



# Chronische venöse Insuffizienz: Rezidiv-Varikose

PD Dr med Rolf Engelberger

HFR Fribourg - Service d'Angiologie

[rolf.engelberger@h-fr.ch](mailto:rolf.engelberger@h-fr.ch)

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Leading Article

## Recurrent varicose veins: A national problem

D. Negus

Issue

British Journal of Surgery

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



# Wichtigkeit der Rezidivvarikosis

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

Bis zu 25% der Veneninterventionen sind für Rezidivvarikosis

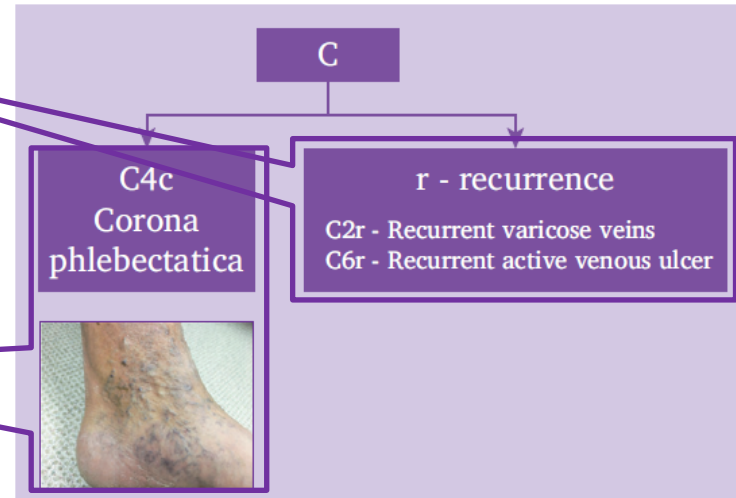
Die Behandlung der Rezidive ist technisch schwieriger, mit einer höheren Morbidität und verminderter Patientenzufriedenheit

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

- C<sub>0</sub>: Keine sichtbaren oder tastbaren Zeichen einer venösen Erkrankung
- C<sub>1</sub>: Teleangiektasien oder retikuläre Varizen\*
- C<sub>2</sub>: Varikose der Venen\$
- C<sub>3</sub>: Ödeme ohne trophische Hautveränderungen
- C<sub>4</sub>: Hautveränderungen
  - C<sub>4a</sub>: Pigmentierung oder Ekzem
  - C<sub>4b</sub>: Lipodermatosklerose oder Atrophie blanche
- C<sub>5</sub>: Abgeheiltes venöses Ulkus
- C<sub>6</sub>: Aktives venöses Ulkus

A = Asymptomatisch  
S = Symptomatisch

## CEAP Update 2020



# SPECIAL COMMUNICATION

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From the American Venous Forum

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

Bo Eklof, MD, PhD,<sup>a</sup> Michel Perrin, MD,<sup>b</sup> Konstantinos T. Delis, MD, MS, PhD,<sup>c</sup>  
Robert B. Rutherford, MD,<sup>d</sup> and Peter Gloviczki, MD,<sup>e</sup> *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.**

# 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

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## Recurrent varices after surgery (REVAS), a consensus document

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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

T	Date of examination <input type="text"/> <input type="text"/> <input type="text"/> Day      Month      Year Patient rename: First name or given name <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Last name or family name <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	• N Ds is for different (new) site <input type="checkbox"/> <i>Only one box can be ticked</i> Persistent <input type="checkbox"/> (Known to have been present at the time of previous surgery) New <input type="checkbox"/> (Known to have been absent at the time of previous surgery) Uncertain/not known <input type="checkbox"/> (insufficient information at the time of previous surgery)	Ds
	✓ <b>Topographical sites of REVAS</b> <i>Since more than one territory may be involved, several boxes may be ticked</i> Groin <input type="checkbox"/> Thigh <input type="checkbox"/> Popliteal fossa <input type="checkbox"/> Lower leg including ankle and foot <input type="checkbox"/> Other <input type="checkbox"/>	✓ <b>Contribution from persistent incompetent saphenous trunks</b> <i>Since more than one territory may be involved, several boxes may be ticked</i> AK great saphenous (above knee) <input type="checkbox"/> BK great saphenous (below knee) <input type="checkbox"/> SSV short saphenous <input type="checkbox"/> 0 neither/other <input type="checkbox"/> Comment: _____ _____ _____	C
S ✓ <b>Source(s) of recurrence</b> <i>Since more than one source may be involved, several boxes may be ticked</i> No source of reflux <input type="checkbox"/> Pelvic or abdominal <input type="checkbox"/> Saphenofemoral junction <input type="checkbox"/> Thigh perforator(s) <input type="checkbox"/> Saphenopopliteal junction <input type="checkbox"/> Popliteal perforator <input type="checkbox"/> Gastrocnemius vein(s) <input type="checkbox"/> Lower-leg perforator(s) <input type="checkbox"/>	✓ <b>Possible contributory factors</b> <i>Several boxes may be ticked</i> • <b>General factors</b> Family history <input type="checkbox"/> Obesity <input type="checkbox"/> Pregnancy* <input type="checkbox"/> Oral contraceptive <input type="checkbox"/> Lifestyle factors** <input type="checkbox"/> * Pregnancy since the initial operation ** Prolonged standing, lack of exercise, chair-sitting		
R	✓ <b>Reflux</b> <i>Only one box can be ticked</i> PROBABLE Clinical significance R+ <input type="checkbox"/> UNLIKELY Clinical significance R- <input type="checkbox"/> UNCERTAIN Clinical significance R? <input type="checkbox"/>	F ✓ <b>Nature of sources</b> <i>Only one box can be ticked</i> N classifies the source as to whether or not it is the site of previous surgery and describes the cause of recurrence. • <b>N Ss is for same site</b> <input type="checkbox"/> <i>Only one box can be ticked</i> Technical failures <input type="checkbox"/> Tactical failures <input type="checkbox"/> Neovascularization <input type="checkbox"/> Uncertain <input type="checkbox"/> Mixed <input type="checkbox"/>	F
N  Ss	• <b>Specific factors</b> <i>Several boxes may be ticked</i> Primary deep vein reflux <input type="checkbox"/> Post-thrombotic syndrome <input type="checkbox"/> Iliac vein compression <input type="checkbox"/> Angiodysplasia <input type="checkbox"/> Lymphatic insufficiency <input type="checkbox"/> Calf pump dysfunction <input type="checkbox"/>		

## 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**

	EVLA ( <i>n</i> = 152)	HLS ( <i>n</i> = 129)	<i>p</i>
Overall REVAS, <i>n</i> (%)	69 (45)	70 (54)	.152
Median follow up, months (range)	60.4 (51.6–79.2)	60.7 (48.7–83.5)	.986

**S**

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

**N**

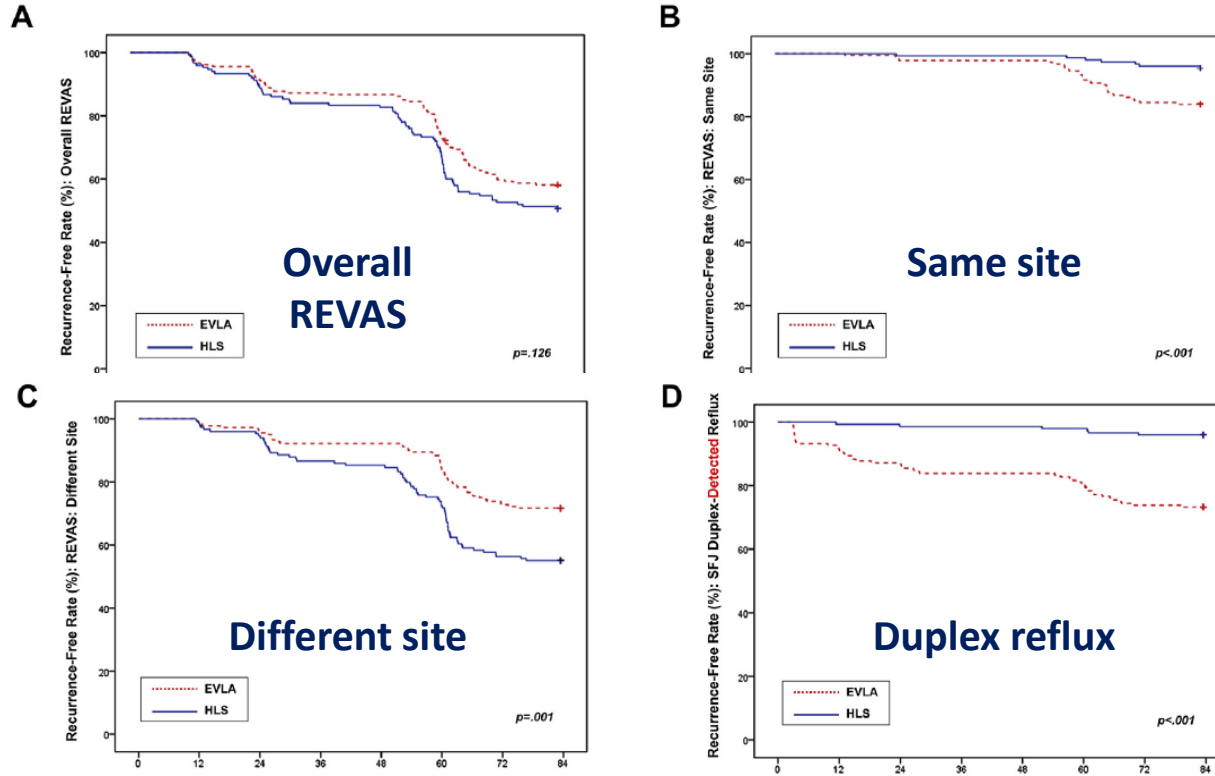
**Ss**

Nature of source			
Same site	27 (39)	7 (10)	.002
Persisting or recurrent reflux <sup>b</sup>	27	0	
Neovascularization	0	2	
Uncertain	0	5	

**Ds**

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)



# Ursachen für Rezidive nach Chirurgie

<b>Taktischer Fehler ≈ 4%</b>	Persistent venous reflux in a saphenous vein secondary to inadequate preoperative evaluation and inappropriate surgery
<b>Technischer Fehler ≈ 5%</b>	Persistent venous reflux due to inadequate or incomplete surgical technique
<b>Neovaskularisation ≈ 13%</b>	Presence of reflux in a previously ligated SFJ or SPJ caused by development of incompetent tortuous veins linked to thigh (or calf) varicosities
<b>Fortschreiten der Krankheit ≈ 15%</b>	Development of venous reflux secondary to the natural evolution of the disease

# ... und nach endovenöser Ablation

Taktischer Fehler

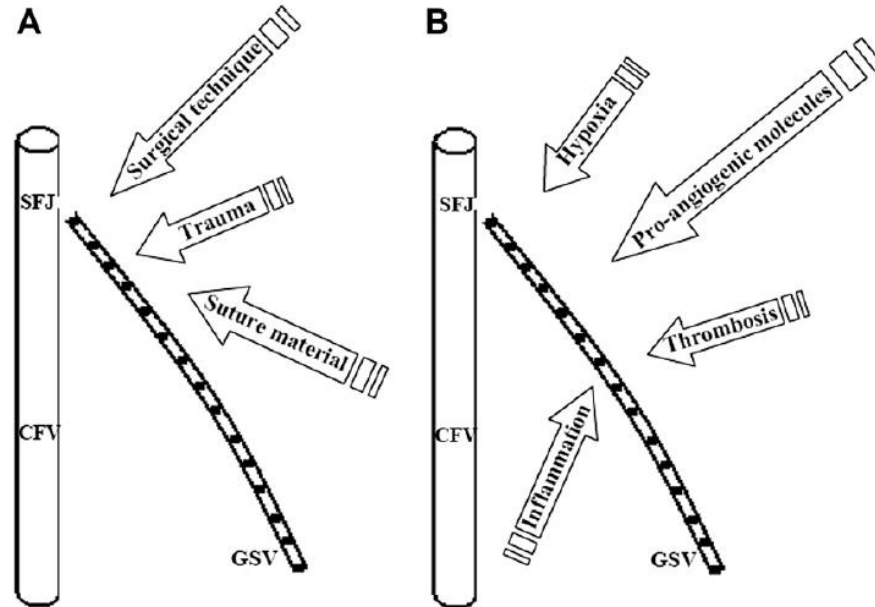
Technischer Fehler

Rekanalisation

Fortschreiten der  
Krankheit

# Neovaskularisation nach Chirurgie

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





# Neovaskularisation

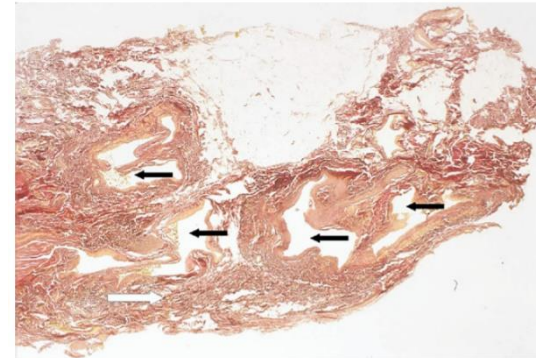
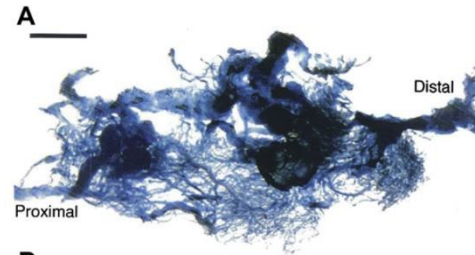
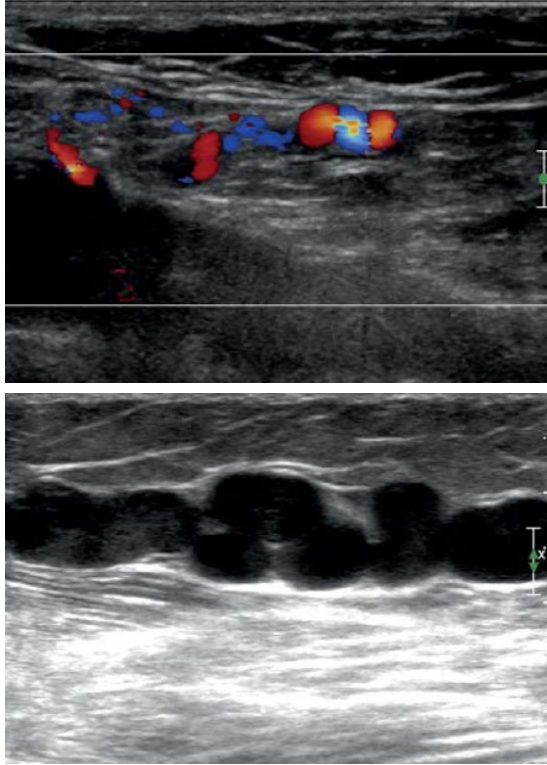
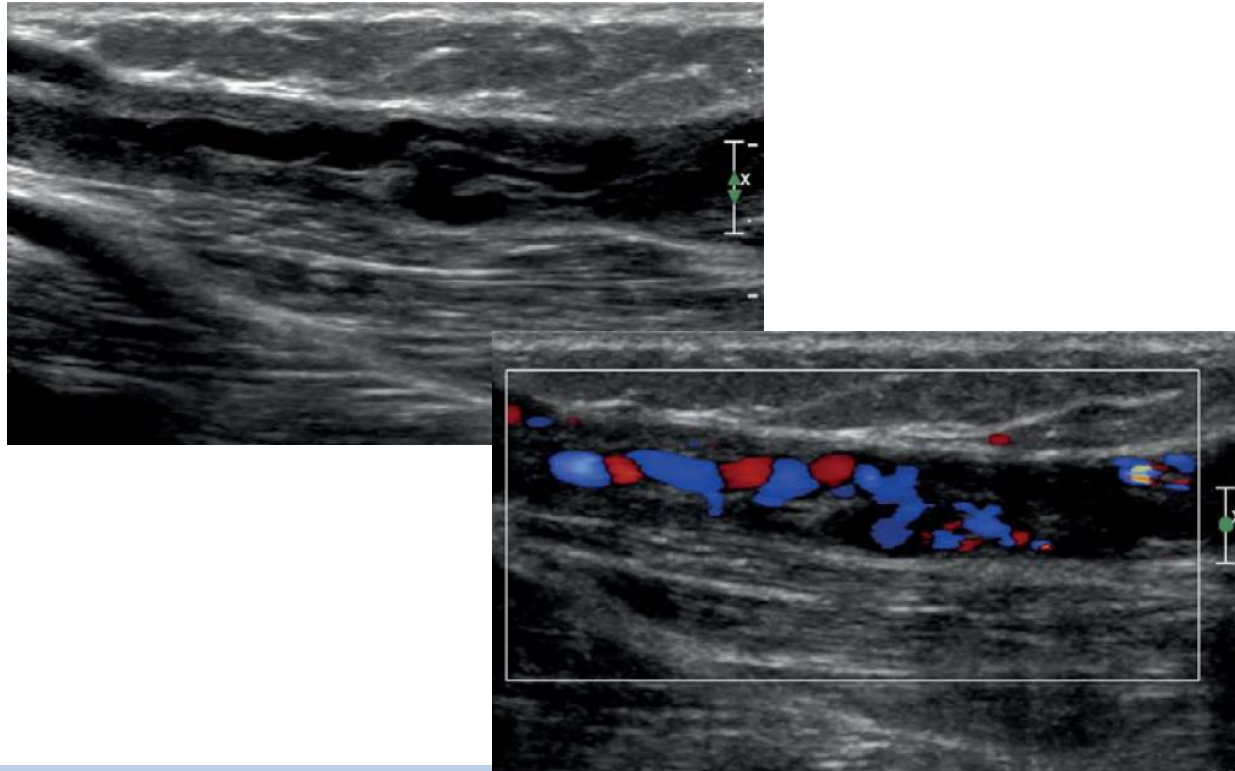


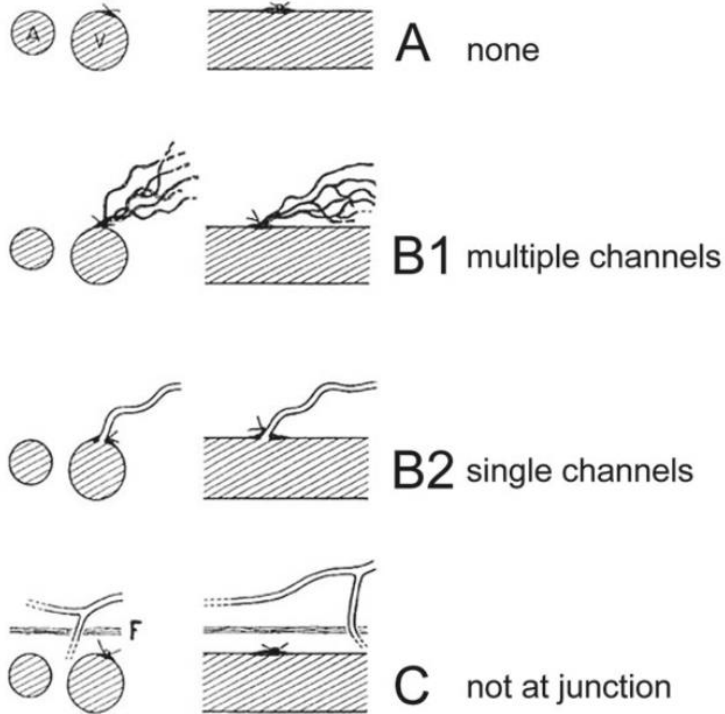
Fig 4. Histological picture characteristic for neovascularization: multiple venous channels with bizarre lumen (*black arrows*), unstructured vessel wall (*white arrow*), and absence of vein valves.

# Rekanalisation

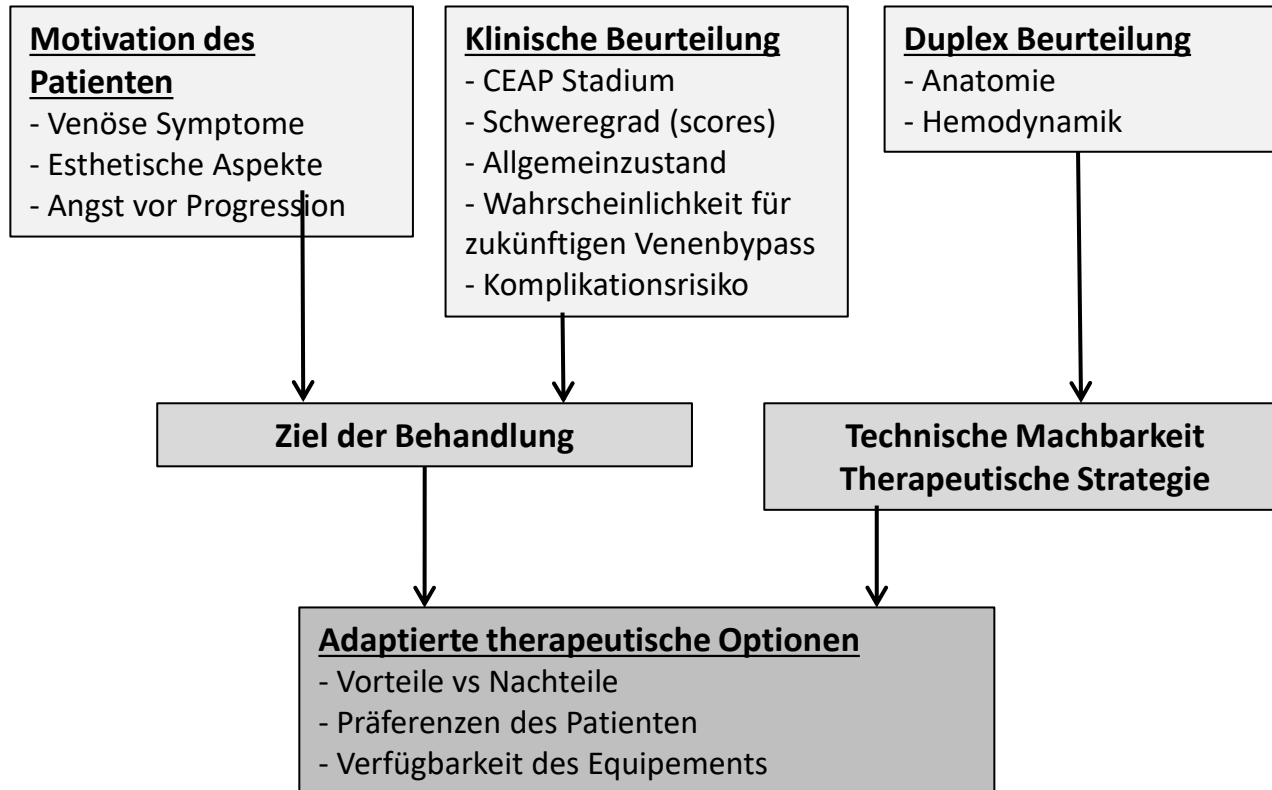


Courtesy Dr Pichot

# Rezidive der sapheno-femoralen Junction nach Ligatur/Stripping



# 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

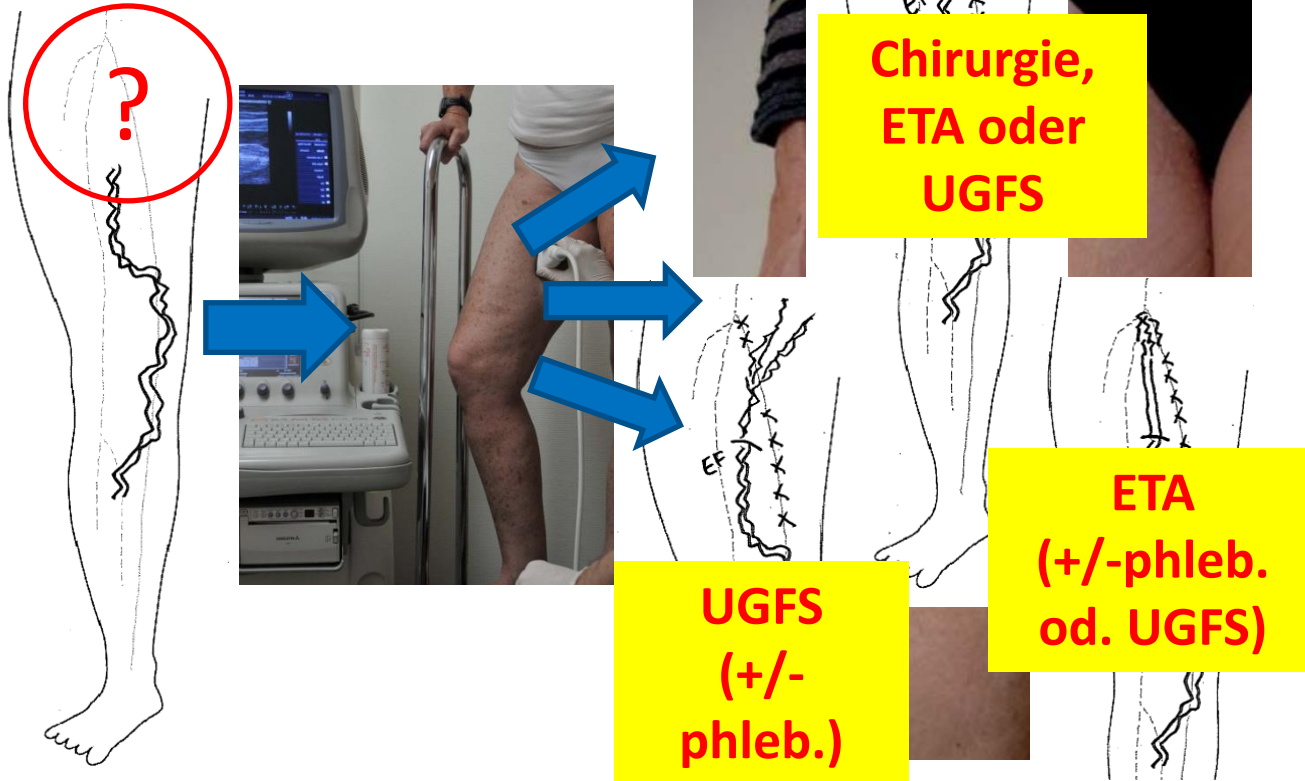
♀ 58 j

S/p Crossektomie/Stripping VSM 2005

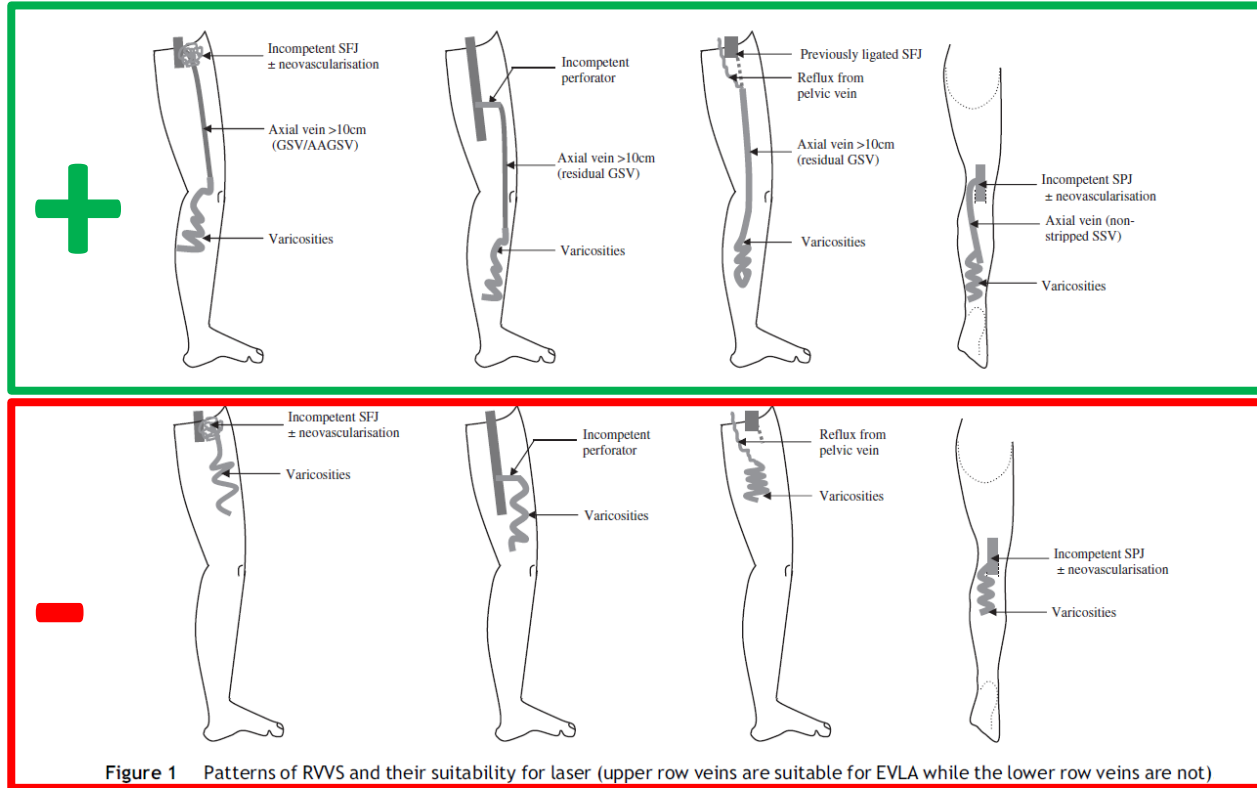
Schwere- und Schwellungsgefühl, teilwei



# Typischer Fall



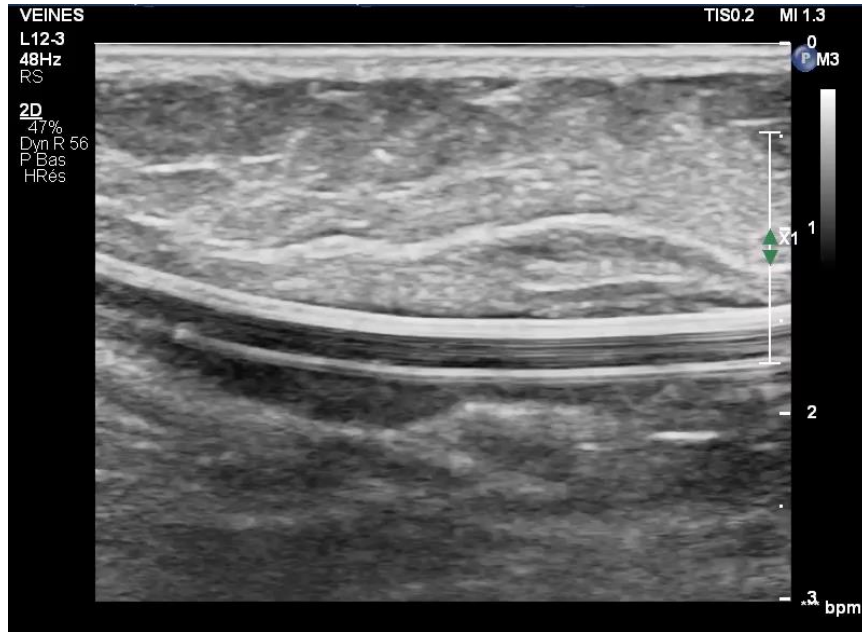
# Endovenöser LASER





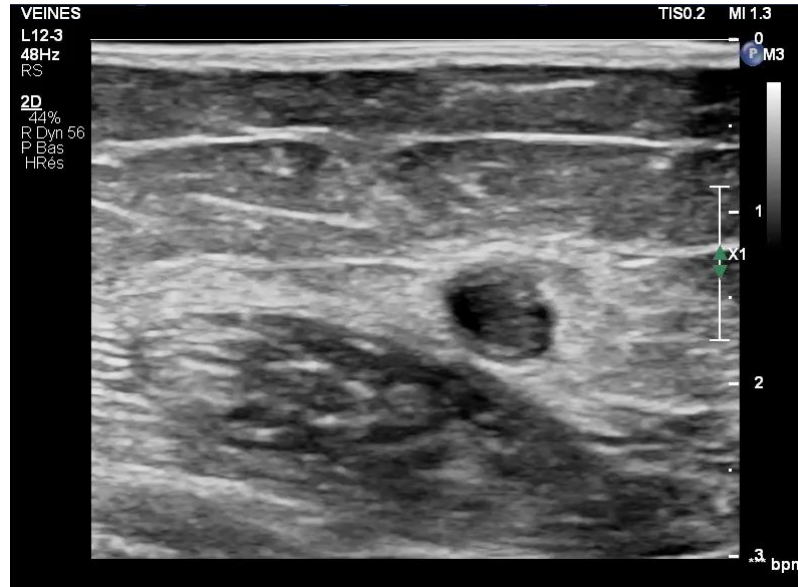
# Endovenöser LASER

Endovenöser Laser bei stark post-thrombotischen Veränderungen



# Endovenöser LASER

Nachkontrolle 2 Wochen nach Laser und zusätzlicher  
Schaumsklero



# 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,<sup>a</sup> J. Adam van der Vliet, MD, PhD,<sup>c</sup> Lizel Flinkenflögel, MD,<sup>a</sup> Elisabeth A. Roovers, PhD,<sup>b</sup> Steven M.M. van Sterkenburg, MD,<sup>a</sup> and Michel M.P.J. Reijnen, MD, PhD,<sup>a</sup> *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.

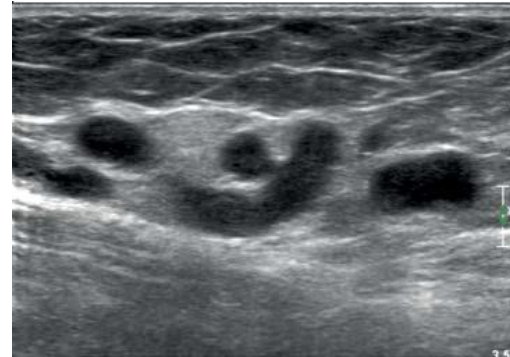
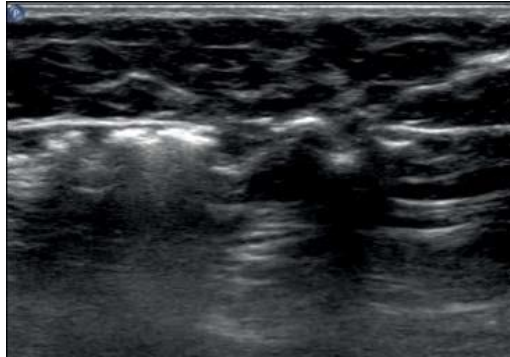
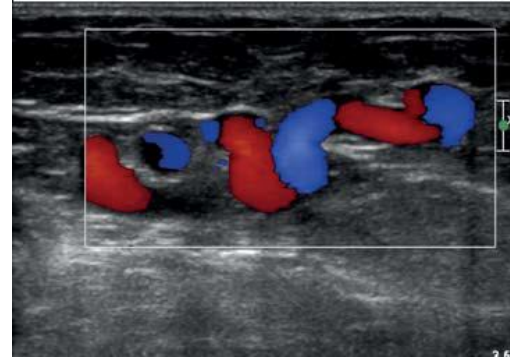
*Methods:* Case files of all patients treated for GSV varicosities were evaluated and recurrences selected. Demographics, duplex scan findings, CEAP classification, perioperative data, and follow-up examinations were all registered. A questionnaire was sent to all patients.

*Results:* 100 patients were included in the study. 50 patients were treated with conventional surgery and 50 with EVLA. Complication rates were 8% vs 0%;  $P = .001$ . Postoperative 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 ( $P = .511$ ).

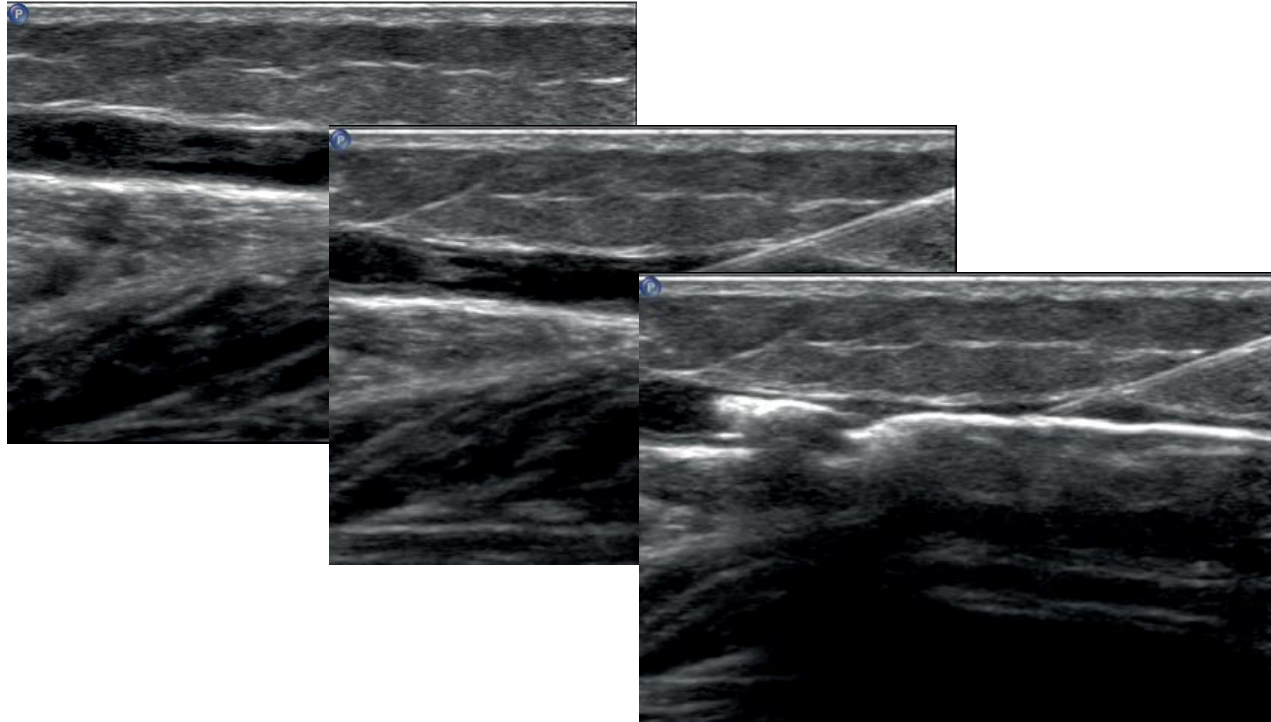
*Conclusion:* EVLA is feasible in patients with recurrent varicose veins of the GSV. Complication rates are lower and socioeconomic outcome is better compared to surgical reintervention. (J Vasc Surg 2009;50:1106-13.)

ETA with lower complication rate and better socioeconomic outcome

# Ultraschallgesteuerte Schaumsklerosierung (UGFS)



# Ultraschallgesteuerte Schaumsklerosierung (UGFS)



# 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*

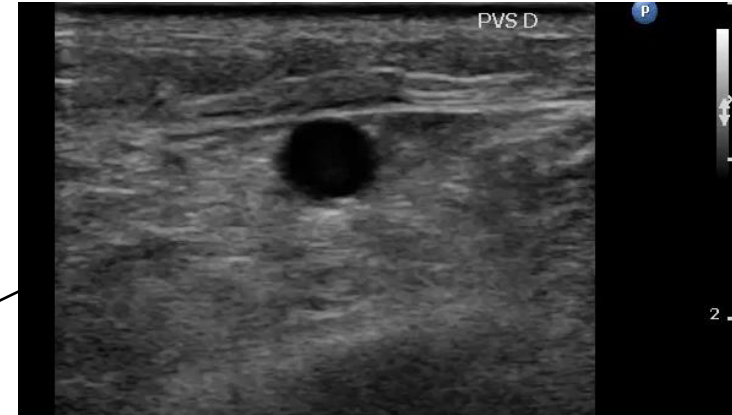
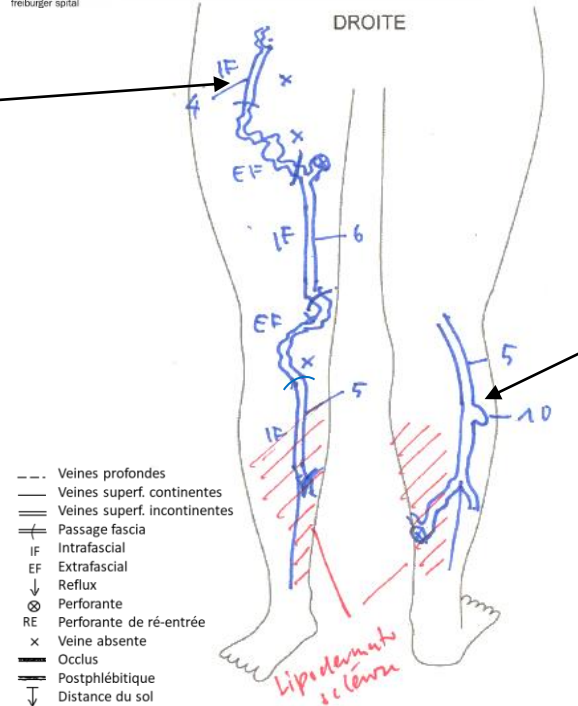
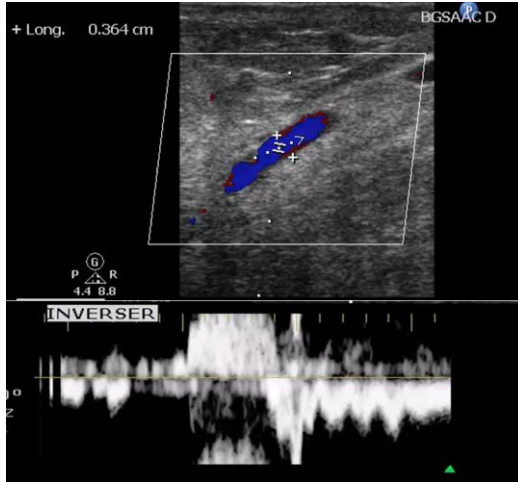
## Comorbidities

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

# Case 1: Venous Duplex



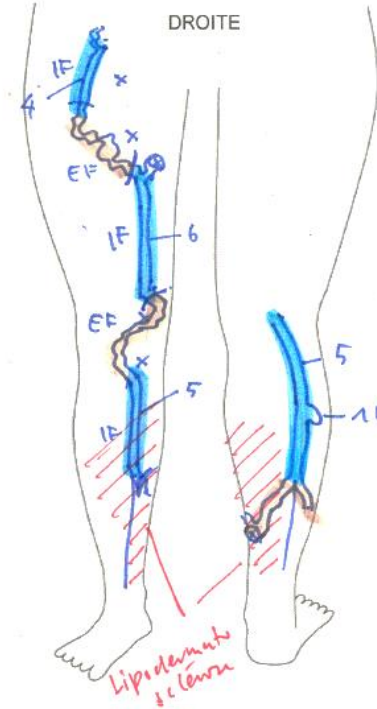
## Bilan phlébologique



# Case 1: Treatment strategy



## Bilan phlébologique



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

- Veines profondes
- Veines superf.
- Veines superf.
- Passage fascia
- IF Intrafascial
- EF Extrafascial
- Reflux
- Perforante
- RE Perforante de
- X Veine absente
- O Occlus
- Postphlébitique
- Distance du sc



# 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
Ila	B	Hinchliffe <i>et al.</i> (2006), <sup>351</sup> Theivacumar <i>et al.</i> (2011), <sup>352</sup> van Groenendaal <i>et al.</i> (2009), <sup>349</sup> van Groenendaal <i>et al.</i> (2010), <sup>348</sup> Nwaejike <i>et al.</i> (2010), <sup>350</sup> Darvall <i>et al.</i> (2011) <sup>354</sup>	

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 <i>et al.</i> (2006), <sup>351</sup> van Groenendaal <i>et al.</i> (2009), <sup>349</sup> van Groenendaal <i>et al.</i> (2010) <sup>348</sup>	

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	ToE
Ila	C	Consensus	

# 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 interventionelle Behandlung?**

*Ultraschallgesteuerte Schaumsklerosierung*

*Thermische Ablation falls möglich*

*Phlebektomien*

*Chirurgie falls möglich vermeiden*