Chronische venöse Insuffizienz:
Rezidiv-Varikose

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BJS

Leading Article

Recurrent varicose veins: A national problem

D. Negus

British Journal of Surgery

Volume 80, Issue 7, pages 823–824, July 1993

Issue

https://www.stern.de/politik/ausland/queen-elizabeth-ii--ihr-mythos-broeckelt--schuld-ist-nicht-nur-andrew-37326482.html

Wichtigkeit der Rezidivvarikosis

Rezidive nach interventionneller Behandlung der Varikosis sind sehr häufig (20-70% nach 10 Jahren)

Bis zu 25% der Veneninterventionen sind für Rezidivvarikosis

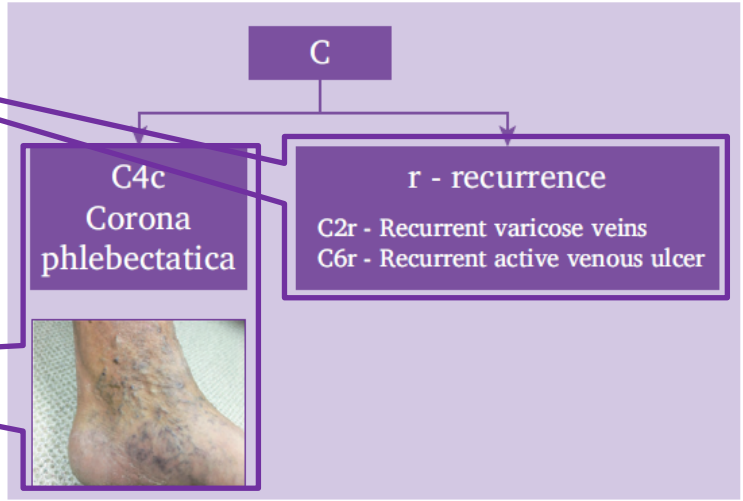
Die Behandlung der Rezidive ist technisch schwieriger, mit einer höheren Morbidität und verminderter Patientenzufriedenheit

CEAP → «C» : Klinischer Befund (Clinical condition)

C_0: Keine sichtbaren oder tastbaren Zeichen einer venösen Erkrankung
C_1: Teleangiektasien oder retikuläre Varizen*
C_2: Varikose der Venen$
C_3: Ödeme ohne trophische Hautveränderungen
C_4: Hautveränderungen
C_{4a}: Pigmentierung oder Ekzem
C_{4b}: Lipodermatosklerose oder Atrophie blanche
C_5: Abgeheiltes venöses Ulkus
C_6: Aktives venöses Ulkus

A = Asymptomatisch
S = Symptomatisch

CEAP Update 2020



Eklof et al, J Vasc Surg 2004;40: 1248-52;
Lurie et al, J Vasc Surg Venous Lymphatic Disord 2020;8:342-352

SPECIAL COMMUNICATION

From the American Venous Forum

Updated terminology of chronic venous disorders: The VEIN-TERM transatlantic interdisciplinary consensus document

Bo Eklof, MD, PhD,[a] Michel Perrin, MD,[b] Konstantinos T. Delis, MD, MS, PhD,[c] Robert B. Rutherford, MD,[d] and Peter Gloviczki, MD,[e] *Helsingborg, Sweden; Lyon, France; Marousi and Larissa, Greece; Denver, Colo; and Rochester, Minn*

Non-uniform terminology in the world's venous literature has continued to pose a significant hindrance to the dissemination of knowledge regarding the management of chronic venous disorders. This VEIN-TERM consensus document was developed by a transatlantic interdisciplinary faculty of experts under the auspices of the American Venous Forum (AVF), the European Venous Forum (EVF), the International Union of Phlebology (IUP), the American College of Phlebology (ACP), and the International Union of Angiology (IUA). It provides recommendations for fundamental venous terminology, focusing on terms that were identified as creating interpretive problems, with the intent of promoting the use of a common scientific language in the investigation and management of chronic venous disorders. The VEIN-TERM consensus document is intended to augment previous transatlantic/international interdisciplinary efforts in standardizing venous nomenclature which are referenced in this article. (J Vasc Surg 2009;49:498-501.)

Updated terminology of chronic venous disorders: The VEIN-TERM transatlantic interdisciplinary consensus document

- **Definitionen**
  - **Recurrent varices:** Reappearance of varicose veins in an area previously treated successfully.
  - **Residual varices:** Varicose veins remaining after treatment.

- **PREVAIT = PREsence of Varices (residual or recurrent) After InTervention.**

Eklöf et al, J Vasc Surg 2009

Klinisch vs Echographisch

Eine « echographische » Rezidive manifestiert sich nicht unbedingt mit einer « klinischen » Rezidive

- z.B. nach Schaumsklerosierung sind echographische Rezidive häufig, klinische hingegen selten

MEETING REPORT

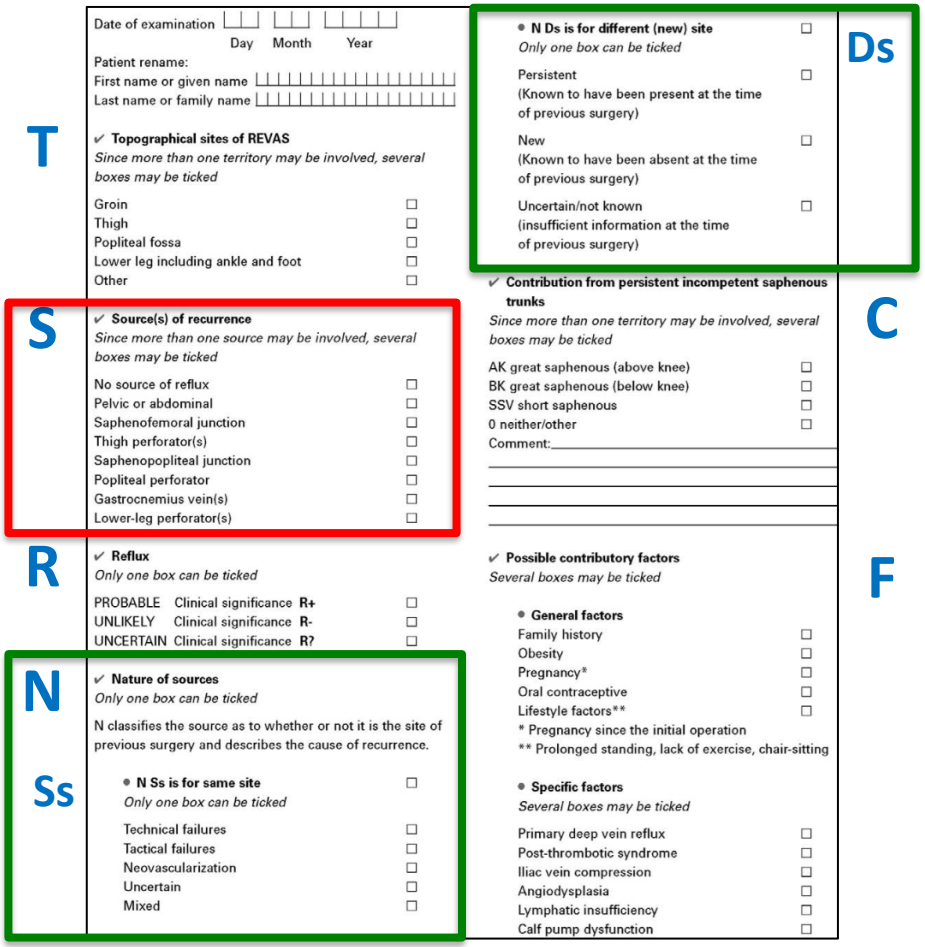
Recurrent varices after surgery (REVAS), a consensus document

Michel R. Perrin*, J. Jerome Guex, C. Vaughan Ruckley, Ralph G. dePalma, John P. Royle, Bo Eklof, Philippe Nicolini, Georges Jantet and the REVAS group
France

- **Definitions of „recurrent varicose veins“:**
  - the existence of varicose veins in a lower limb **previously operated on for varicosities**, with or without adjuvant therapies, which includes
    - **true recurrences**
    - **residual veins**
    - **new varices, as a result of disease progression**.

„REVAS“ Klassifikation

- **T Topographical sites** of REVAS
- **S Source of recurrence**
- **R Reflux**
- **N Nature of sources**
  - **Ss** is for **Same Site**
    - **1**: technical failures
    - **2**: tactical failures
    - **3**: neovascularisation
    - **4**: uncertain and **5**: mixed
  - **Ds** is for **Different (New) Site**
    - **1**: persistent (known to have been present at the time of previous surgery)
    - **2**: new (known to have been absent at the time of previous surgery)
    - **3**: uncertain/not known
- **C Contribution from persistent incompetent saphenous trunks**
- **F Possible contributory Factors**



Perrin et al. J Cardiovascular Surgery. 2000;8:233–45

Same Site Recurrence is More Frequent After Endovenous Laser Ablation Compared with High Ligation and Stripping of the Great Saphenous Vein: 5 year Results of a Randomized Clinical Trial (RELACS Study)

REVAS

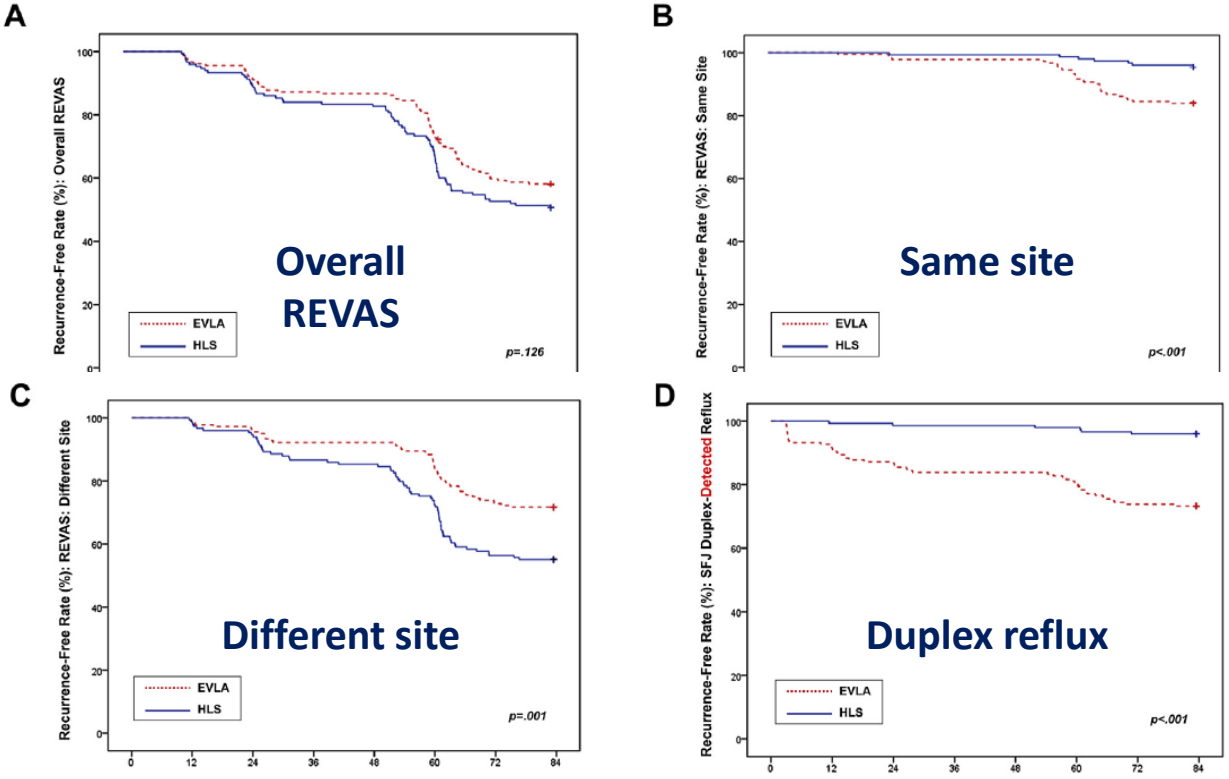
S

N Ss

Ds

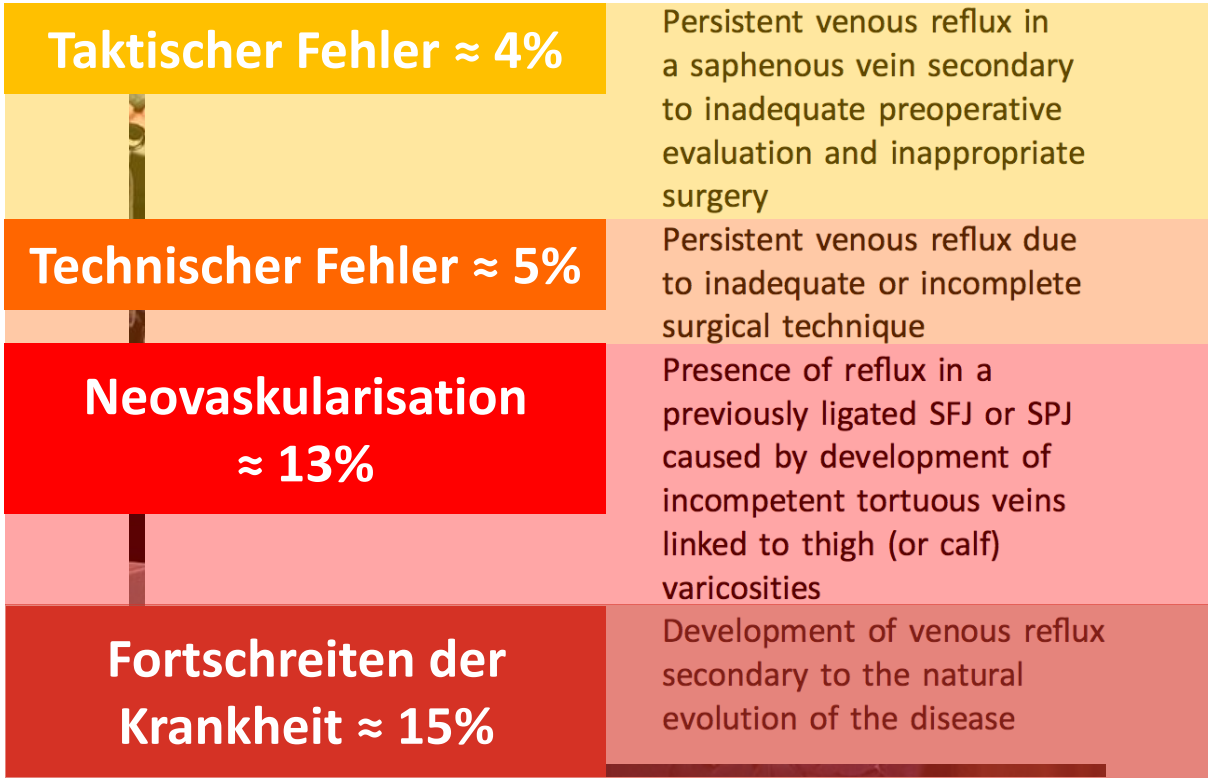
	EVLA ($n = 152$)	HLS ($n = 129$)	p
Overall REVAS, *n* (%)	69 (45)	70 (54)	.152
Median follow up, months (range)	60.4 (51.6–79.2)	60.7 (48.7–83.5)	.986
Source of recurrence			
Not detectable	34 (49)	50 (70)	.015
SFJ	27 (39)	2 (3)	<.001
Thigh perforator	3 (4)	10 (14)	.078
SPJ	2 (3)	7 (10)	.166
Lower leg perforator	6 (9)	8 (11)	.780
Nature of source			
Same site	27 (39)	7 (10)	.002
Persisting or recurrent reflux[b]	27	0	
Neovascularization	0	2	
Uncertain	0	5	
Different site	47 (68)	64 (91)	.002
Persistent	1	0	
New	46	64	

Same Site Recurrence is More Frequent After Endovenous Laser Ablation Compared with High Ligation and Stripping of the Great Saphenous Vein: 5 year Results of a Randomized Clinical Trial (RELACS Study)



Rass et al, EJVES 2015

Ursachen für Rezidive nach Chirurgie



Kostas et al, EJVES 2004; 27:275

… und nach endovenöser Ablation

Brake et al, J Vasc Surg 2013

Ursachen für Rezidivvarikosis

Table 11. The main causes of varicose vein recurrence after treatment[173]

Cause	Description
Tactical error	*Persistence of reflux because of an inappropriate intervention:*
	Inadequate pre-operative DUS, not identifying the source(s) of reflux
	Inadequate choice of cannulation site(s)
Technical error	*Persistence of reflux because of inadequate intervention*
	for endovenous procedures:
	Failure to cannulate target saphenous trunk
	Poor ultrasound visualisation of the target segment, the SFJ, or SPJ
	Insufficient delivery of energy/glue/sclerosant to target segment
	for open surgical procedures:
	Incomplete stripping
	Other surgical failure
Neovascularisation*	*Presence of multiple new small tortuous refluxing veins in anatomical proximity to a previous intervention:*
	Reflux from a previously ligated or ablated SFJ, SPJ, PV, or tributary
	New veins visible on DUS in connection with varicose veins
Recanalisation*	Partial or complete reopening of an initially ablated saphenous segment with recurrence of reflux
Disease progression*	Development of venous reflux as a result of the natural history and progression of disease, with reflux occurring at new sites

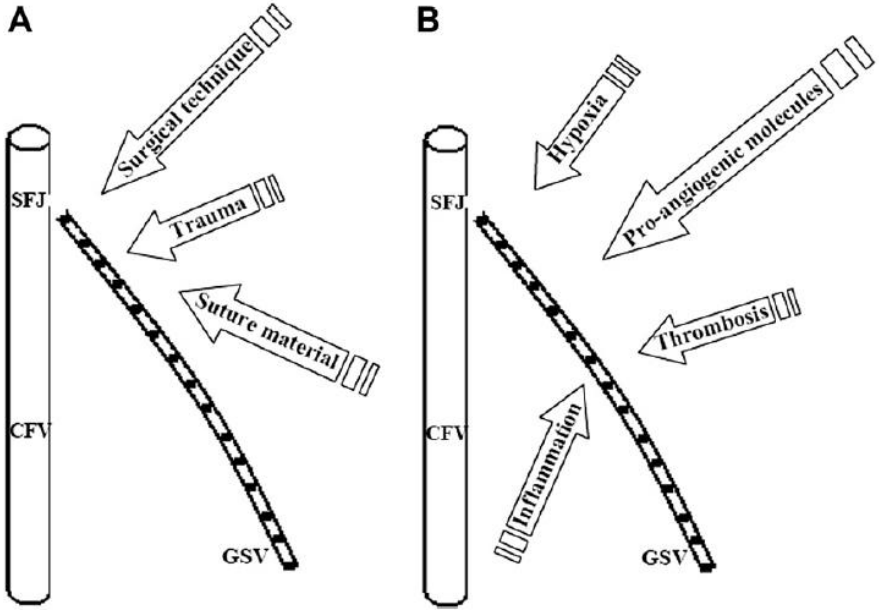
DUS = duplex ultrasound; SFJ = saphenofemoral junction; SPJ = saphenopopliteal junction; PV = perforating vein.
* Defined by duplex ultrasound.

Risikofaktoren für Rezidive

- Fortgeschrittenes Alter
- Weibliches Geschlecht
- Langes Stehen
- Erhöhter BMI
- Frühere Rezidive
- Beckenvenenreflux (v.a. bei multiparen Frauen)
- Reflux der tiefen Becken/Beinvenen
- Venöse Obstruktion (z.B. postthrombotisch oder durch externe Kompression)
- Anatomie der Saphenofemoralen Crosse +/- assoziierter Reflux der V. saphena anterior (VSA)
- Ungenügender Präoperativer Duplex..

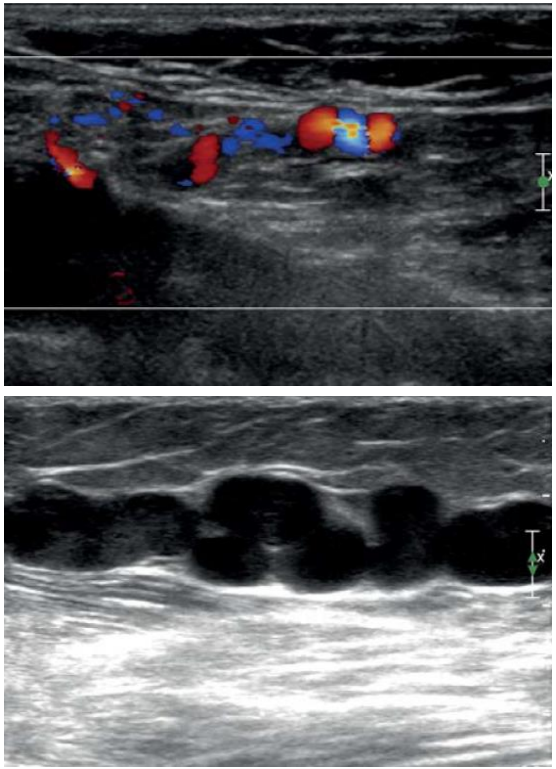
Neovaskularisation nach Chirurgie

« Refers to new blood vessel formation, which occur in abnormal tissue or position »



Brake et al, J Vasc Surg 2013

Neovaskularisation



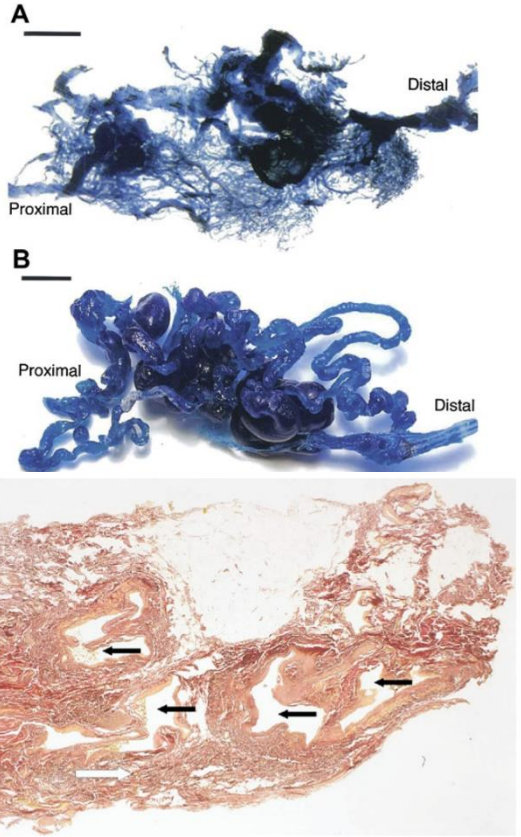
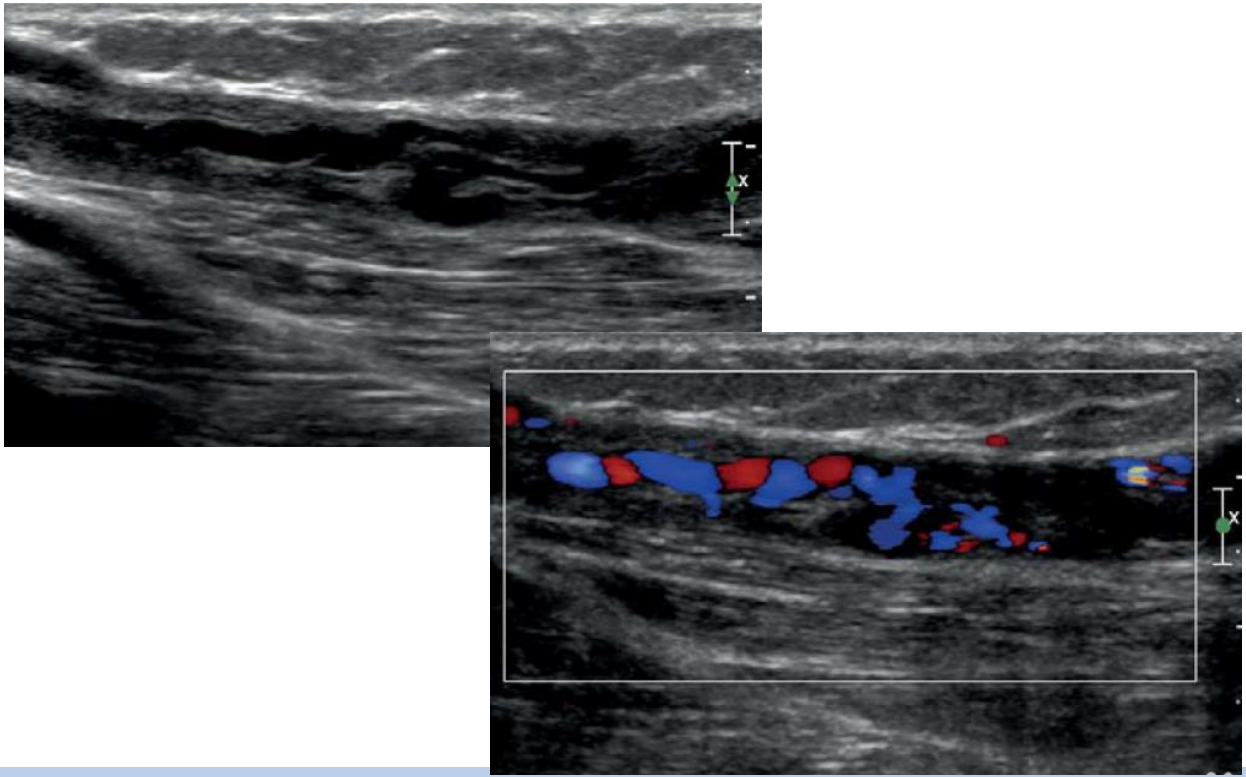


Fig 4. Histological picture characteristic for neovascularization: multiple venous channels with bizarre lumen (*black arrows*), unstructured vessel wall (*white arrow*), and absence of vein valves.

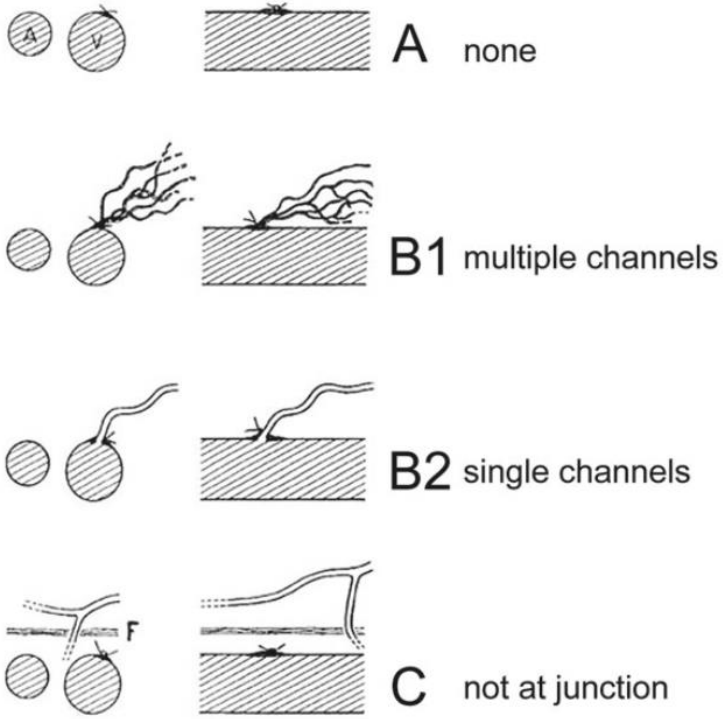
Brake et al, J Vasc Surg 2013; van Rij et al, J Vasc Surg 2004; courtesy Dr Pichot

Rekanalisation



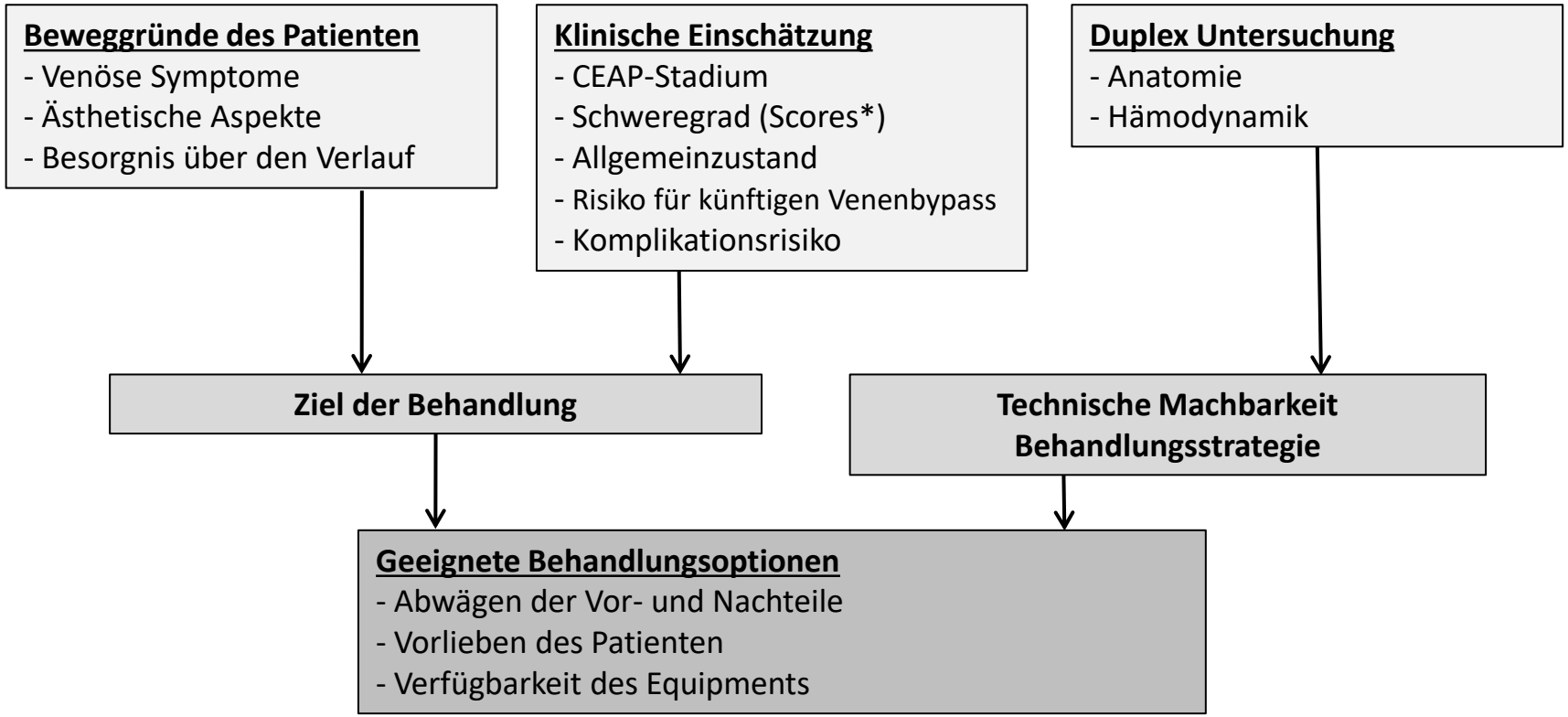
Courtesy Dr Pichot

Rezidive der sapheno-femoralen Junktion nach Ligatur/Stripping



Jeanneret et al, VASA 2011; Fischer et al, J Vasc Surg 2001

Behandlung der Rezidive



Behandlungsoptionen für Rezidive

Konservative Behandlung

Kompression

Venotonika

« Hygiène de vie »

Interventionelle/chirurgische Behandlung

Minimalinvasive Behandlungen zu bevorzugen

Die « gleichen » wie für normale Varizen
(aber häufig ein bisschen komplizierter…)

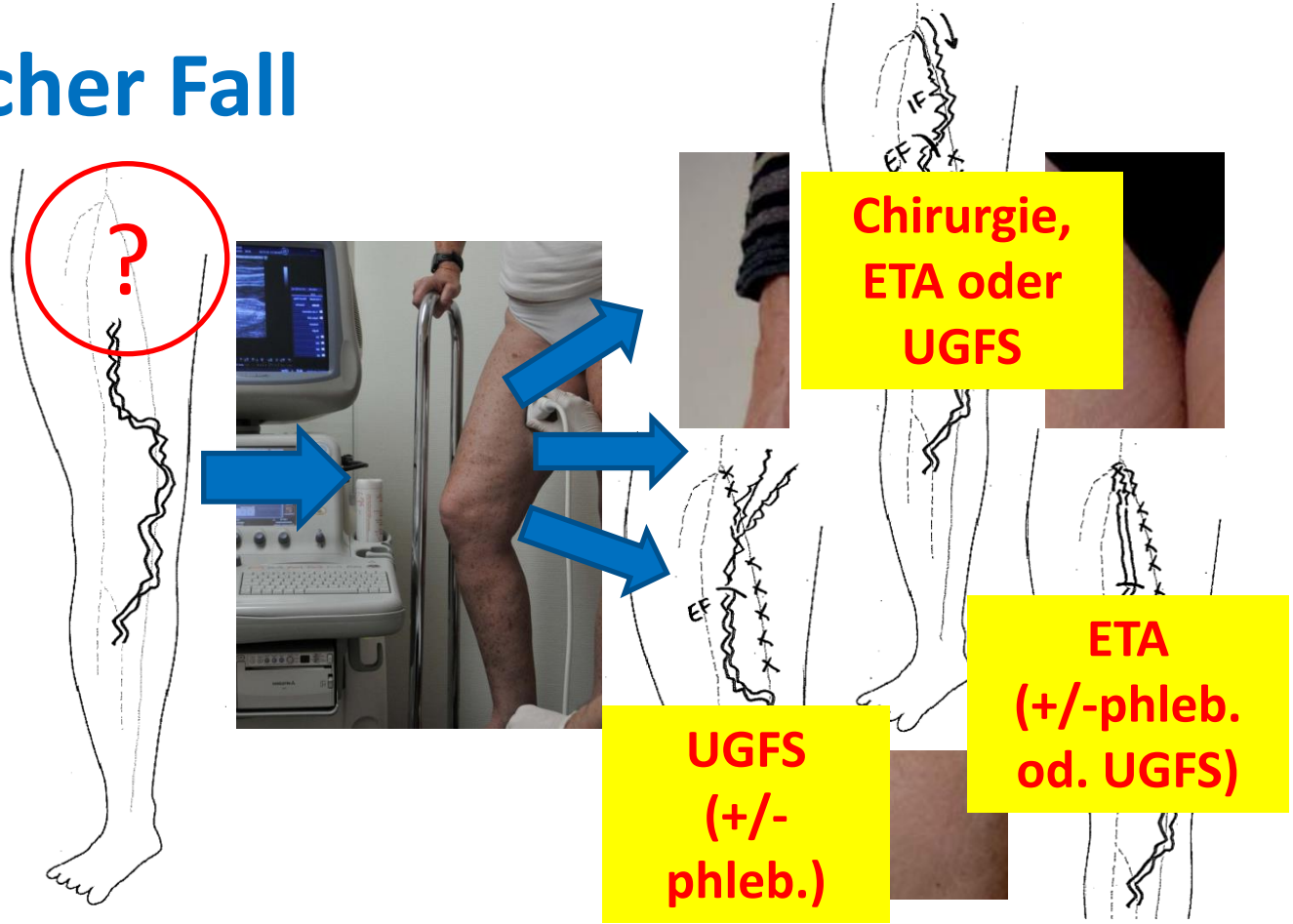
Typischer Fall

♀ 58 j

S/p Crossektomie/Stripping VSM 2005

Schwere- und Schwellungsgefühl, teilwei

Typischer Fall



Endovenöser LASER

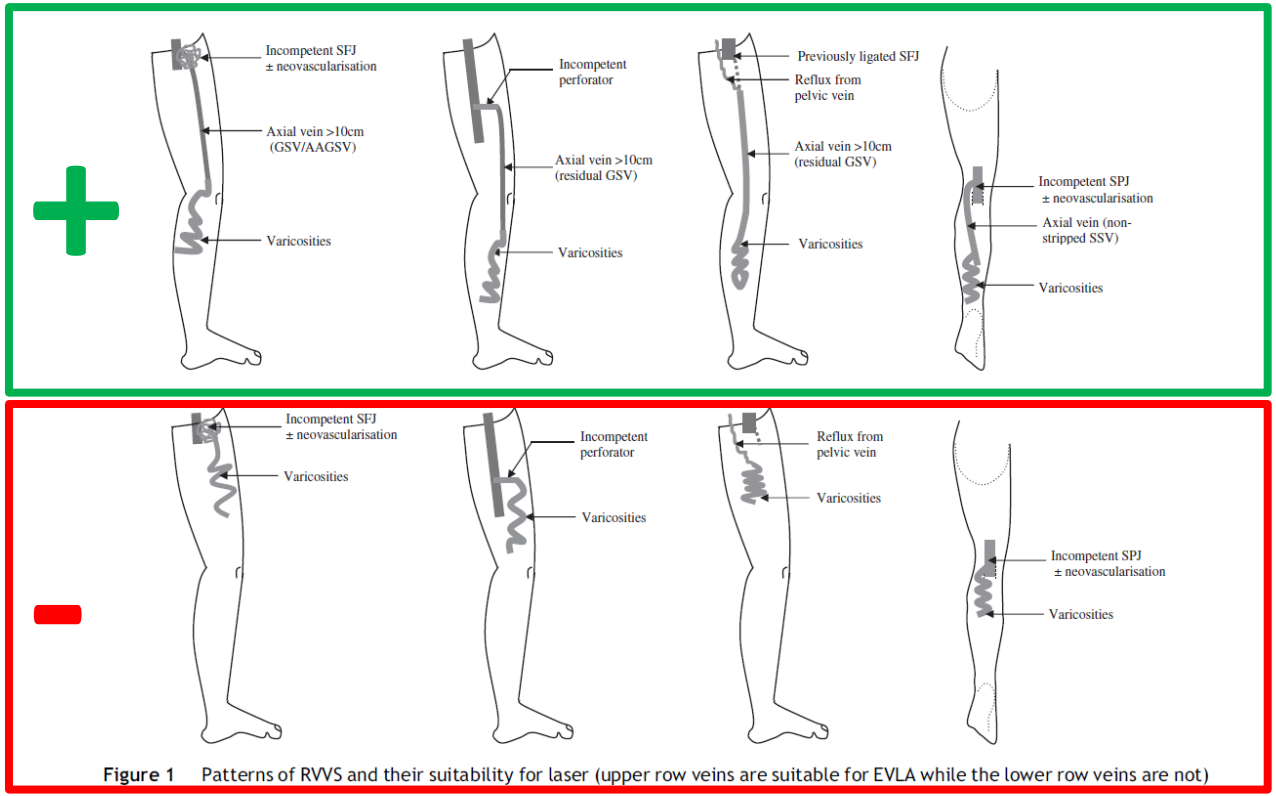


Figure 1 Patterns of RVVS and their suitability for laser (upper row veins are suitable for EVLA while the lower row veins are not)

Theivacumar et al, EJVES 2011

Recurrent varicos veins: ETA vs Surgery

GVS

Treatment of recurrent varicose veins of the great saphenous vein by conventional surgery and endovenous laser ablation

Laura van Groenendael, MD,[a] J. Adam van der Vliet, MD, PhD,[c] Lizel Flinkenflögel, MD,[a] Elisabeth A. Roovers, PhD,[b] Steven M.M. van Sterkenburg, MD,[a] and Michel M.P.J. Reijnen, MD, PhD,[a] *Arnhem and Nijmegen, The Netherlands*

Objective: Varicose vein recurrence of the great saphenous vein (GSV) is a common, costly, and complex problem. The aim of the study was to assess feasibility of endovenous laser ablation (EVLA) in recurrent varicose veins of the GSV and to compare this technique with conventional surgical reintervention.

Methods: Case files of all patients treated for GSV varicosities were evaluated and recurrences selected. Demographics, duplex scan findings, CEAP classification, perioperative data, and follow-up examinations were all registered. A questi

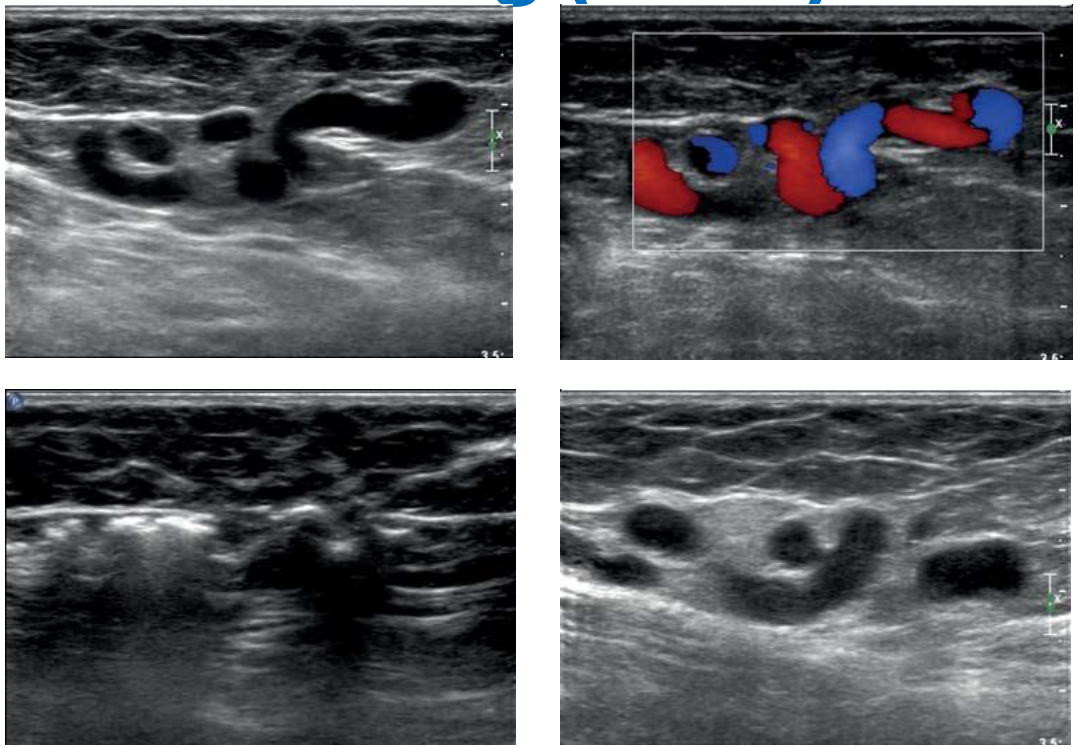
Resul hesia were used r ons (8% vs 0%; *P* A-treated patien roperative pain ($P < .05$) but reported a higher use of analgesics ($P < .05$). Hospital stay in the surgery group was longer ($P < .05$) and they reported a longer delay before resuming work (7 vs 2 days; $P < .0001$). Patient satisfaction was equally high in both groups. At 25 weeks of follow-up, re-recurrences occurred in 29% of the surgically-treated patients and in 19% of the EVLA-treated patients ($P = .511$).

Conclusion: EVLA is feasible in patients with recurrent varicose veins of the GSV. Complication rates are lower and socioeconomic outcome is better compared to surgical reintervention. (J Vasc Surg 2009;50:1106-13.)

ETA with lower complication rate and better socioeconomic outcome

Groenendael et al, J Vasc Surg 2009;50:1106-13

Ultraschallgesteuerte Schaumsklerosierung (UGFS)



Courtesy of Dr Pichot

Case 1: Mrs G, 73 y old farmer

Chronic venous insufficiency C4b Ep As,d Pr

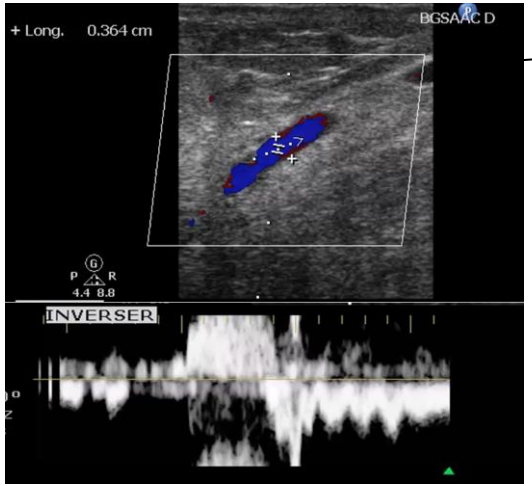
- crossectomy/stripping GSV R + L 2004
- phlebectomies R + L 2009

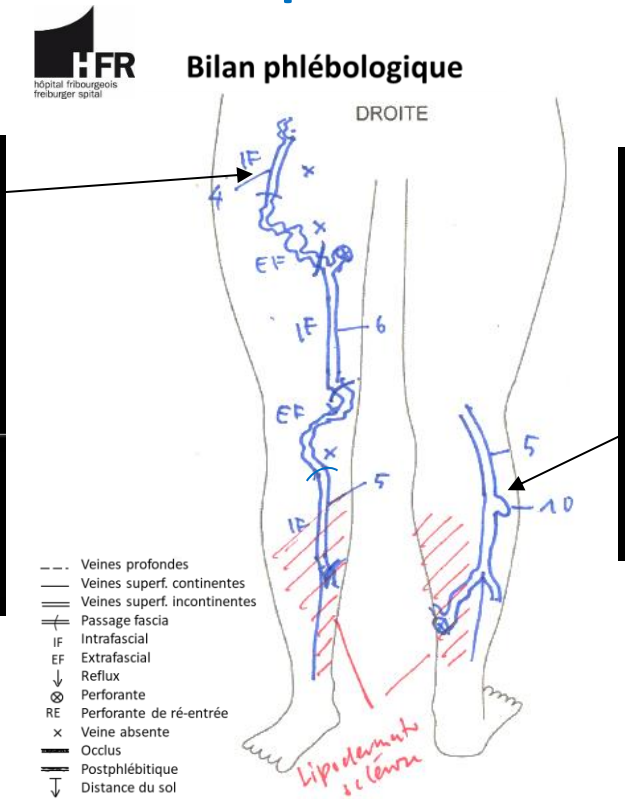
Currently: *assigned by the GP for leg pain and worsening lipodermatosclerosis R > L*

Comorbidities

- Obesity (BMI 32)
- Lumbar spine arthrosis and degenerative scoliosis
- Arterial hypertension and dyslipidaemia

Case 1: Venous Duplex





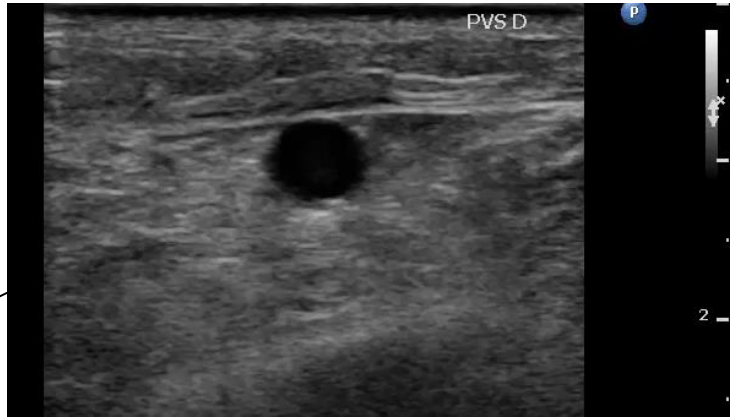


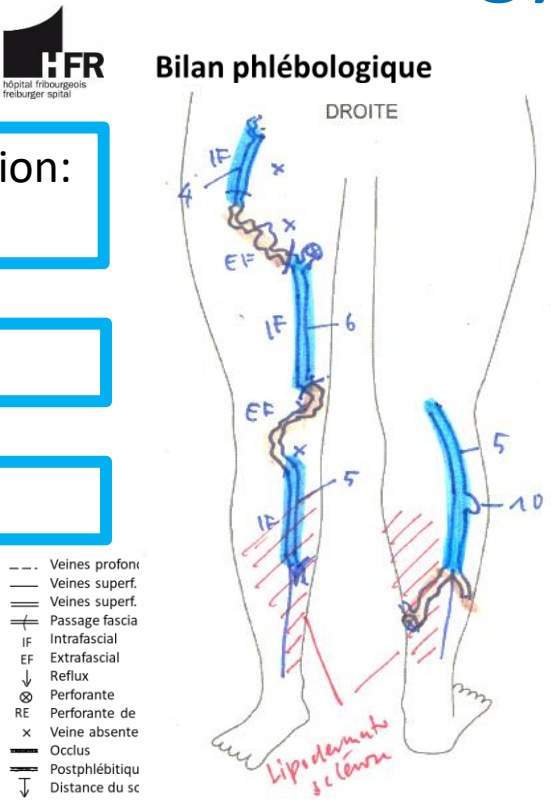
Bild Dr Engelberger, HFR Fribourg

Case 1: Treatment strategy

2) Supine position:
EVL of AASV

3) EVL of GSV

4) EVL of GSV



5) UGFS

1) Prone position:
EVL of SSV

6) Complementary
UGFS on Day 1

Bild Dr Engelberger, HFR Fribourg

Editor's Choice – European Society for Vascular Surgery (ESVS) 2022 Clinical Practice Guidelines on the Management of Chronic Venous Disease of the Lower Limbs☆

Treatment of recurrent varicose veins

Recommendation 55 — Unchanged

For patients with symptomatic recurrent varicose veins due to saphenous trunk incompetence, endovenous thermal ablation or ultrasound guided foam sclerotherapy with or without phlebectomy should be considered.

Class	Level	References	ToE
IIa	B	Hinchliffe *et al.* (2006),[351] Theivacumar *et al.* (2011),[352] van Groenendael *et al.* (2009),[349] van Groenendael *et al.* (2010),[348] Nwaejike *et al.* (2010),[350] Darvall *et al.* (2011)[354]	

Recommendation 56 — Unchanged

For patients with symptomatic recurrent varicose veins requiring treatment, where endovenous ablation is possible, re-exploration of the groin or popliteal fossa is not recommended.

Class	Level	References	ToE
III	B	Hinchliffe *et al.* (2006),[351] van Groenendaal *et al.* (2009),[349] van Groenendaal *et al.* (2010)[348]	

Recommendation 57 — New

For patients with symptomatic recurrent varicose veins without truncal incompetence, ultrasound guided foam sclerotherapy and/or ambulatory phlebectomy should be considered.

Class	Level	References
IIa	C	Consensus

The 2023 Society for Vascular Surgery, American Venous Forum, and American Vein and Lymphatic Society clinical practice guidelines for the management of varicose veins of the lower extremities. Part II

Endorsed by the Society of Interventional Radiology and the Society for Vascular Medicine

9. Management of recurrent varicosities	
Consensus statements	
9.1.1.	For patients with symptomatic recurrent varicosities, clinical evaluation and DUS should be performed before treatment to determine the potential source of recurrence.
9.1.2	For patients with symptomatic recurrent varicosities due to persistent or recurrent reflux of the GSV or AAGSV, treatment either with open surgical or endovascular techniques may be performed, with good outcomes expected.
9.1.3.	For patients with symptomatic recurrent varicosities due to persistent or recurrent reflux at the groin, either EVLA or RFA can be used if there is a straight GSV stump, long enough for thermal ablation. Sclerotherapy or phlebectomy should be performed for recurrence due to neovascularization.
9.1.4.	For patients with symptomatic recurrent varicosities due to persistent or recurrent reflux of the SSV, UGFS should be performed.
9.1.5.	For patients with residual or recurrent varicosities due to incompetent perforator veins, treatment with both open and endovascular techniques may be used depending on the physician's experience, patient choice and availability of technology.

Gloviczki et al, J Vasc Surg Venous Lymphat Disord. 2024 Sep;12(5):101923. doi: 10.1016/j.jvsv.2024.10192

Zusammenfassung: Rezidivvarikosis

Sehr häufige Problematik

Pathophysiologische Mechanismen wenig bekannt

Häufigste Ursache: **Fortschreiten der Krankheit**

Für Chirurgie → Neovaskularisation

Für endovenöse Methoden → Rekanalisation

Zusammenfassung: Rezidivvarikosis

Duplex-Untersuchung ist essentiell zur Bestimmung der optimalen Behandlung

Optimale interventionnelle Behandlung?

- *Ultraschallgesteuerte Schaumsklerosierung*
- *Thermische Ablation falls möglich*
- *Phlebektomien*
- *Chirurgie falls möglich vermeiden*