Disclosure

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Limflow/Inari consultant

- **Bypass/PTA → immediate ischemia relief!**
- **FVA → jailed inside the foot vein "fortress", no blood flow to tissues → more ischemia → FVA needs time to "mature"**

TcPO2 rises 2-4 weeks after treatment and reaches >40 mm Hg only 6-8 weeks later (Kum et al. JEVT 2017)

What happens in this period when the arterialization slowly starts to work? How does FVA function?

- Retrospective observational case series study
- 17 no-option CLTI patients who underwent clinically successful FVA (wound healing)
- 40 clinically driven angiographic studies during follow up (2.5/pt)

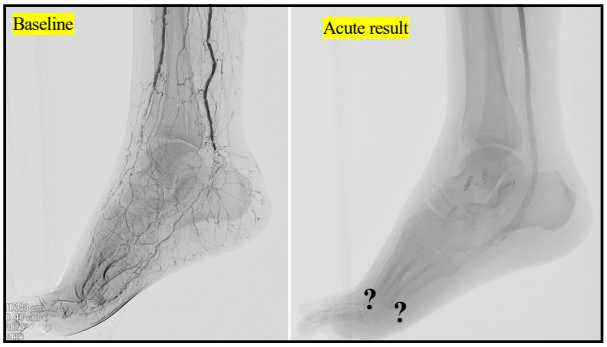
Submitted for publication

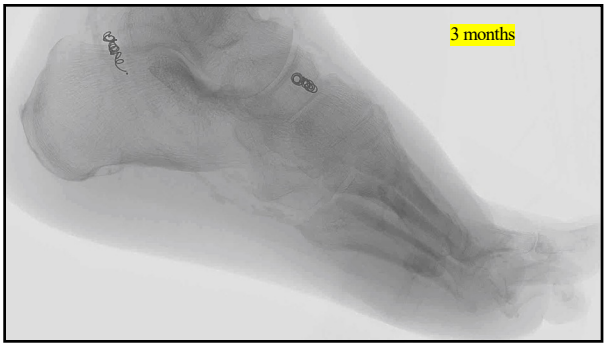
Clinical data

Mean Age (Years ± SD)	65.5 ± 8.8
Male sex	100 %
Diabetes Mellitus	76.5 %
Dialysis	23.5 %
Hybrid FVA superficial dorsal system	58.8 %
Hybrid FVA deep plantar system	5.8 %
Percutaneous FVA deep plantar system	35.3 %

Patterns of angiographic vascular remodeling after FVA

Type	Imaging	Mechanism (?)
1	Expansion outside the vein fortress	Mechanical fatigue leading to valve incompetence





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Type	Imaging	Mechanism (?)
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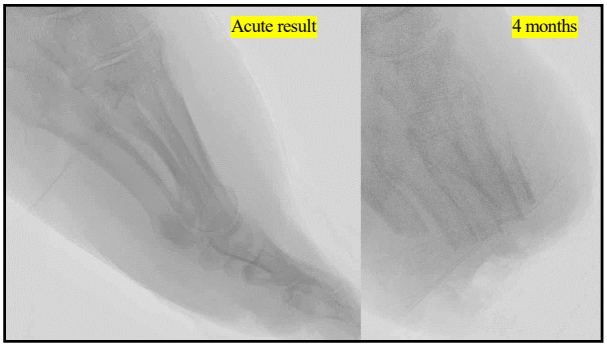
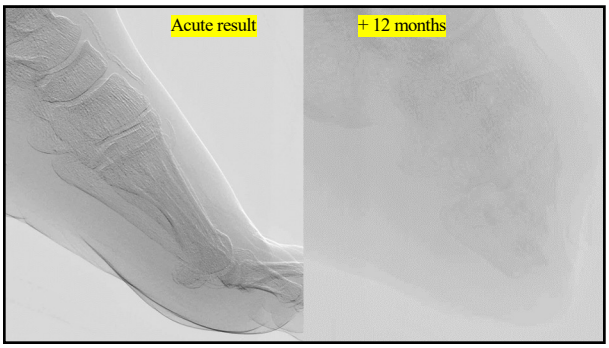
2	Wound-related neo-vascularization	Inflammatory response and angiogenesis





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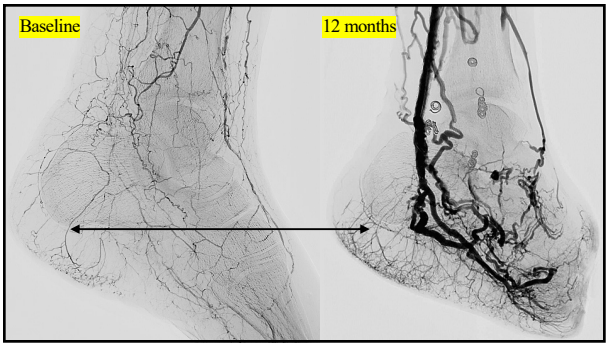

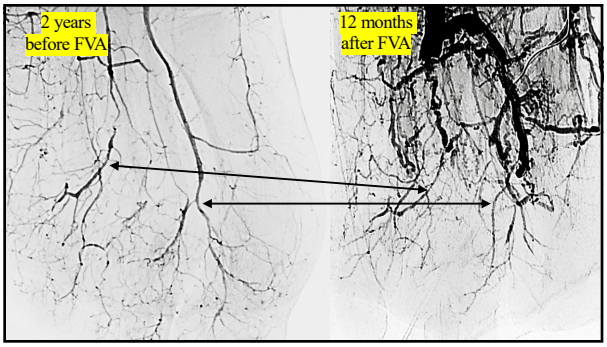

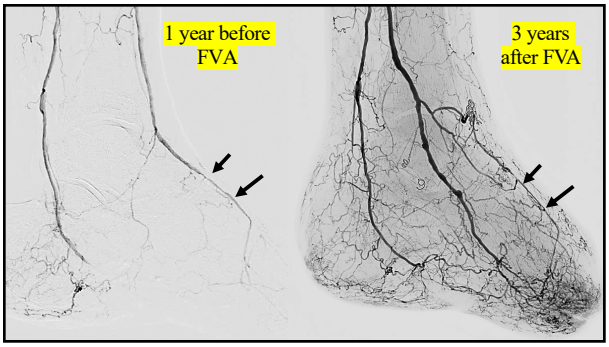

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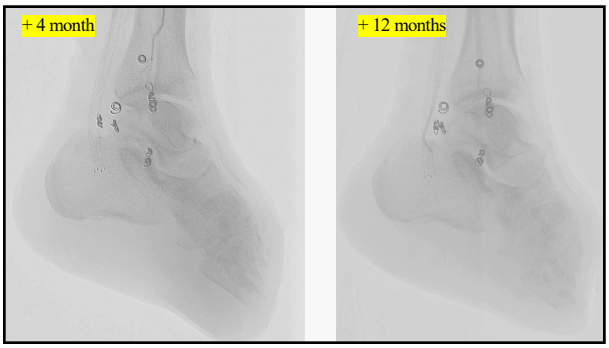

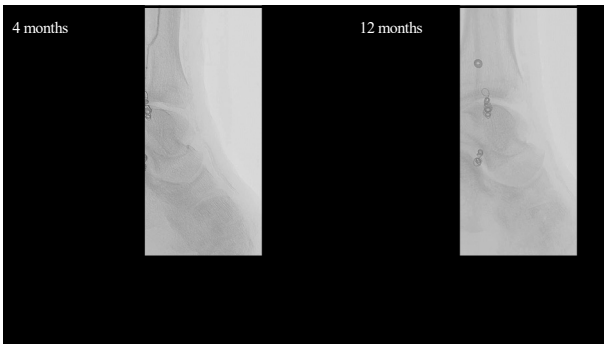

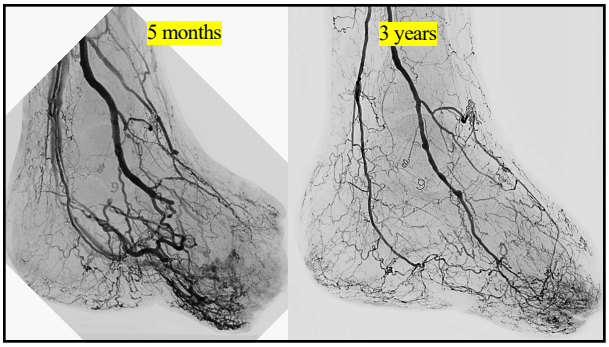

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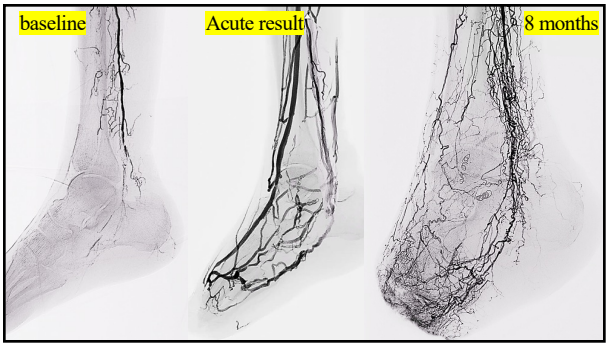
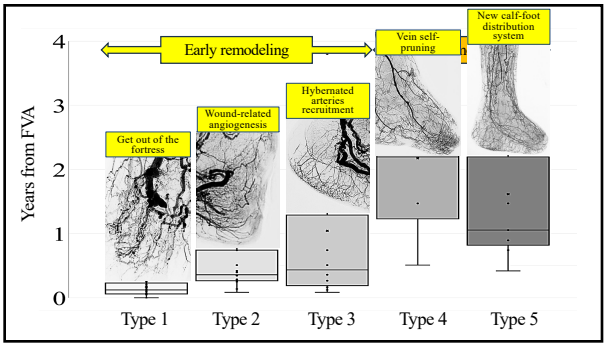
5	Development of a new calf/foot distribution system	Shear stress? Vascular growth factors?





Type	Imaging	How can we help the process?
1	Expansion outside the vein fortress	- **Mechanical opening of vein valves** - **Intermittent calf pressure?**
2	Wound-related neo-vascularization	- **Early surgery?**
3	Recruitment of old arterial segments	- **Maintain patency**
4	Self-pruning of venous outflow	- **Embolization of vein outflow**
5	Development of a new calf/foot distribution system	- **Maintain patency** - **Cell therapies?** - **Intermittent calf pressure?**