CACVS Venous session 2014

Do we need to treat leg perforator veins? PROS

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Disclosure

Speaker name:

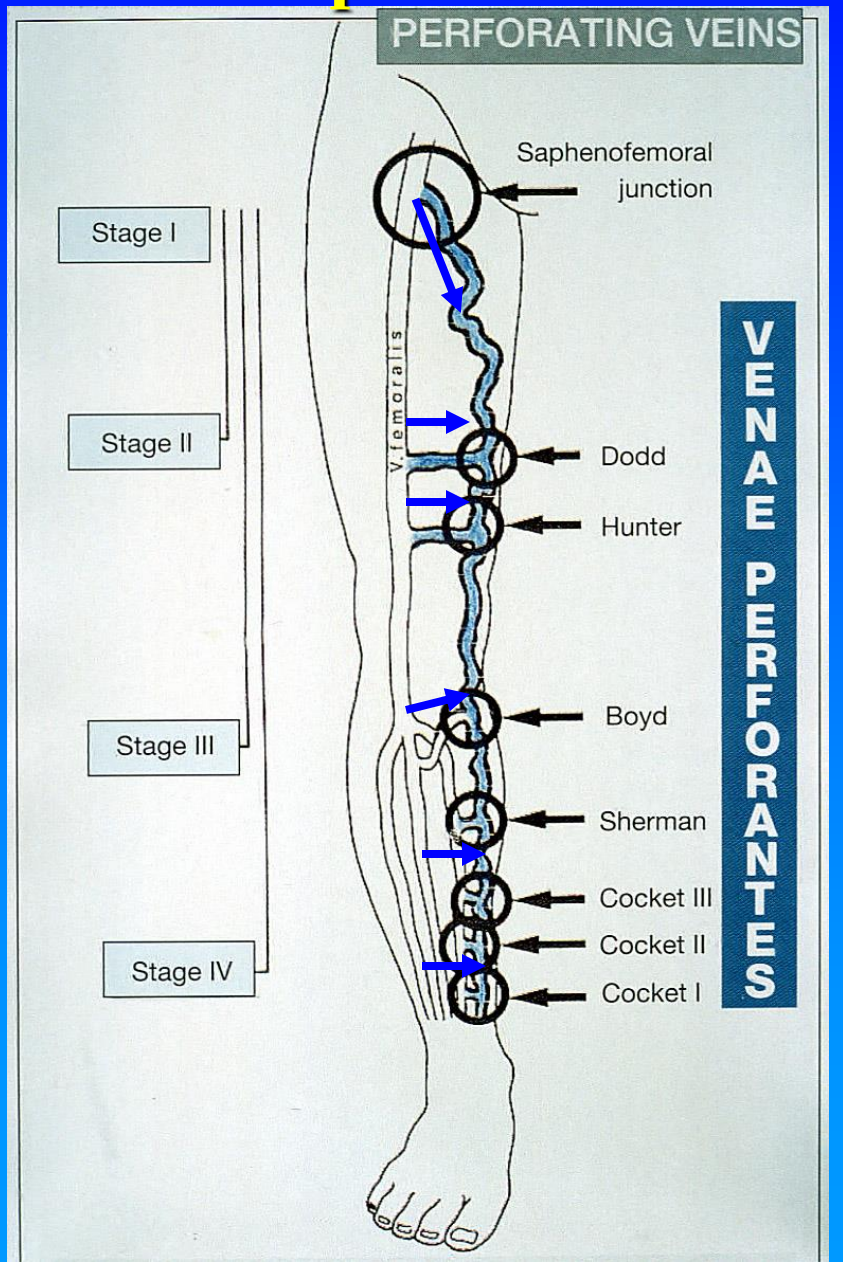
Olle Nelzén.....

I do not have any potential conflict of interest

Controversy nr 1

To treat or not
to treat ,
that is the question

Great saphenous vein



Small saphenous vein

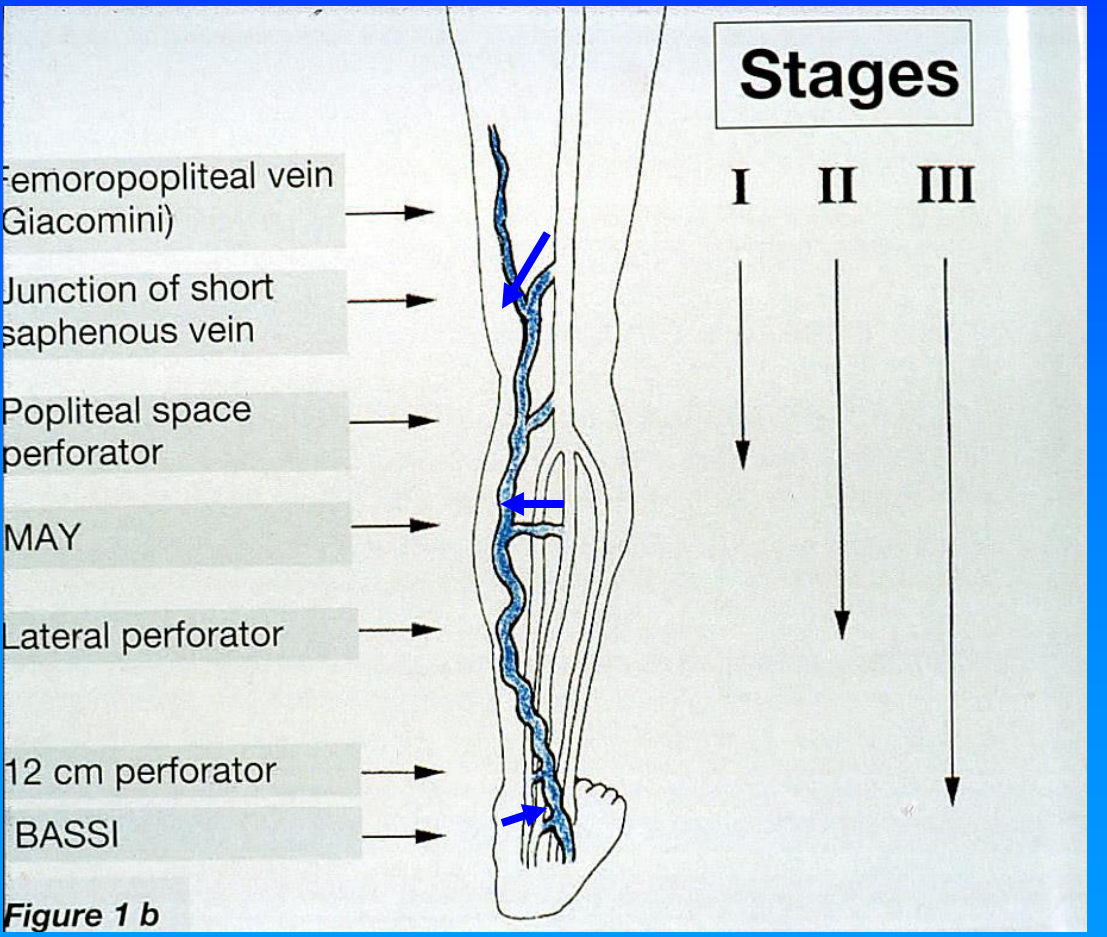


Figure 1 b

What do we know about IPs?

- They are contributing to global venous incompetence together with SVI and DVI
- The number of incompetent perforators increases with the amount of reflux
- Perforator incompetence is an independent factor contributing to venous disease severity

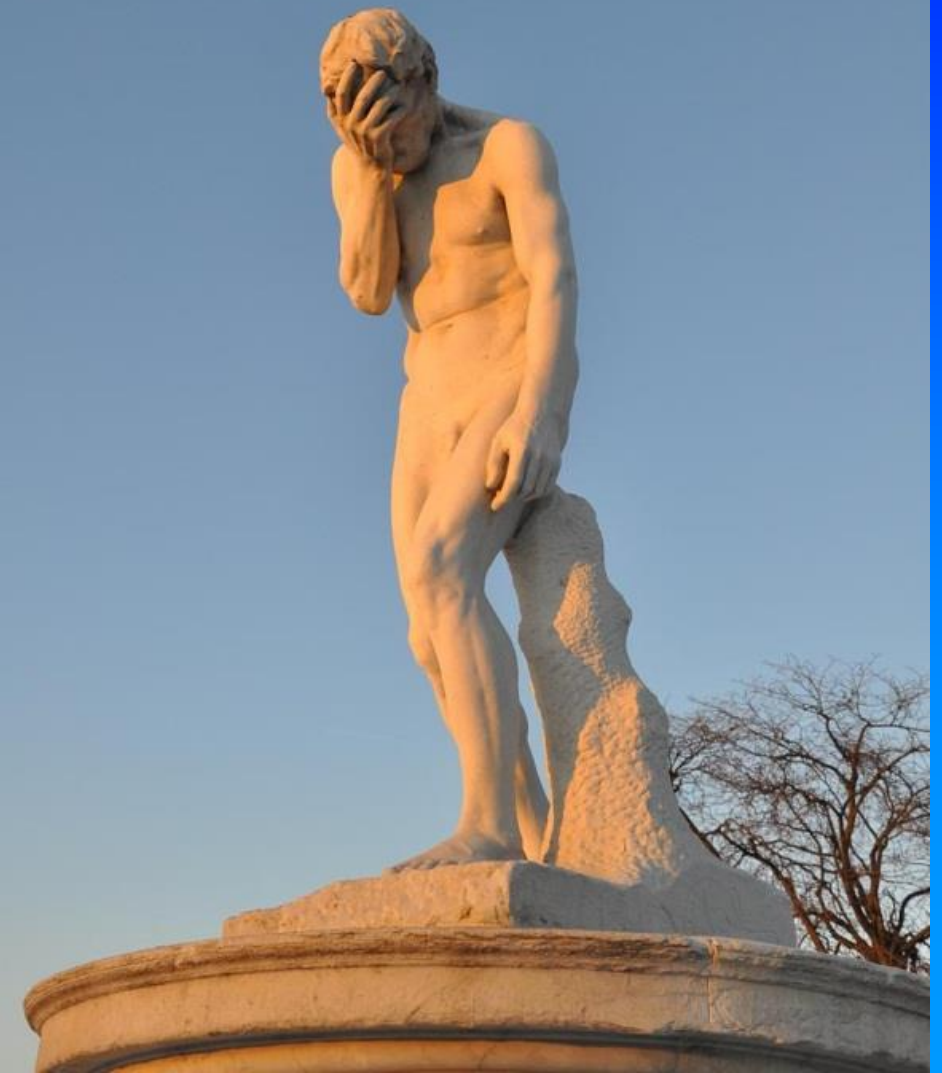
Delis et al. J Vasc Surg 2004; 40: 626-33.
Ibegbuna et al. Eur J Vasc Endovasc Surg 2006; 31: 535-41.

Myths regarding incompetent perforators (IPs)

- ”DVI is a prerequisite for IPs of clinical importance”

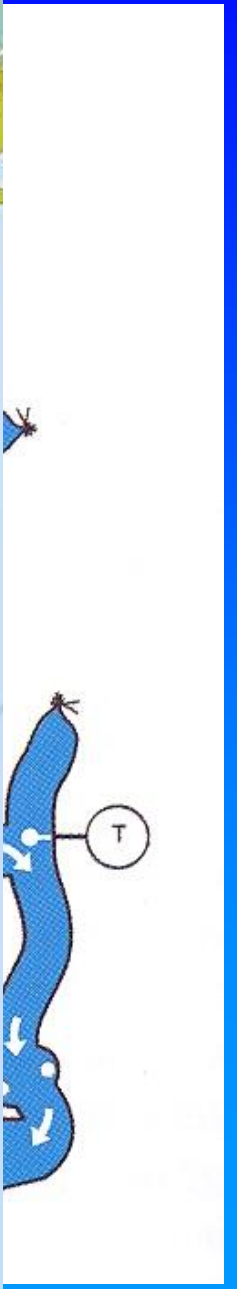
- ”IPs combined with saphenous vein incompetece are normalized by saphenous surgery/ablation alone”

The myth that IPs are of importance only if combined with DVI



- That would perhaps be true if we were standing still like statues
- But we do walk, which changes the situation
- In fact IPs are connected more to SVI rather than to DVI!


GREATER SAPHENOUS V.
FEMORAL V. TUNNEL
Superficial Inguinal Lower
8
Quadratus
Pectineus
MEDIAL ACCESSORY SAPHENOUS V.
113
50
10
Add. Minimus
Magnus
Sartorius
Vastus Medialis
Rectus
171
2
Vastus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Most incompetent perforators (IPs) are found in association with superficial venous reflux!

Stuart et al. J Vasc Surg 2001

Magnusson et al. Eur J Vasc Endovasc Surg 2001

Labropoulos et al. Phlebology 2004

Delis et al. J Vasc Surg 2004

If the venous reflux is left untreated new incompetent perforators develop!

Labropoulos et al. J Vasc Surg 2006

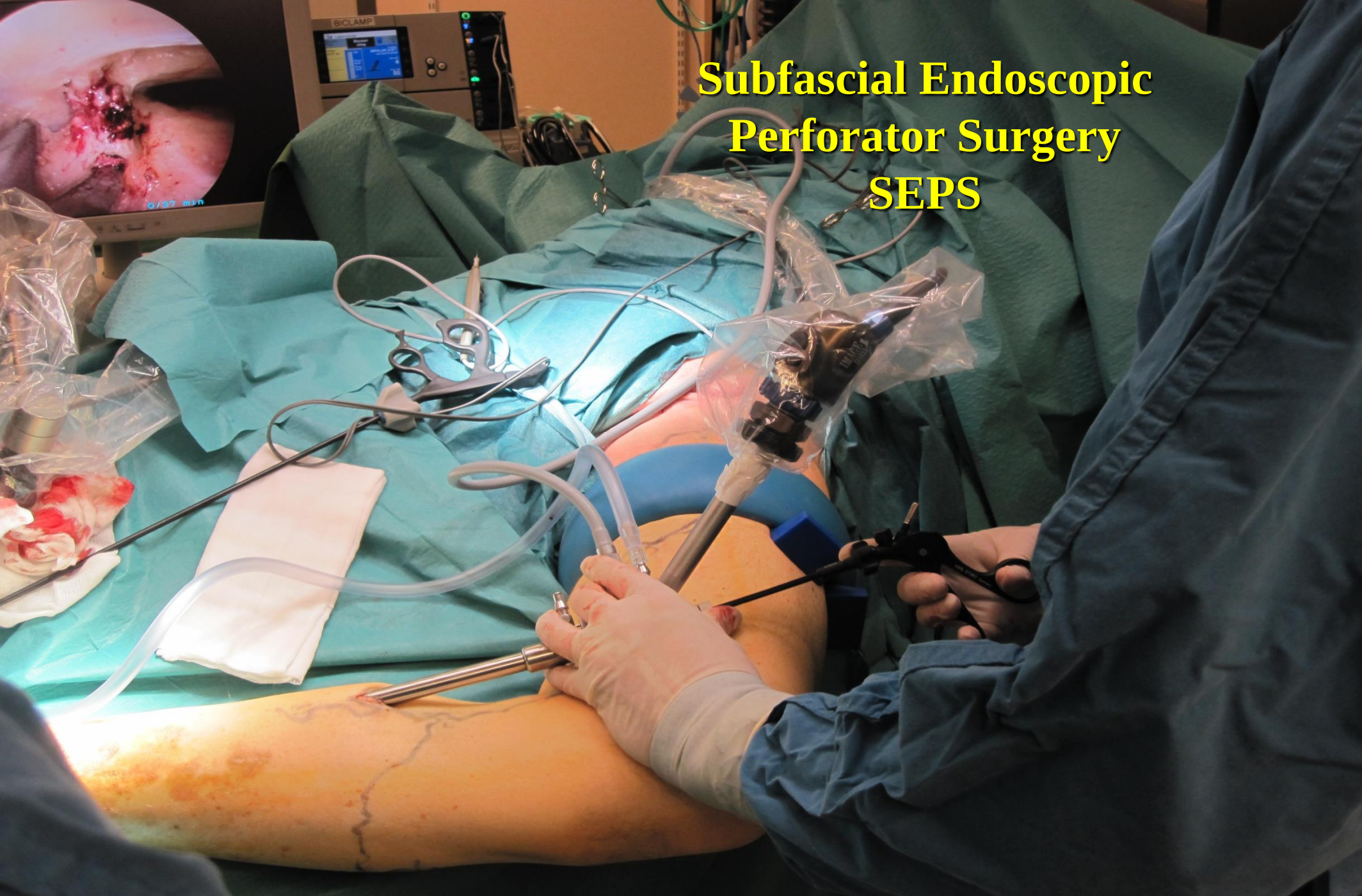
”Missed incompetent perforators are strongly correlated to non-healing or recurrent leg ulcers”

Pierik et al. J Vasc Surg 1997
Kolvenbach et al. J Vasc Surg 1999
TenBroke et al. (review) J Vasc Surg 2004
Lawrence et al. J Vasc Surg 2011
Van Gent et al. Phlebology 2014

Myth 2-Do IPs become competent as result of superficial vein surgery in ulcer patients?

Gohel et al. Eur J Vasc Endovasc Surg 2005;29: 78-82
Colour Doppler scans of patients from the ESCHAR study

- **Only one out of three incompetent perforators normalizes**
- **Thus, two out of three remained incompetent!**
- **Was it a wise decision not to treat IPs?**


Subfascial Endoscopic
Perforator Surgery
SEPS

IP normalized/interrupted

SWESEPS study RCT C5-C6

Control duplex 6-9 months

- **no SEPS group** **(31/74) 42%**
- **SEPS group** **(65/75) 87%**

Chi-square (p<.001)

Nelzén et al. Br J Surg 2011;98:495-500

Perforator "cure" based on original IPs in ulcer patients

- **No SEPS group: 7/37 legs "cured" (19%)**
- **SEPS group: 27/36 legs "cured" (75%)**

Chi-square (p<.001)

Nelzén et al. Br J Surg 2011;98:495-500

Perforator "cure" based on original IPs in varicose vein patients

- No SEPS group: 7/32 legs "cured" (22%)
- SEPS group: 26/38 legs "cured" (68%)

Chi-square ($p<.001$)

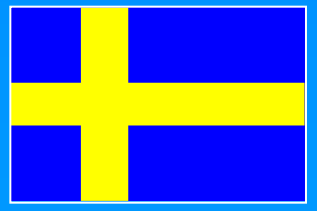
Kianifard et al Br J Surg 2007;94:1075-80

True long term results of SEPS

n=87 legs (56 primary+31 repeat surgery)
median follow-up 77 months (60-112)

- **3 Years 8% ulcer recurrence**
- **5 Years 18% ulcer recurrence**

Nelzén et al. Eur J Vasc Endovasc Surg 2007



Hard to heal venous ulcers due to IPs

- 45 patients with IPs had ulcers not responding to conservative compression nor to superficial ablation
- No ulcer healed without at least one perforator closed by RF ablation
- Only 10% remained open despite IP closure

Lawrence et al. J Vasc Surg 2011; 54: 737-42.

Ulcer healing benefits from IP ablation

- In a series of hard to heal venous ulcers unresponsive compression and 76 ablations of superficial venous incompetence 66 IP treatments with RF ablation were additionally performed
- 6 months healing rate 76%
- Ablation of all refluxing superficial or perforating veins was recommended

Harlander –Locke et al. J Vasc Surg 2012; 55: 458-64.

Factors favouring intervention

- Venous ulcer disease or eczema/sclerosis
- Size of perforators (>3 mm)
- Number of IPs
- Inflammation in the area of the perforator
- Severe oedema

Conclusion

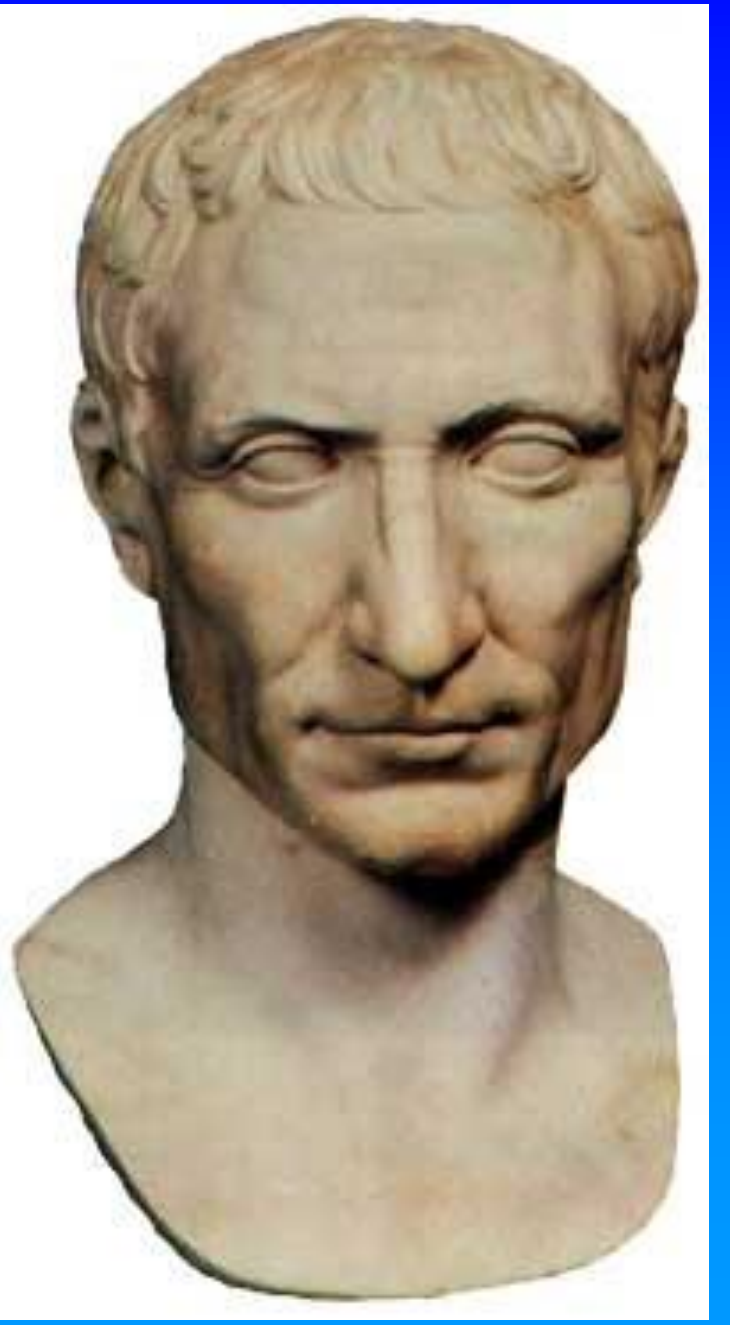
When should you consider IP treatment?

- **Patients with CEAP C4-C6**
- **In certain cases with severe oedema C3 or recurrent VVs and with several IPs**
- **You can wait and see regarding most patients with primary VVs C2-C3**

Gaius Julius Caesar

"Fere libenter homines id quod volunt credunt"

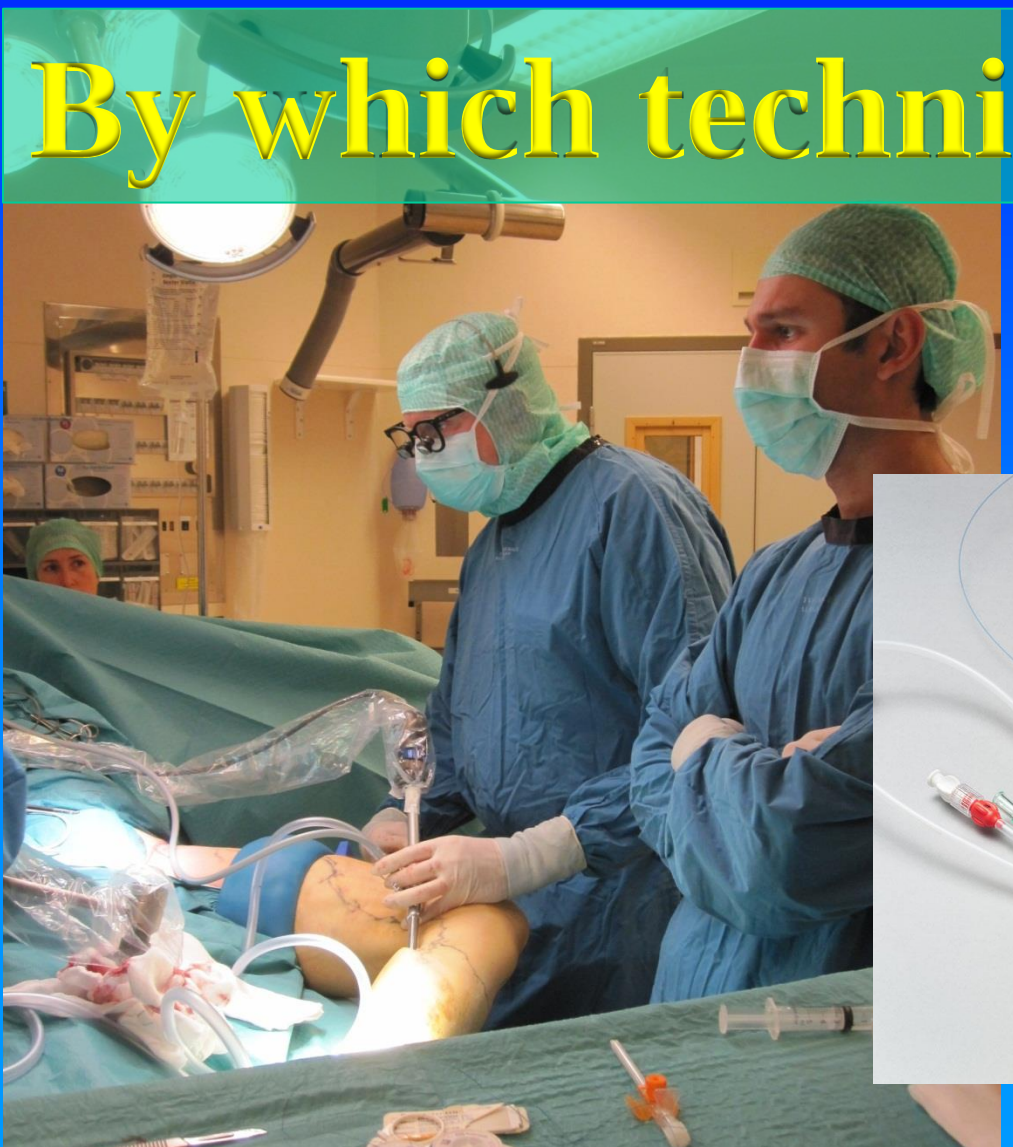
Men willingly believe what they wish (to be true)

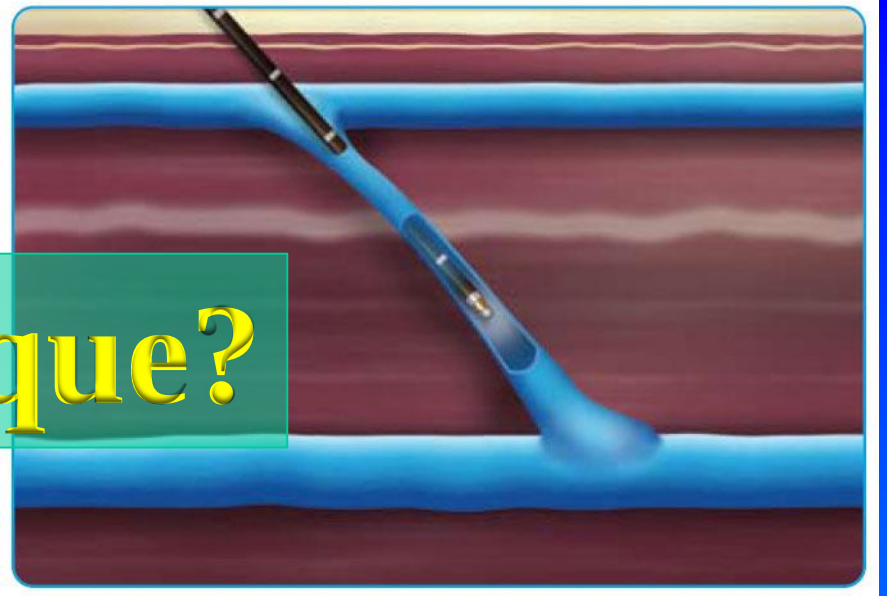


Do you believe in facts or fairy tales?

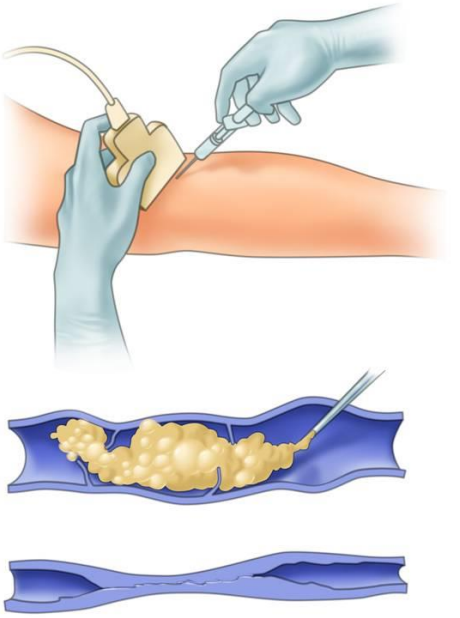
Controversy nr 2

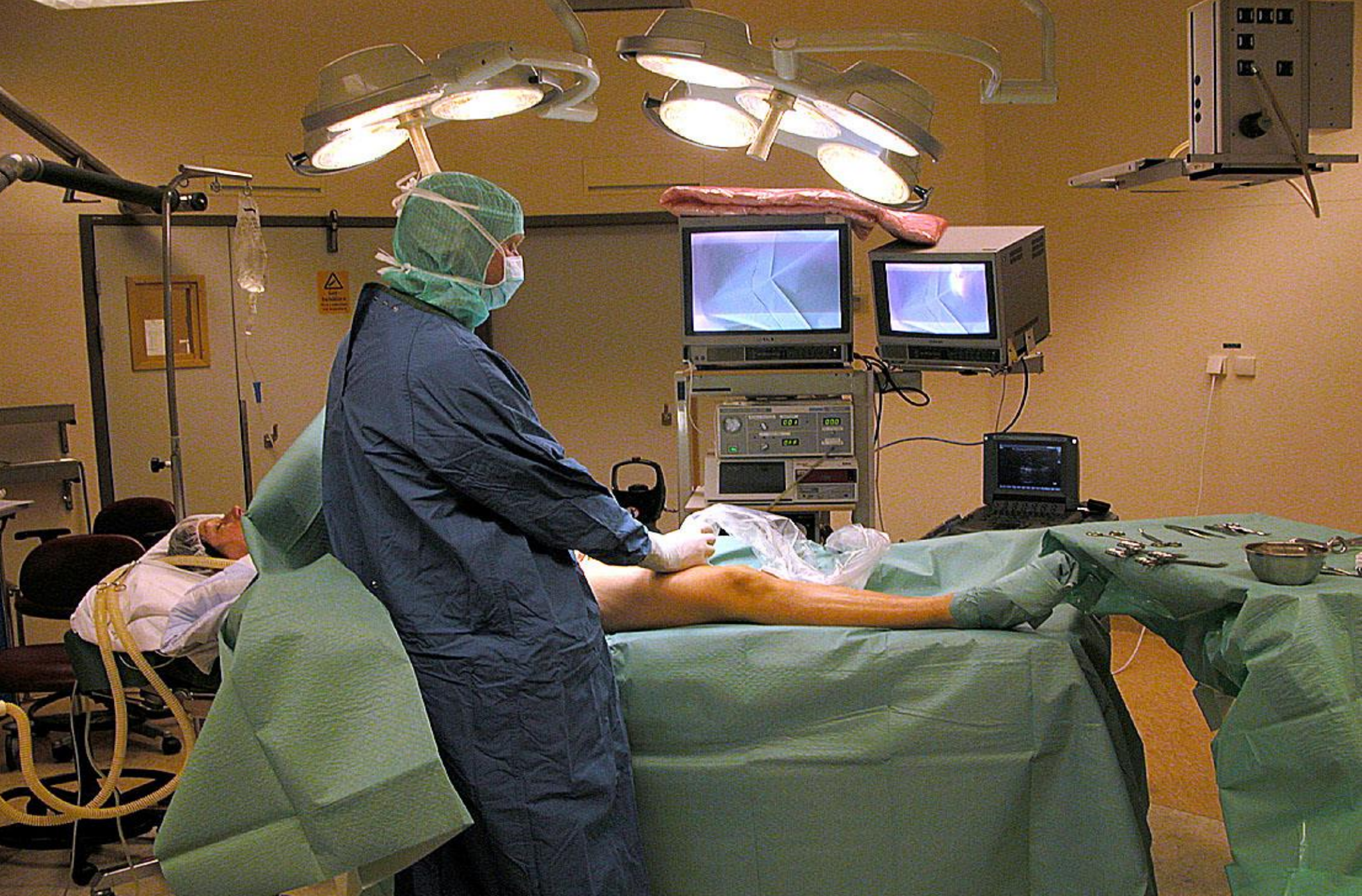
By which technique?





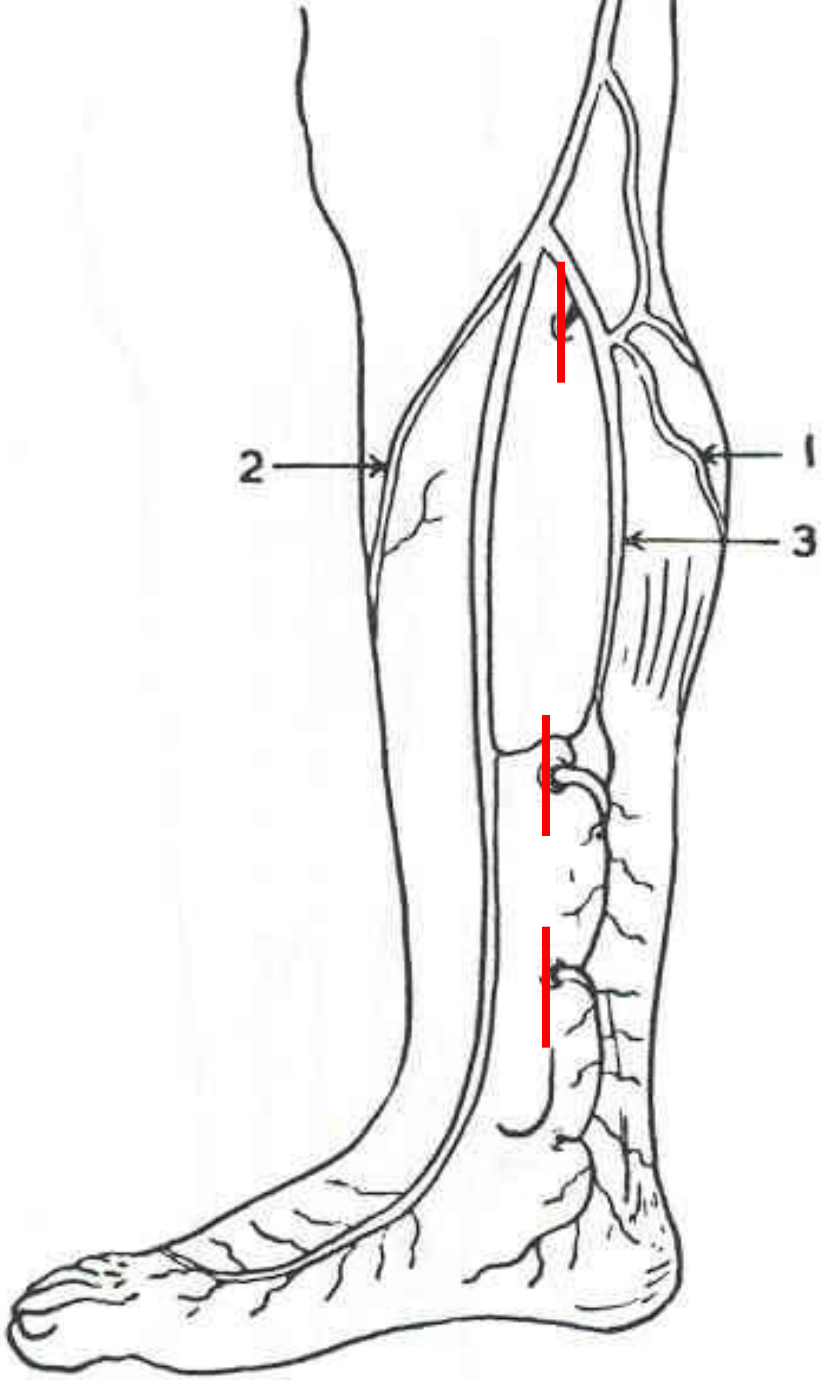
VNUS Closure*RFS* stylet treating perforator vein





How to intervene?

	Documentation
• Traditional open surgery	+(+)
• SEPS	+++
• Foam	(+)
• RF	+
• Laser	(+)



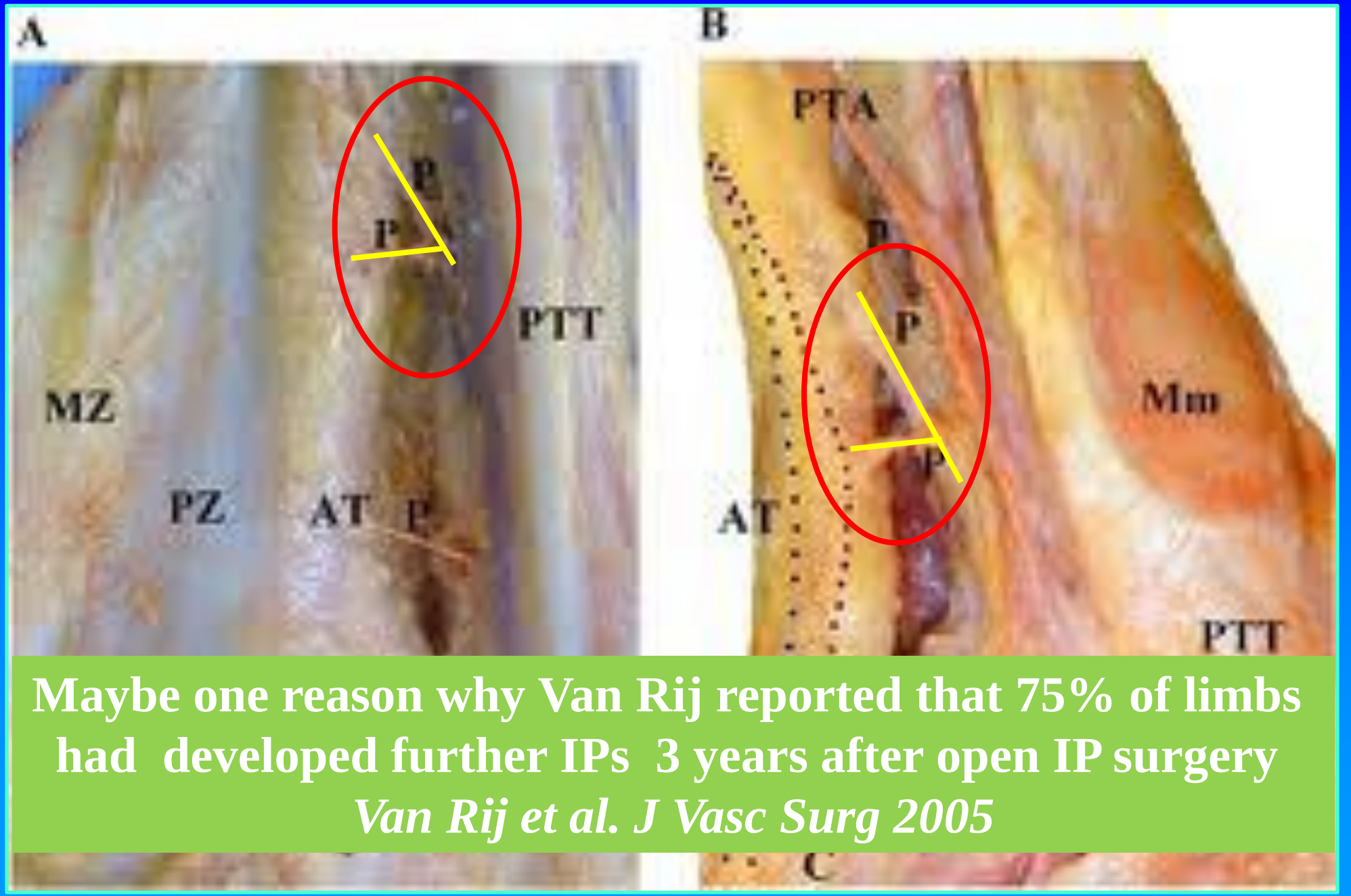
Small incisions based on Preoperative CDU mapping

Perforator surgery

Randomised to open surgery or SEPS?

	SEPS N=20	Open surgery N=19
Healing	85%	90%
Wound complications	0%	50%

Pierik et al. J Vasc Surg 1997



Maybe one reason why Van Rij reported that 75% of limbs had developed further IPs 3 years after open IP surgery

Van Rij et al. J Vasc Surg 2005

Summary

- Perforators do definitely play a major role for leg ulcer patients, but we are still uncertain about the details
- The lowest ulcer recurrence rates have been reported from studies combining SEPS + superficial venous surgery
- Superficial venous surgery alone only normalizes one out of three incompetent perforators
- Randomised studies are necessary to define the true role of the incompetent perforator

Aulus Cornelius Celsus

”Conjecturalem artem esse medicinam”

Medicine is the art of guessing