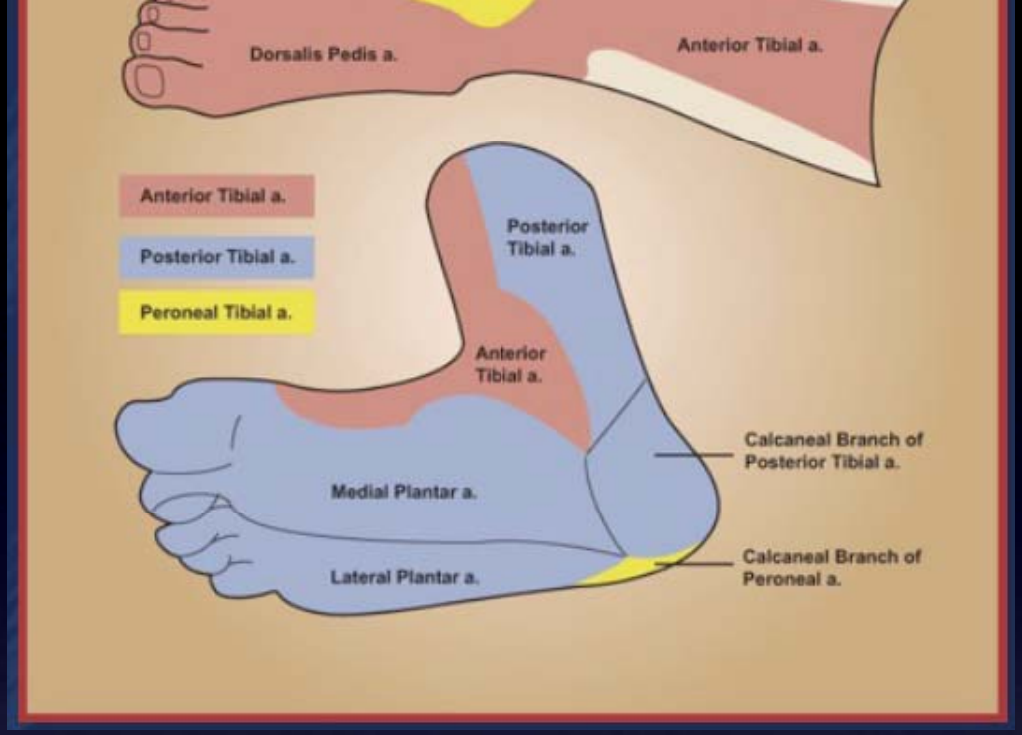
imensional ‘tissue blocks’ served by a specific ‘source artery’• ‘So

y’ perfusion within the specific angiosome should be defined• Rela

een ischemic ulcer location and ‘wound related artery’ is



opriateAngiosomeTreated	BoundaryAngiosomeTreated
83% healed	59% healed
ass 91% healed	62% healed



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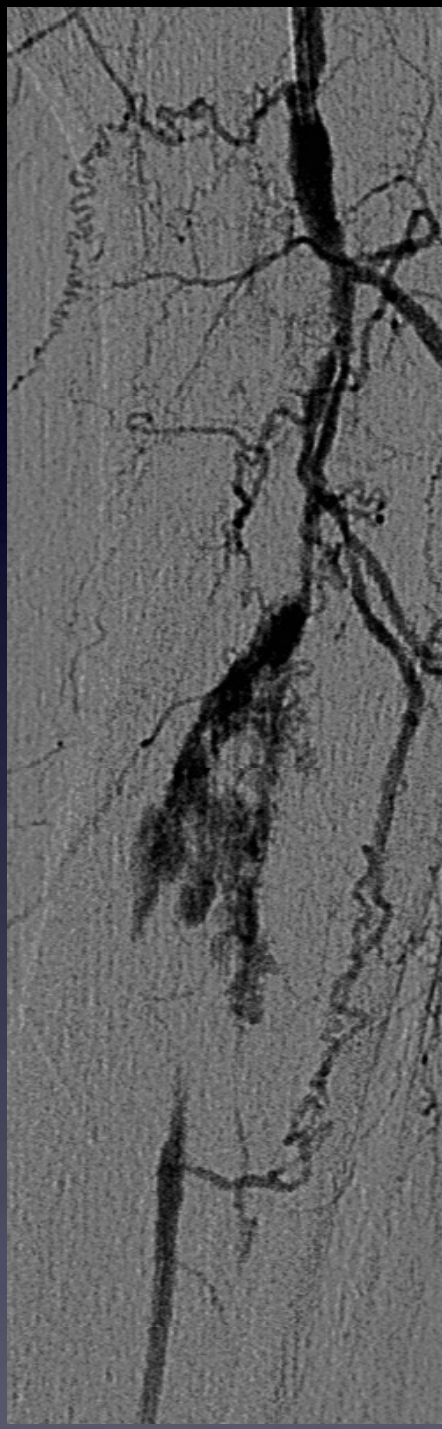
pts.



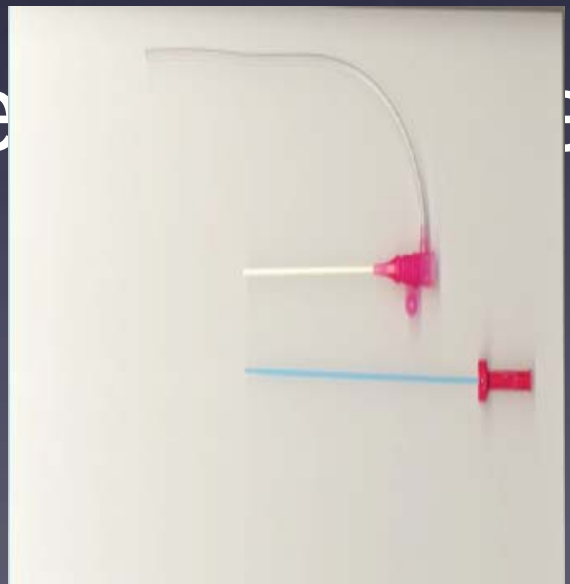
pliteal Arterial Disease (antegrade acce only)

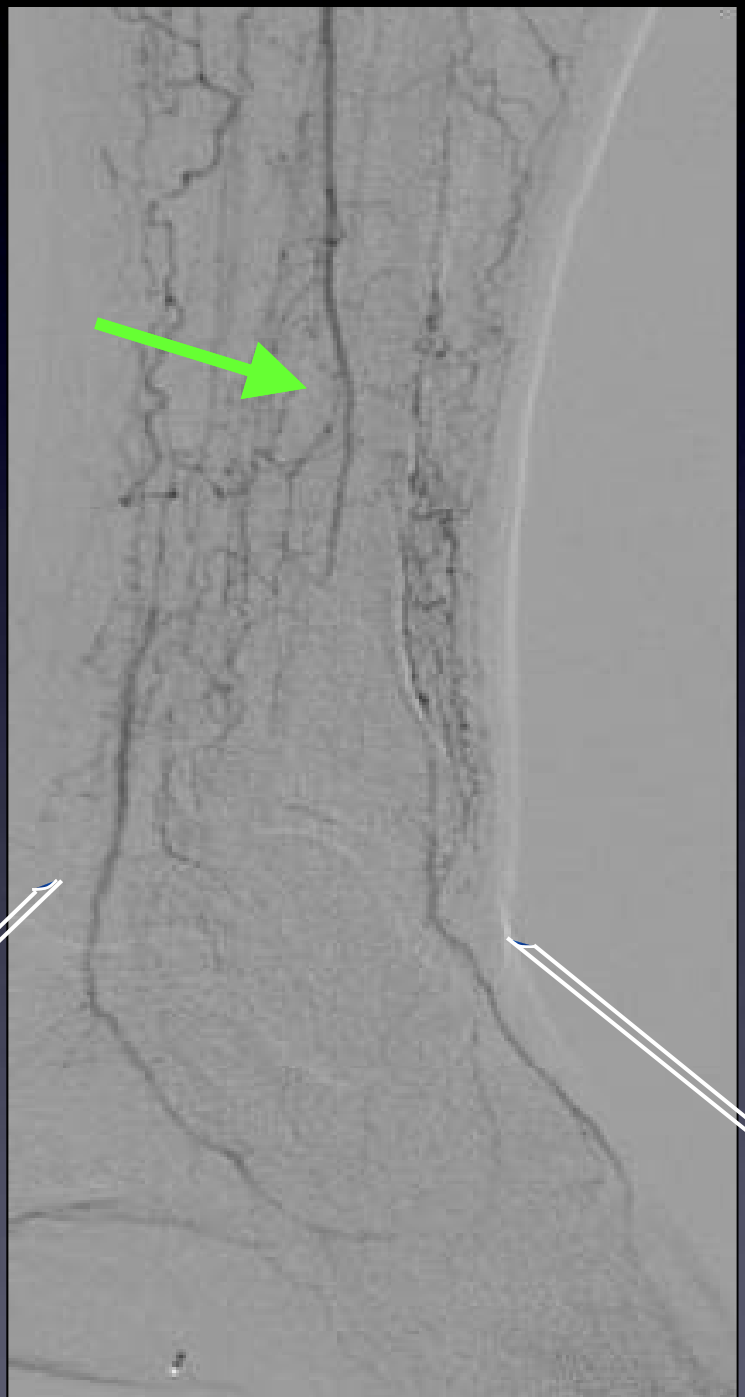
BTK-Occlusions	Failure-rate
- Dorros, *Circulation* 2001	**27 %**
- Soder, *JVIR* 2000	**39 %**

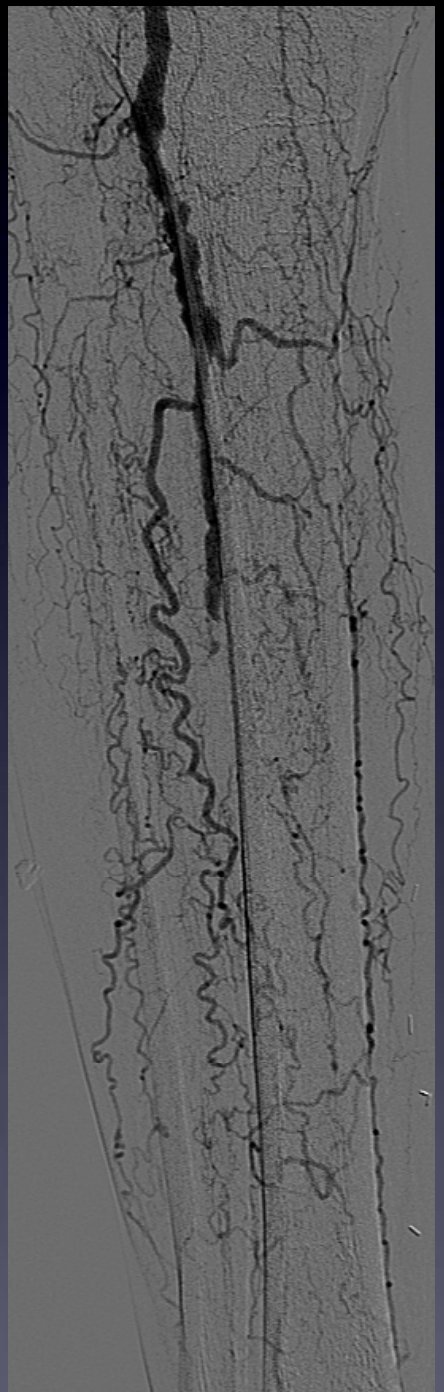
Retrograde Transpedal Approach

- Only in case of antegrade failure, never first choice

- Profile of the introduced device [illegible] small







ATA

Pe

Approach

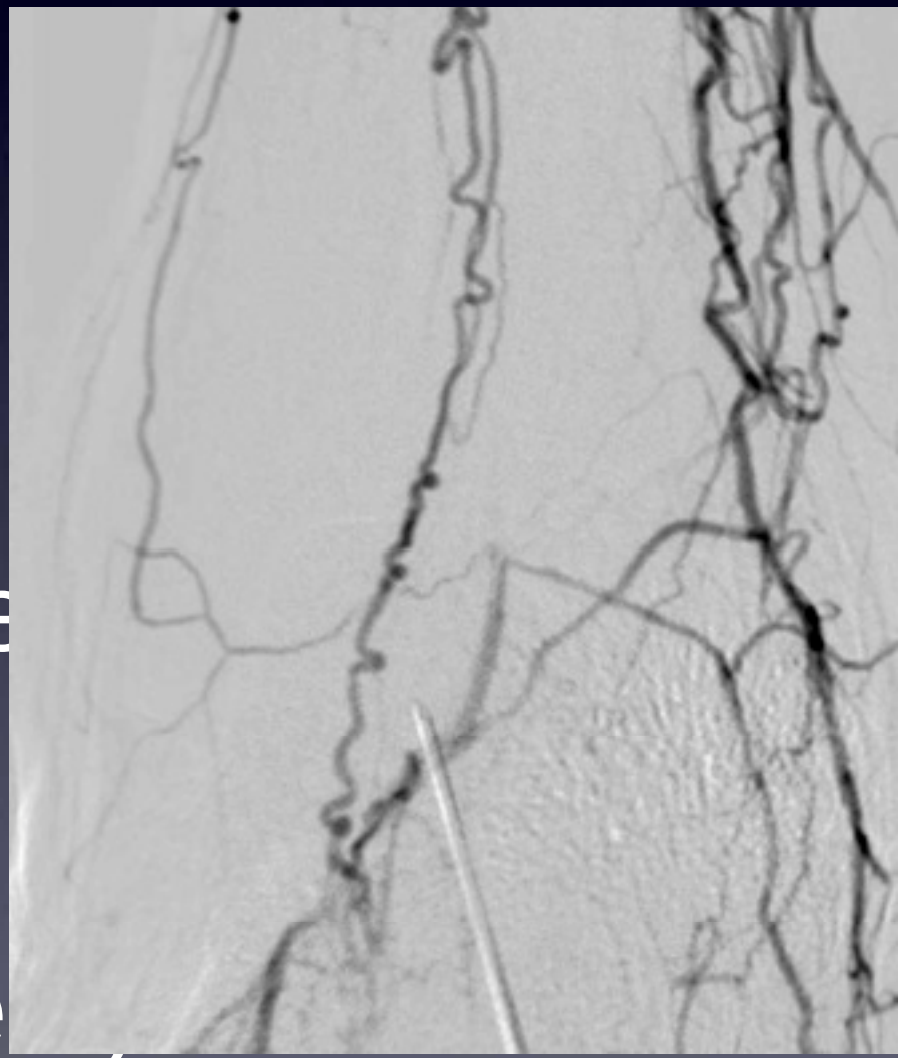
- 0.014“ or 0.018“ guid
  wire 300cm, hydroph
- OTW low-profile
  balloon or

approach

Angiographical control is

faster and easier than duple

Aim to calcification (if prese



approach

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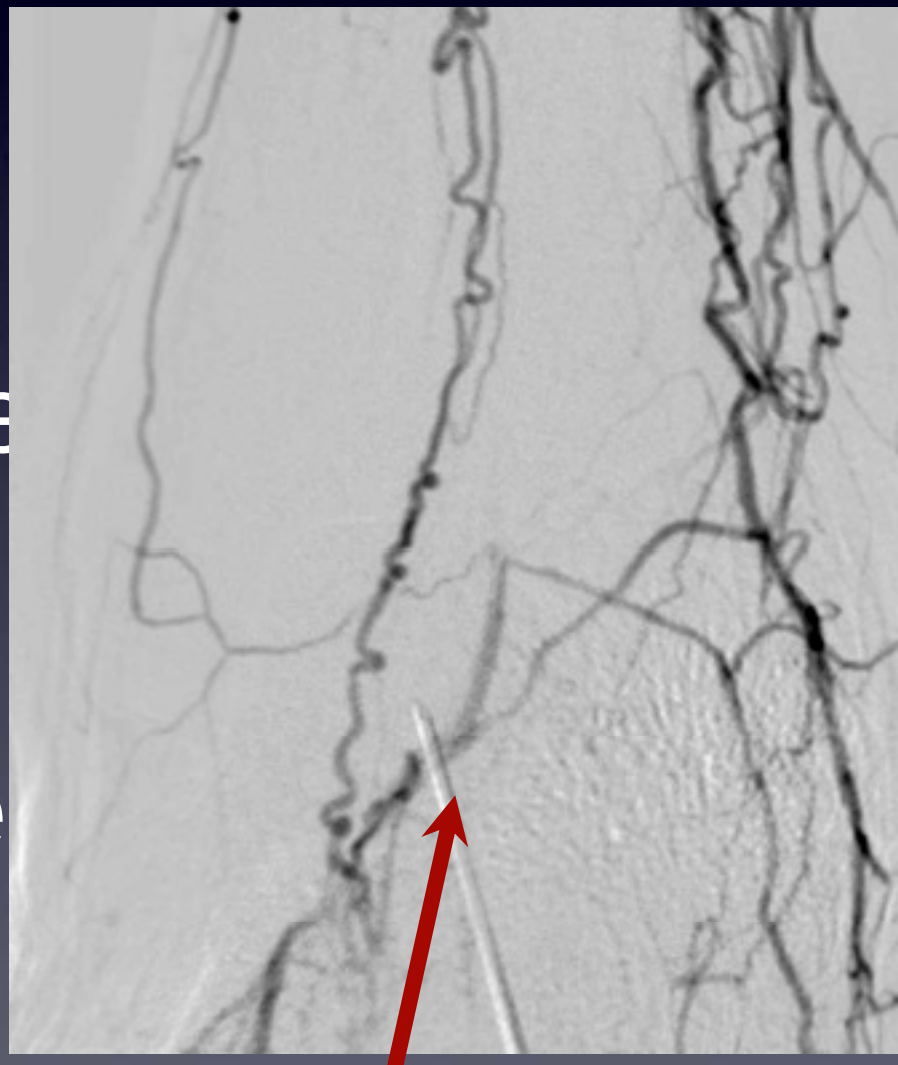
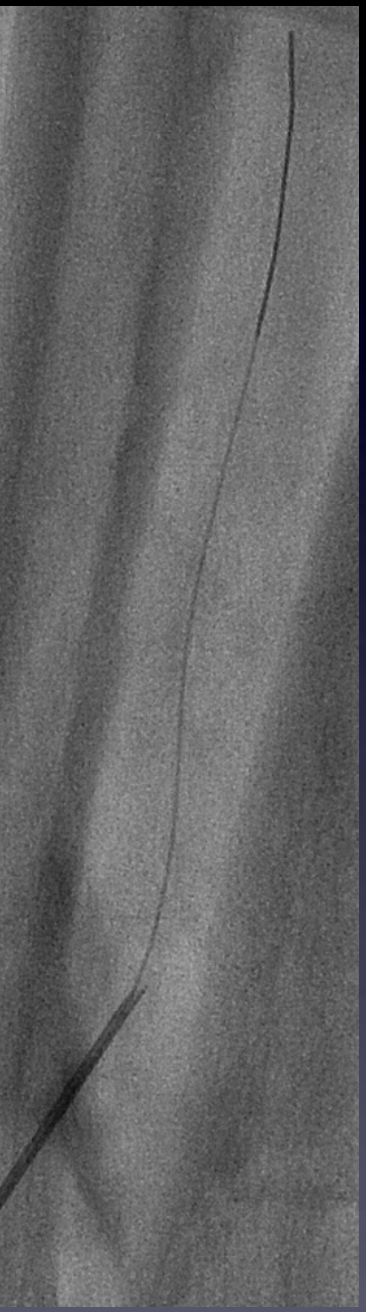
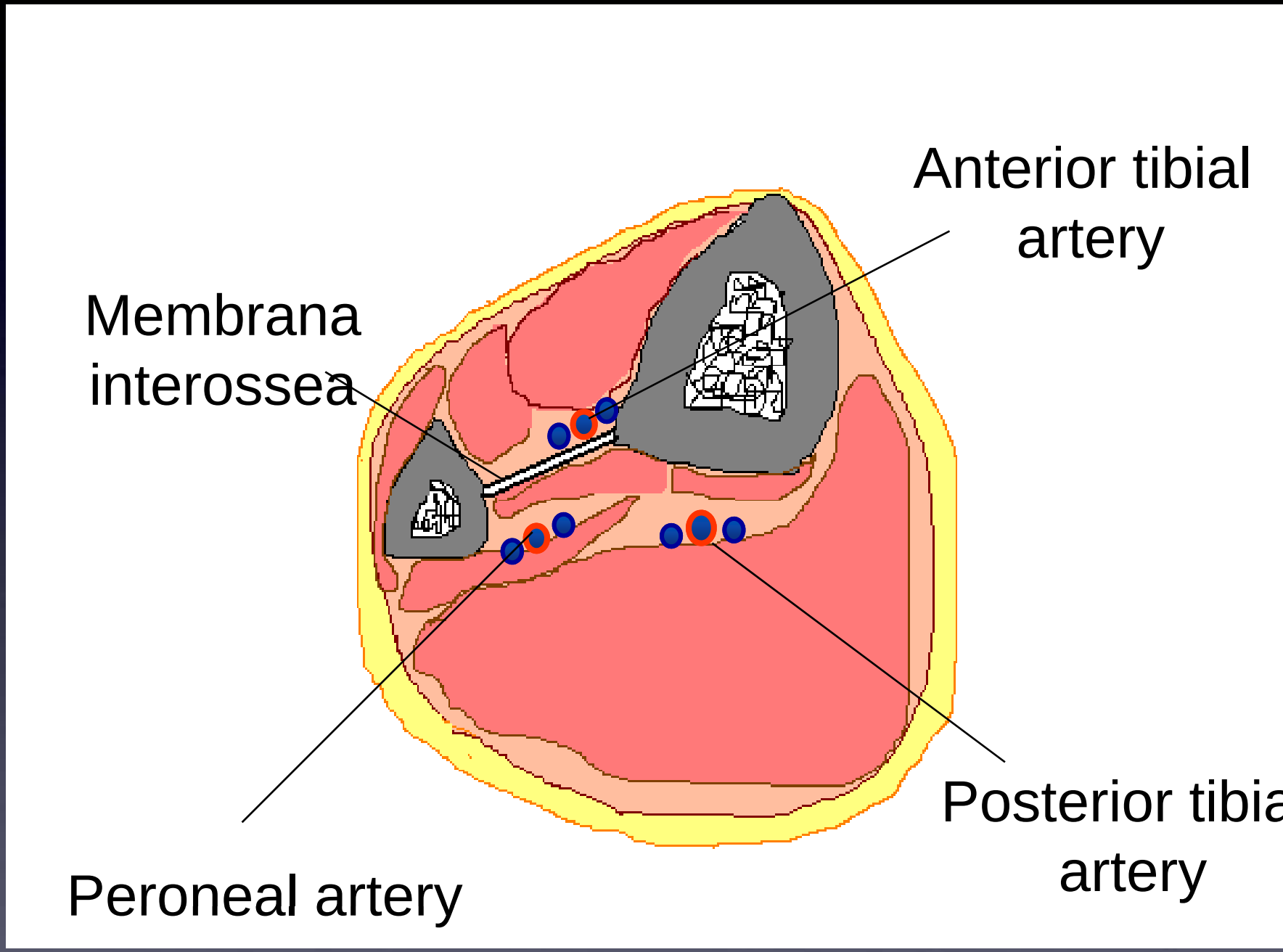


Puncture

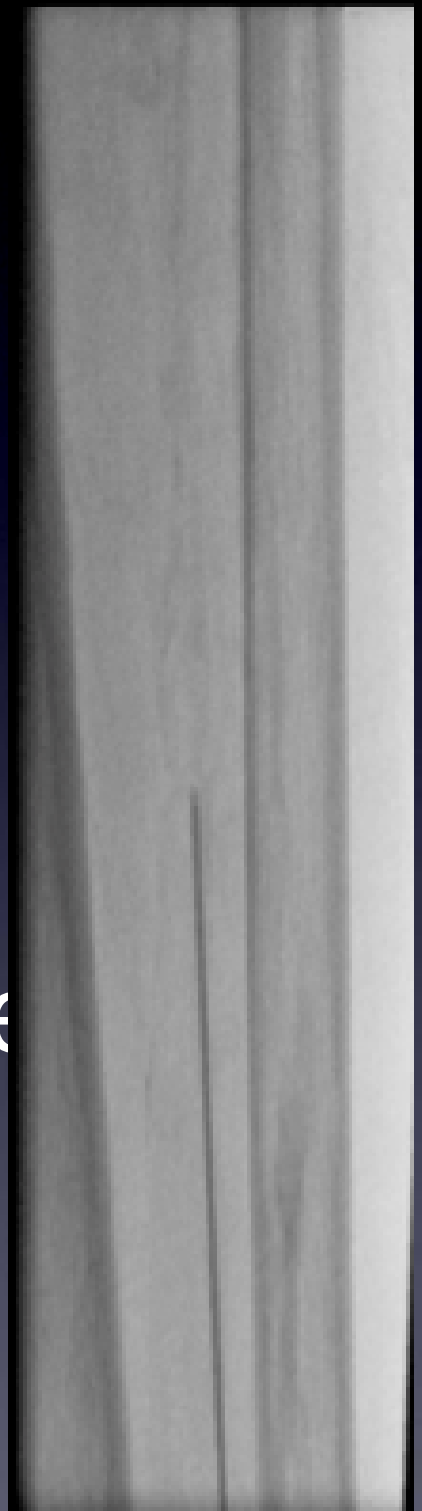


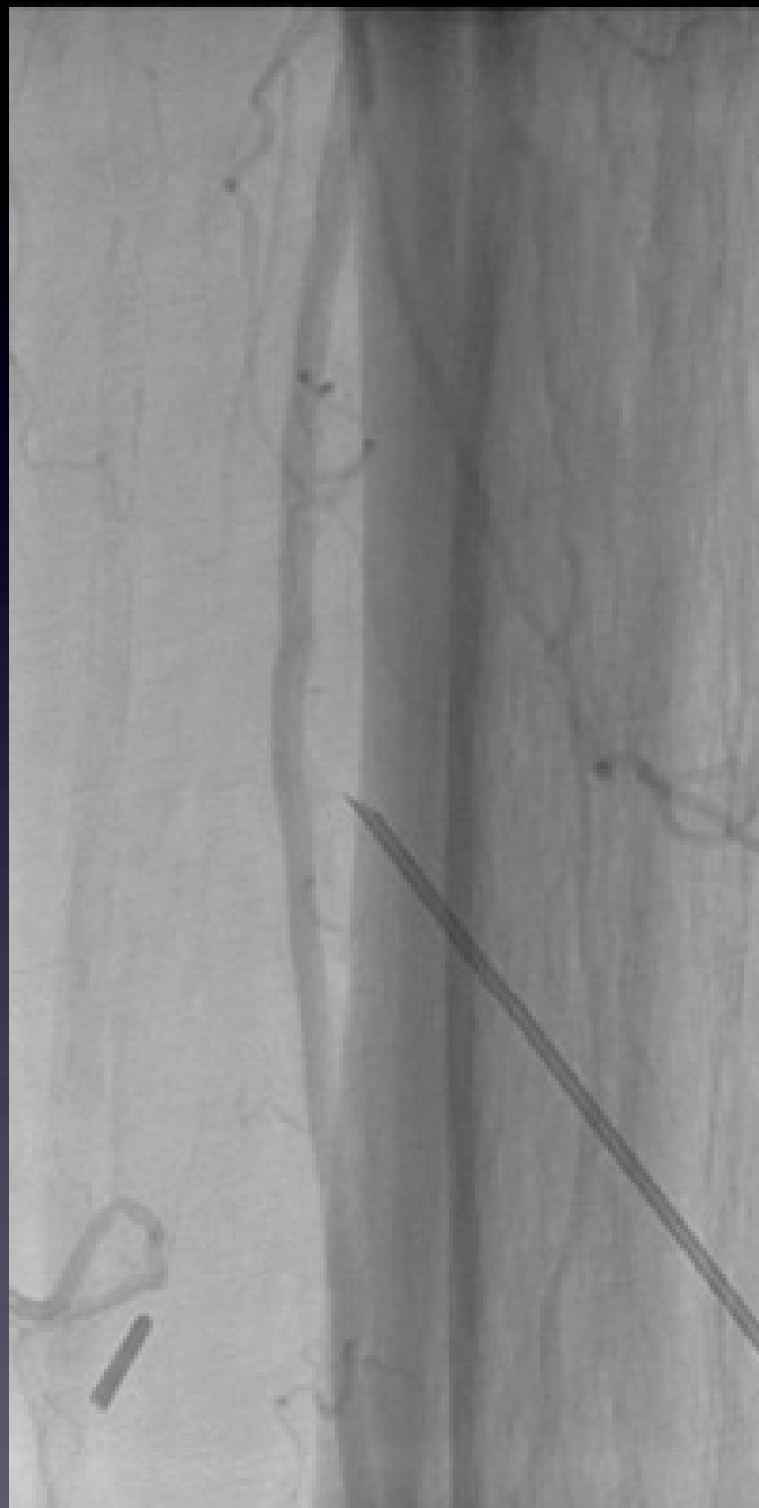

Anterior tibial artery
Membrana interossea
Peroneal artery
Posterior tibial artery

Distal Retrograde Femoral Access

21G 7cm needle

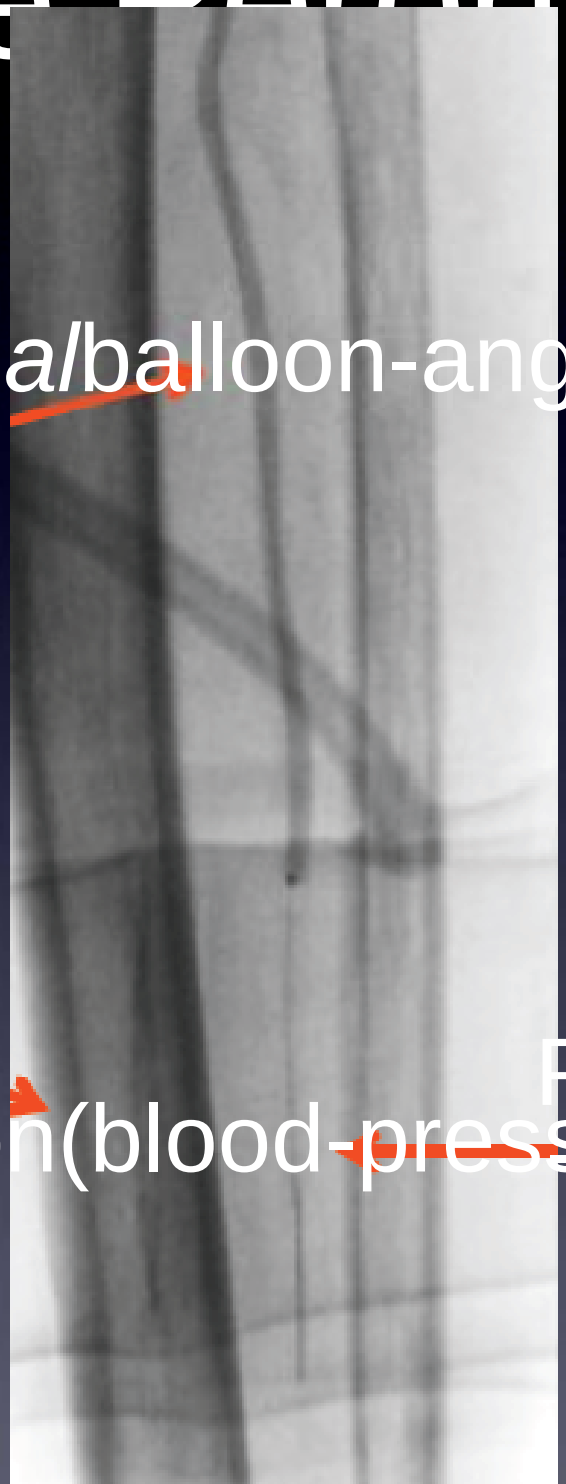
Micro-puncture





Distal Retrograde Peroneal Access

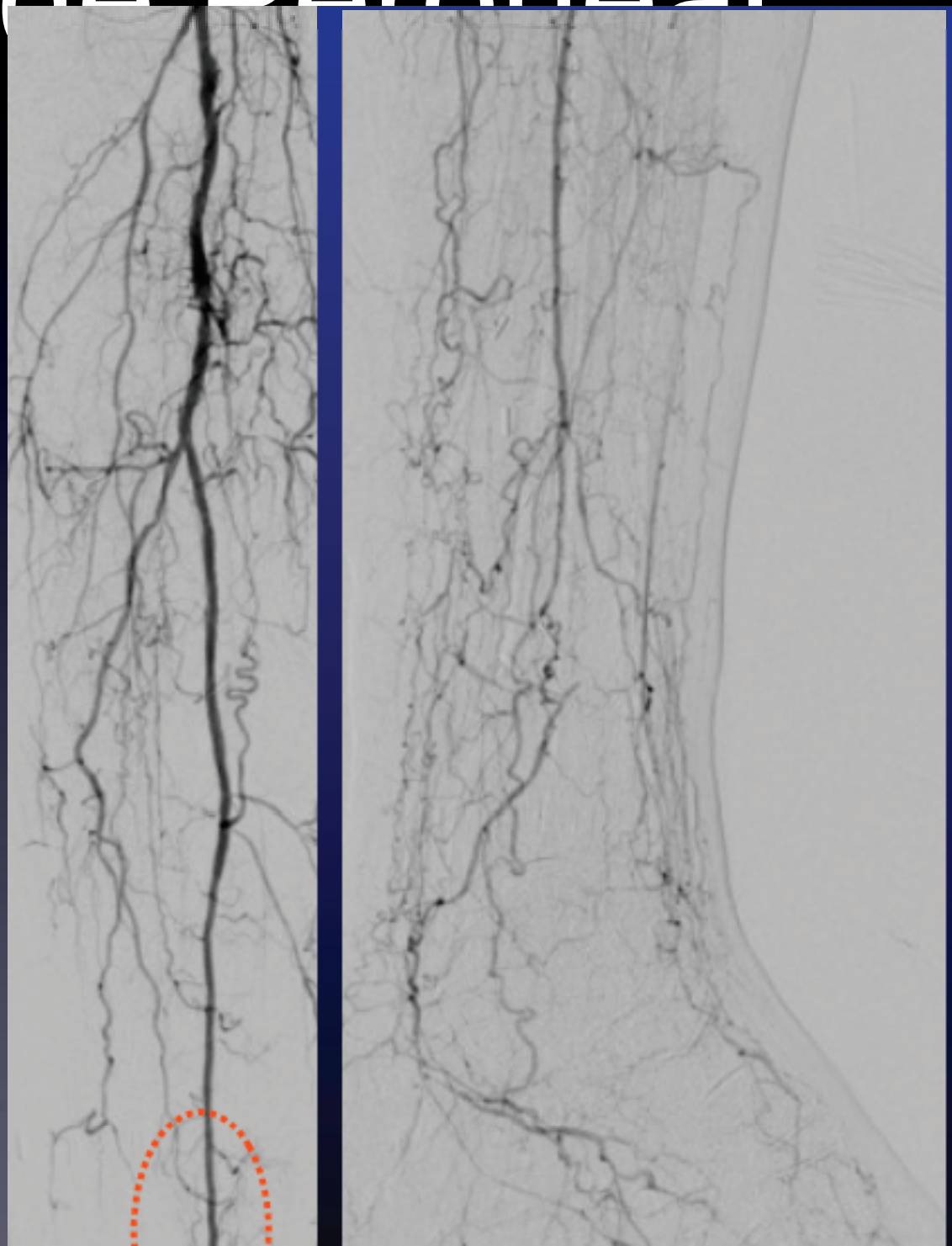
Simultaneous *proximal* balloon-angioplasty
3-5 min

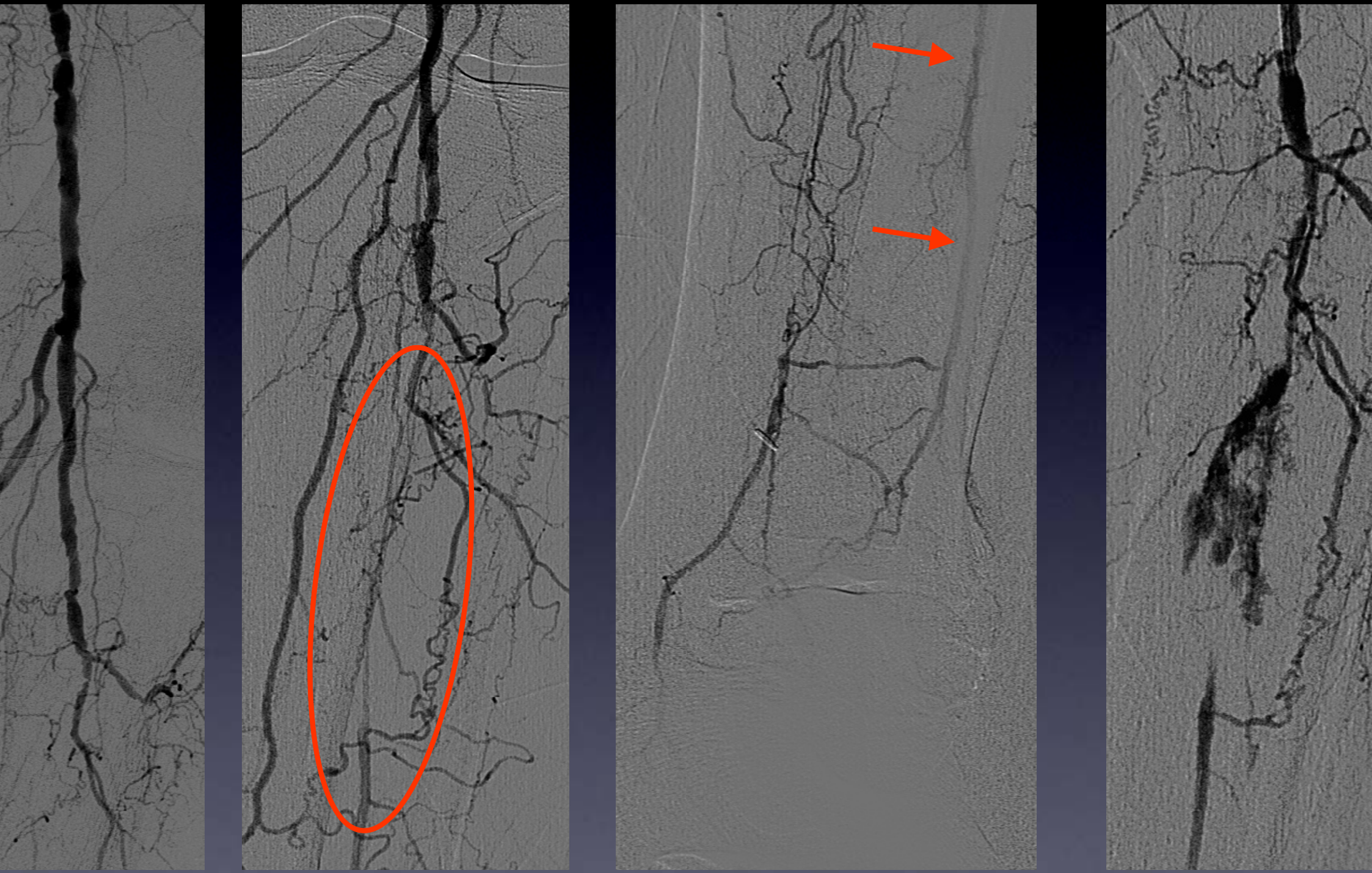


Puncture area

+ external compression (blood-pressure cuff)

Distal Retrograde Peroneal Access



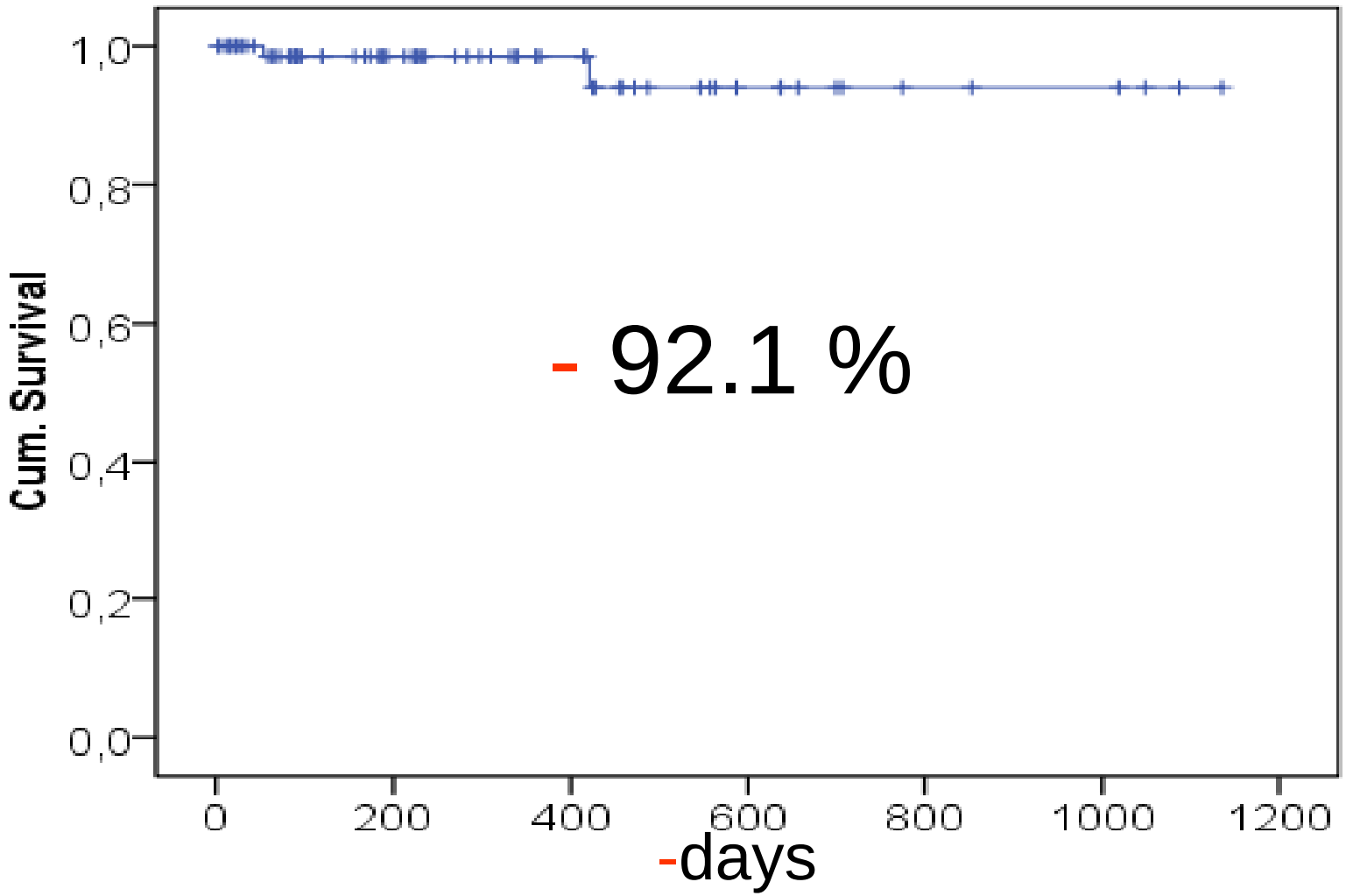


ecanalisation through collatera

Interventions

- Success-rate in 101 interventions 94.7 %

- Limb-salvage rate



- 92.1 %

Advanced Techniques for Limb Salvage

Pedal and tibial access

Recanalization through collaterals

Advanced CTO techniques

Distal and multi-vessel intervention

Plantar arch recanalization

Advanced Techniques for Limb Salvage

Pedal and tibial access

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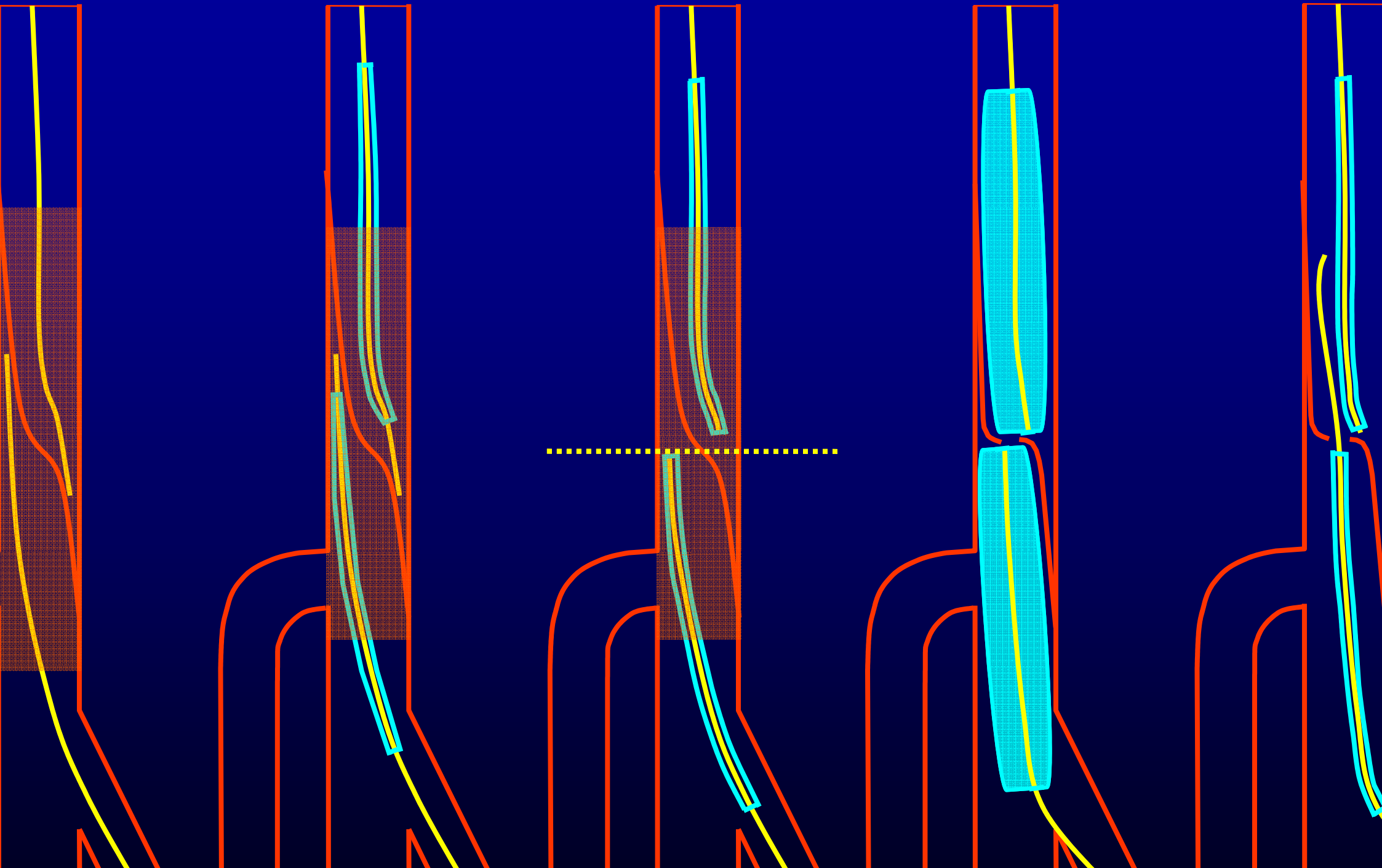
The Double-Balloon - Technique



Advanced Techniques for Limb Salvage

- Pedal and tibial access
- Recanalization through collaterals
- Advanced CTO techniques
- **Distal and multi-vessel intervention**
- Plantar arch recanalization

Plantar-Loop Technique

- 135 CLI-patients

- Multiple-vessel recanalization technique (2 o
tibial vessels):

  pedal-plantar loop technique, which uses 2
antegrade wires

Fernandez et al. J Vasc Surg November 2010

11 patients, 123 limbs, Rutherford classes 4, 5, 6

imb salvage rate at 1 year: 75%

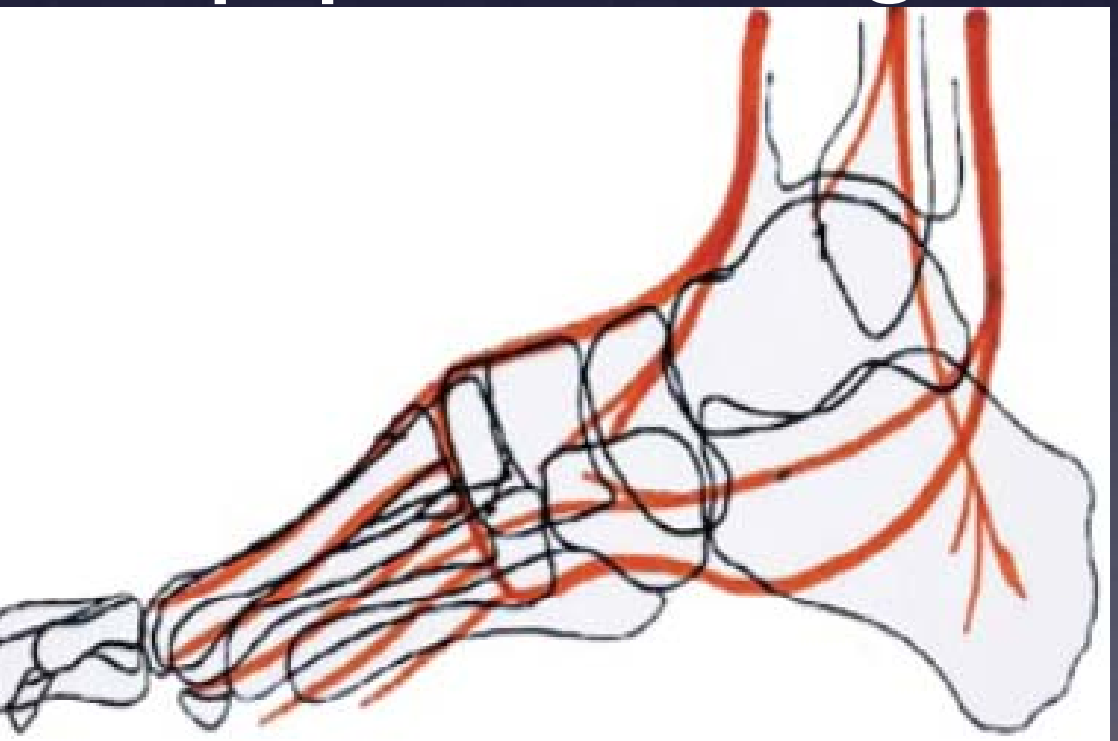
lulti-level intervention: predictor of wound healing

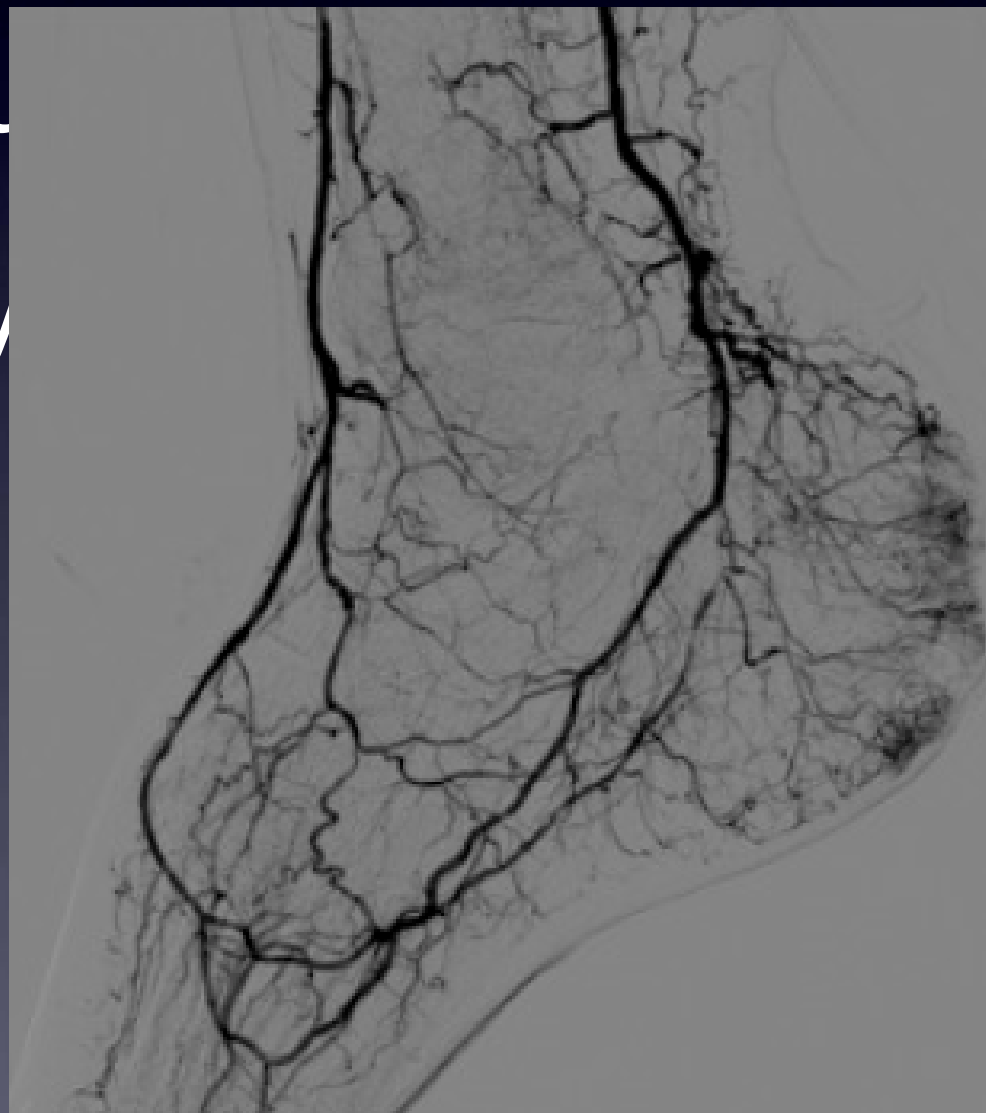
Advanced Techniques for Limb Salvage

- Pedal and tibial access
- Recanalization through collaterals
- Advanced CTO techniques
- Distal and multi-vessel intervention
- **Plantar arch recanalization**

Plantar Arch

The dorsal artery of the foot and the late
plantar arteries commu
deep perforating artery





Plantar-Loop Technique

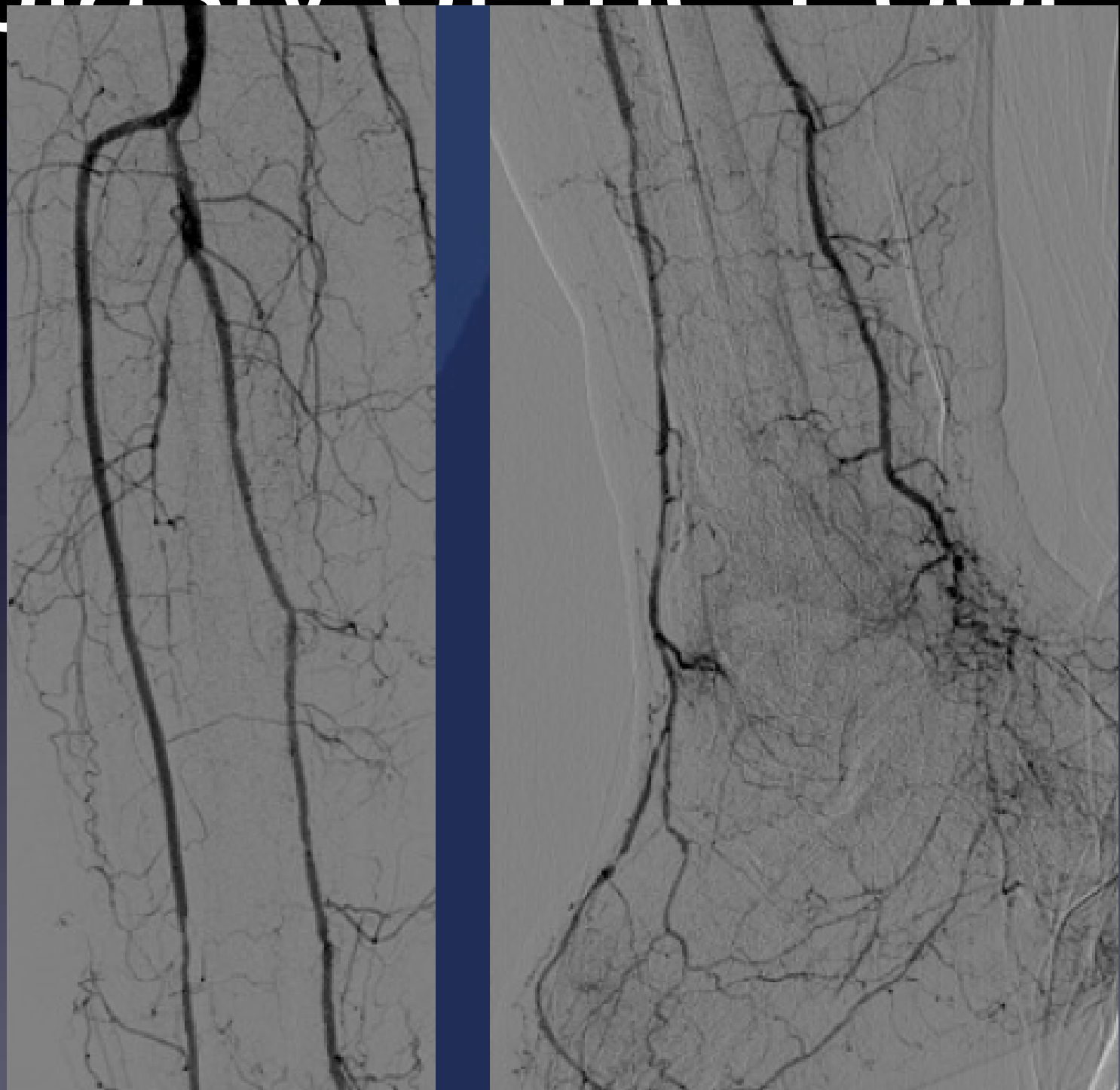
Recanalization of both pedal and planta
arteries

and their anatomical anastomoses.

Angioplasty of the Foot-loo

Diabetes

Rutherford



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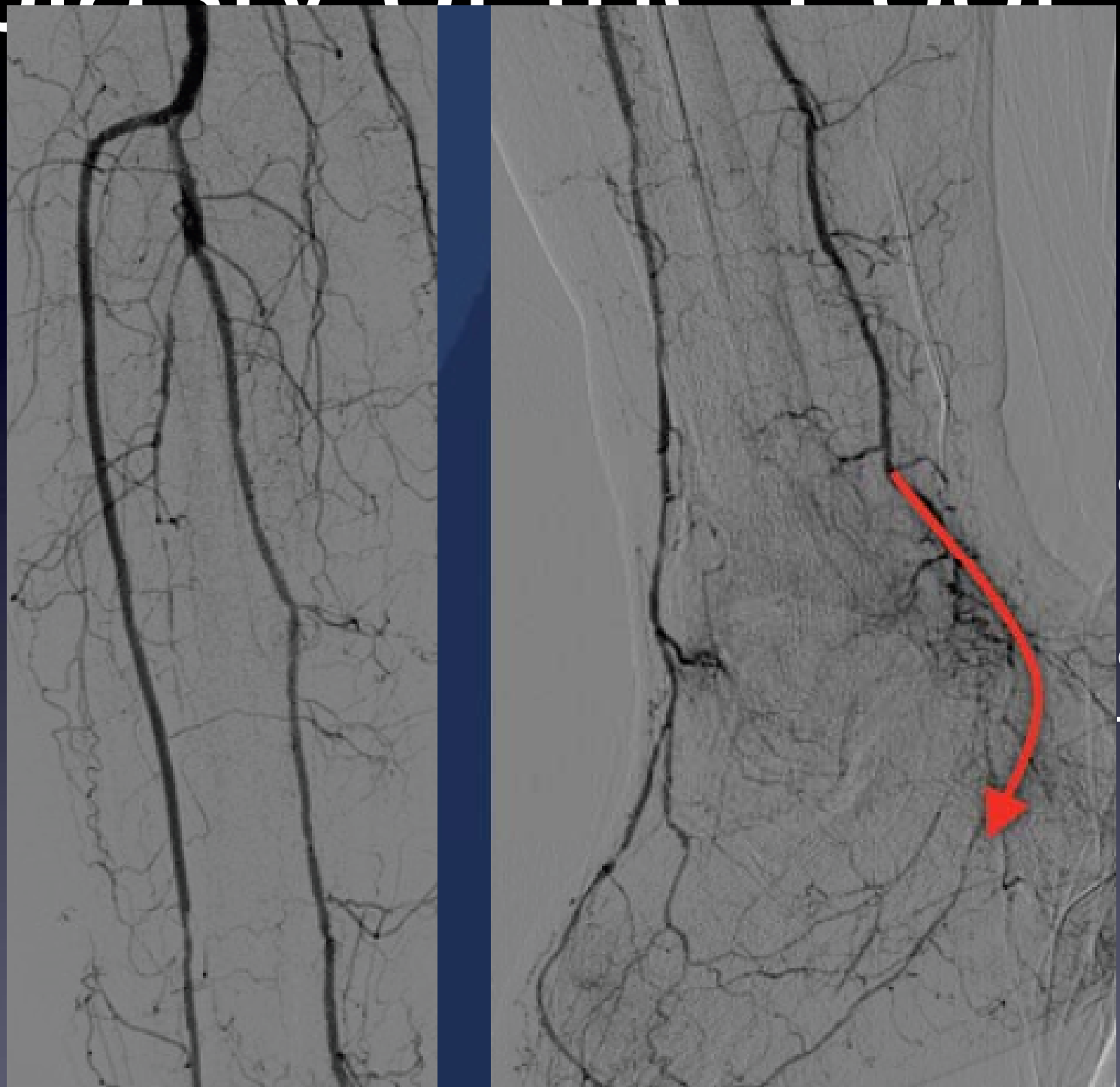
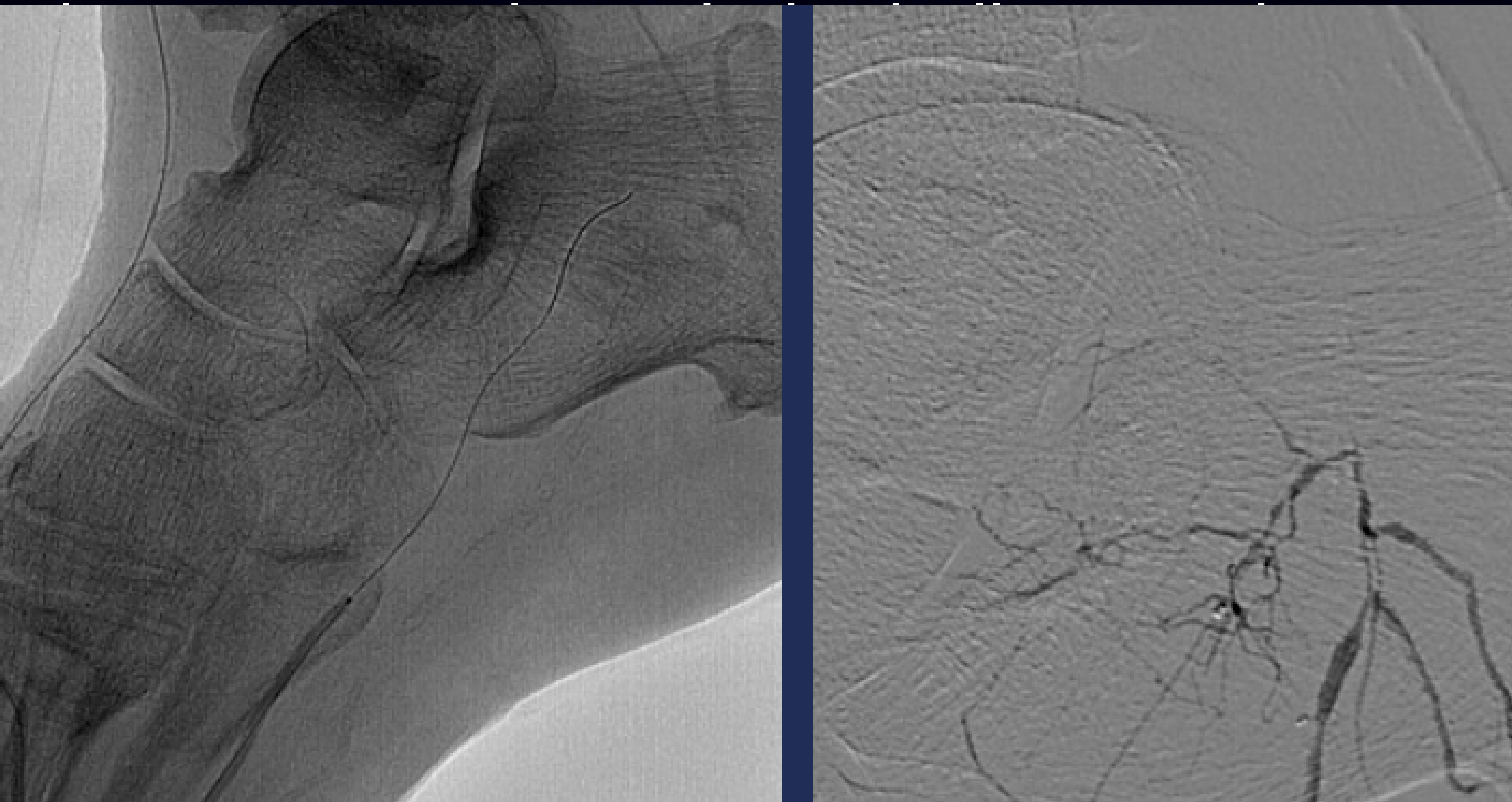


anteg
recan
a-
tion fa

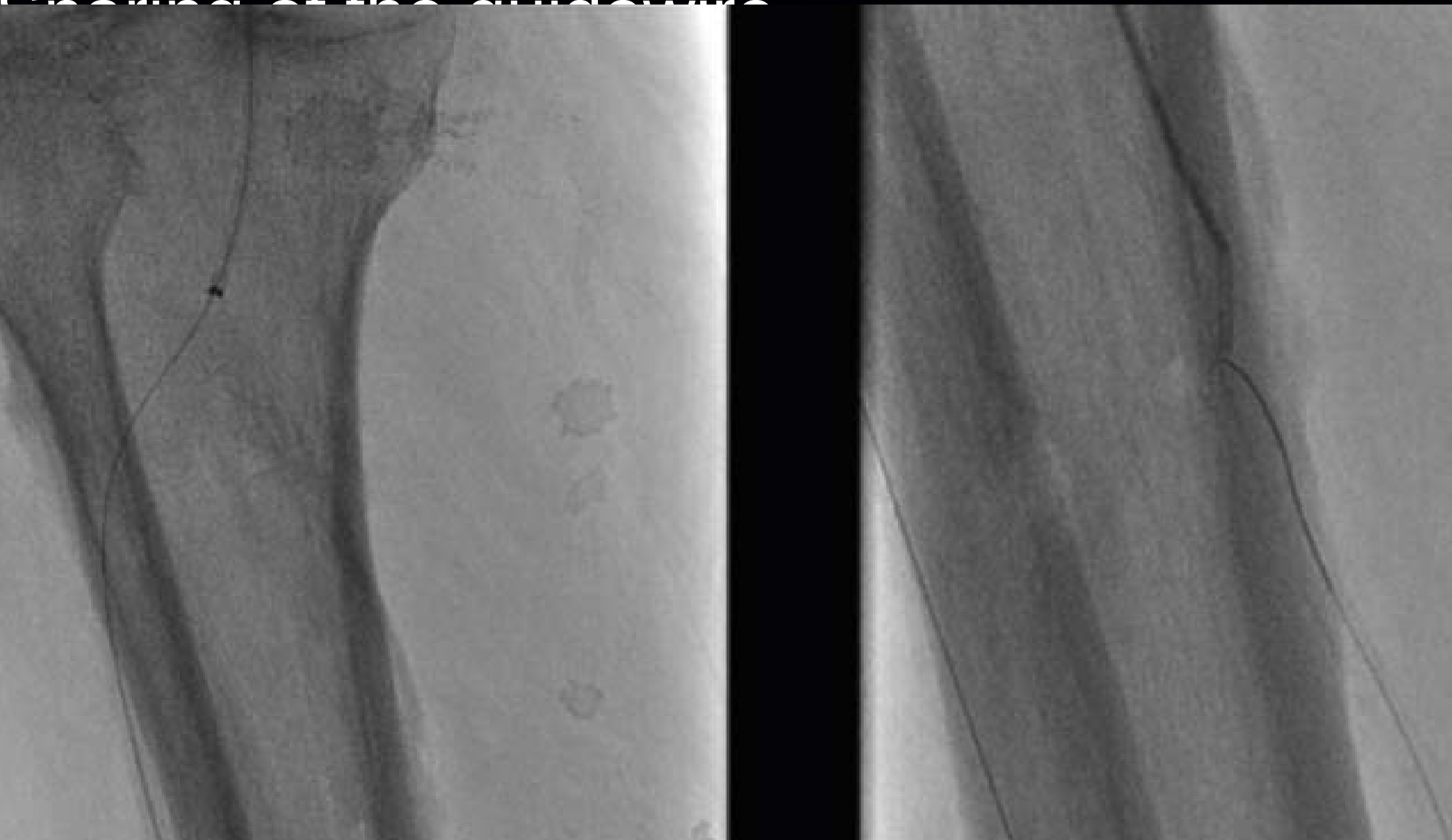
from the dorsalis pedis to the plantar artery.

PTA of the plantar loop with low profile balloo

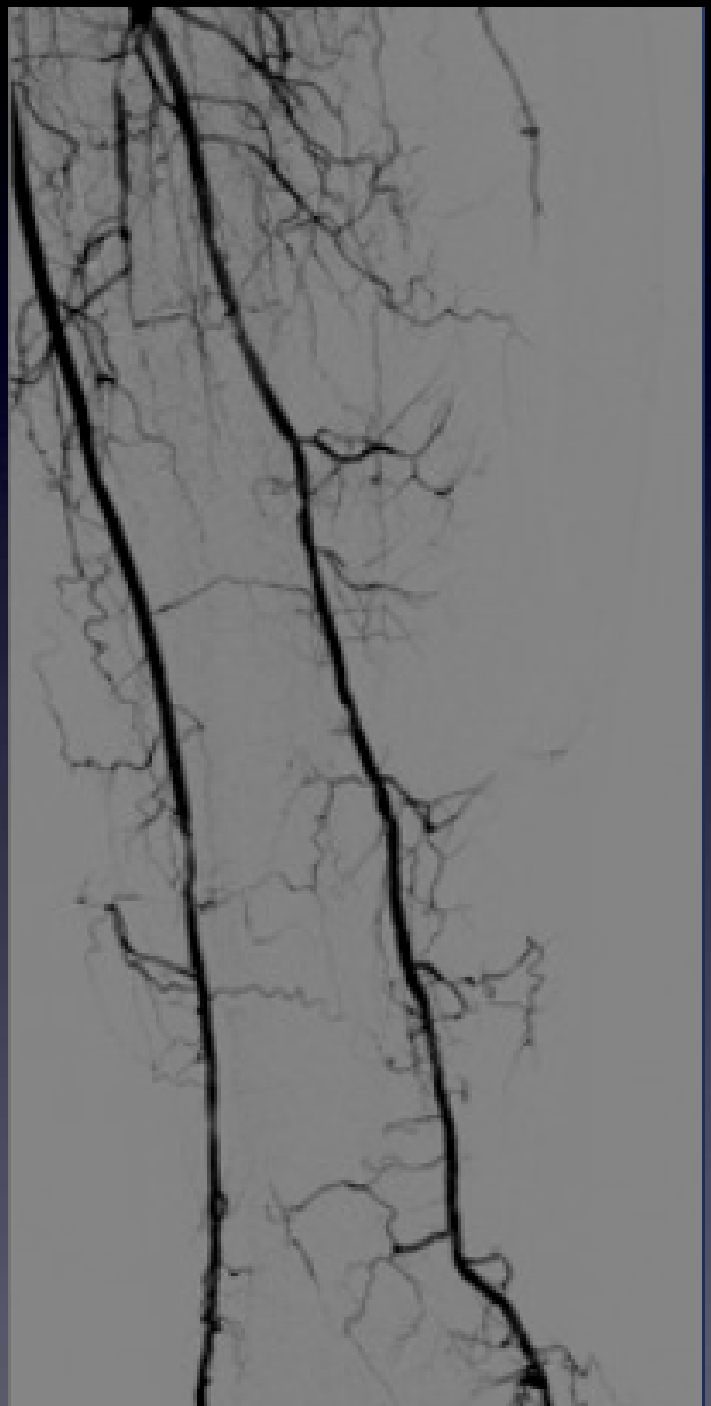


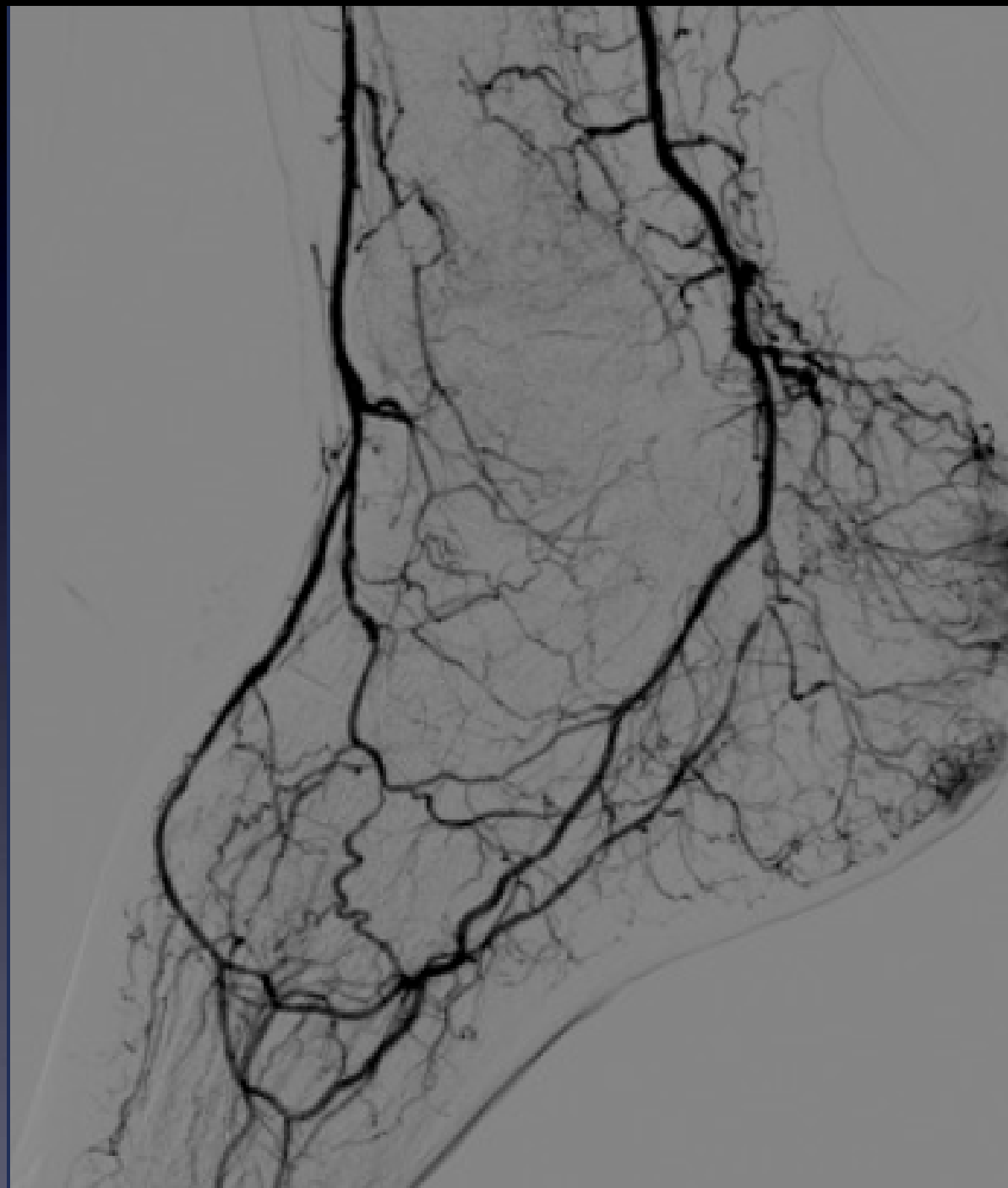
If the balloon catheter can not cross the lesion

Snaring of the guidewire



occluded tibial posterior artery





Conclusion

n case of failure of antegrade access, different
ethods for alternative approaches are possibl
epending on the level of the occlusion.

everal advanced recanalization techniques ar
edicated long, low-profile balloons are availab

ight require some experience.

safe, potentially cost-saving and highly

Thank you!