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Which Saphenous Vein Recanalization Should Be Treated And By What Method – Evidence Based

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Nothing To Disclose

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Predictors of Recanalization of the Great Saphenous Vein in Randomized Controlled Trials 1 Year After Endovenous Thermal Ablation

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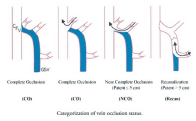
The primary outcome measure was recanalization of the GSV after follow up of at least 1 year.

Recanalization was defined as an i
treated vein >5 cm in length.
Merchant 2002

Secondary outcome was HRQol ch
follow up compared with baseline



Categorization of vein occlusion status.

Table 1. Baseline characteristics of included legs.

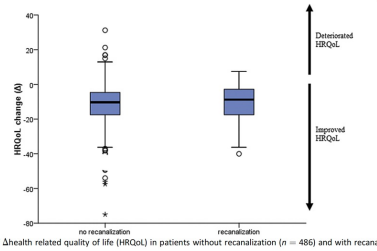
	Anatomical cohort Total (*n* = 1226)	Recanalization (*n* = 130)	Obliteration (*n* = 1096)	*p*[a]	HRQoL cohort Total (*n* = 537)
Start inclusion, *n* (%)				<.001	
2000–06	382 (31)	57 (44)	325 (30)		168 (31)
2007–13	844 (69)	73 (56)	771 (70)		369 (69)
Missing	0	0	0		0
Median (IQR) age (y)	51.9 (40.0–62.0)	51.0 (39.0–62.0)	52.0 (40.0–62.0)	.563	52.0 (40.0–64.0)
Missing, *n* (%)	0	0	0		
Sex, *n* (%)				<.001	
Male	407 (33)	62 (48)	345 (32)		170 (32)
Female	818 (67)	68 (52)	750 (68)		367 (68)
Missing	1 (0)	0	0		0
Median (IQR) BMI (kg/m^2)	25.1 (23.0–28.0)	27.1 (25.0–29.0)	25.0 (23.0–28.0)	.003	24.6 (23.0–28.0)
Missing, *n* (%)	519 (42)	70 (54)	449 (41)		233 (43)
CEAP C	290 (24)	14 (11)	276 (25)		124 (23)
Median (IQR) GSV diameter (mm)	6.8 (6.0–8.0)	8.0 (6.0–10.0)	6.6 (6.0–8.0)	<.001	7.0 (6.0–9.0)
Missing, *n* (%)	78 (6)	8 (6)	70 (6)		56 (10)
Device, *n* (%)					
RFA	205 (17)	24 (19)	181 (17)	2.476	130 (24)
810 nm	242 (20)	37 (28)	205 (19)	.048	109 (20)
940 nm	233 (19)	40 (31)	193 (18)	<.001	73 (14)
980 nm	266 (22)	16 (12)	250 (23)	.032	181 (34)
1470 nm	280 (23)	13 (10)	267 (24)	<.001	44 (8)
Missing	—	—	—	—	—
Median (IQR) energy (J/cm)	56.2 (43.0–66.0)	54.6 (43.0–64.0)	56.4 (43.0–66.0)	.598	62.6 (47.0–74.0)
Missing, *n* (%)	351 (29)	32 (25)	319 (29)		256 (48)
Median (IQR) length of treated vein (cm)	36.7 (30.0–43.0)	35.9 (28.0–45.0)	36.8 (30.0–43.0)	.176	38.0 (30.0–42.0)
Missing, *n* (%)	247 (20)	31 (24)	216 (20)		168 (31)

Note. HRQoL = health related quality of life; IQR = interquartile range; BMI = body mass index; SFJ = sapheno-femoral junction; GSV = great saphenous vein; RFA = radiofrequency ablation.
[a] Mann–Whitney *U*-test (age, BMI, GSV diameter, energy and length of treated vein), chi-square test (inclusion period, bilateral legs, clinical class, SFJ reflux), chi-square test with Bonferroni post-hoc testing (site of diameter measurement, device).

This study shows that sex, clinical class, SFJ reflux, GSV diameter, length of treated vein, and type of device are independent predictors of recanalization of the GSV after EVTA.

Van der Veldon, 2016

Overall HRQoL scores improved after treatment with EVTA, irrespective of the development of recanalization at 1 year follow up.



Boxplot of Δhealth related quality of life (HRQoL) in patients without recanalization ($n = 486$) and with recanalization ($n = 51$).

Van der Veldon, 2016

CrossMark
Journal of Vascular Surgery
Venous and Lymphatic Disorders

REVIEW ARTICLE

Richard P. Cambria, MD, Section Editor

Recurrence of varicose veins after endovenous ablation of the great saphenous vein in randomized trials

Thomas F. O'Donnell, MD,[a] Ethan M. Balk, MD, MPH,[b] Meghan Dermody, MD, MS,[a] Erica Tangney, BA,[a] and Mark D. Iafrati, MD,[a] *Boston, Mass*

J Vasc Surg: Venous and Lym Dis 2016;4:97-105

Causes of recurrence, Thermal vs HL/S

Table V. Causes of recurrence [number and percentage of cause/total causes per study]

Study	Methods	Limbs at risk	Neo, No. (%)	Tech, No. (%)	Recan, No. (%)	Thigh Perf, No. (%)	AASV, No. (%)	Calf Perf, No. (%)	Total number
Lurie,[18] 2005	RFA	36	1 (17)	2 (33)	3 (50)	0	0	0	6
	L&S	29	4 (100)	NR	NR	NR	NR	NR	4
Perala,[19] 2005	RFA	15	1 (25)	1 (25)	0	0	2 (50)	0	4
	L&S	13	1 (50)	1 (50)	0	0	0	0	2
Rasmussen,[20] 3 years	RFA	74	NR	8 (50)	8 (50)	NR	NR	NR	16
	L&S	66	NR	8 (100)	0	NR	NR	NR	8
Christenson,[21] 2010	EVLA	95	0	11 (61)	7 (39)	0	0	0	18
	L&S	99	2 (100)	NR	0	0	0	0	0
Rasmussen,[24] 5 years	EVLA	48	0	3 (10)	5 (22)	5 (22)	6 (26)	4 (17)	23
	L&S	41	0	2 (3)	3 (14)	8 (38)	8 (38)	NR	21
Rasmussen,[20] 3 years	EVLA	73	NR	8 (50)	8 (50)	NR	NR	NR	16
	L&S	66	NR	8	0	NR	NR	NR	8
Rass,[22] 2012	EVLA	173	0	6 (33)	6 (33)	5 (28)	0	1 (6)	18
	L&S	143	1 (5)	2 (10)	2 (10)	4 (20)	3 (15)	8 (40)	20
Disselhoff,[22] 2008	EVLA	56	0	0	3 (27)	2 (18)	6 (55)	0	11
	Cryo	55	11	0	0	6 (35)	0	0	17

AASV, Anterior accessory saphenous vein; *EVLA*, endovenous laser ablation; *L&S*, ligation and stripping; *Neo*, neovascularization; *NR*, not reported; *Perf*, perforator; *Recan*, recanalization; *RFA*, radiofrequency ablation; *Tech*, technical.

Neovascularization, technical, recanalization, perforator, AASV

O'Donnell, 2016

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

For patients with symptomatic recurrent varicosities, clinical evaluation and DUS should be performed before treatment to determine the potential source of recurrence.

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.

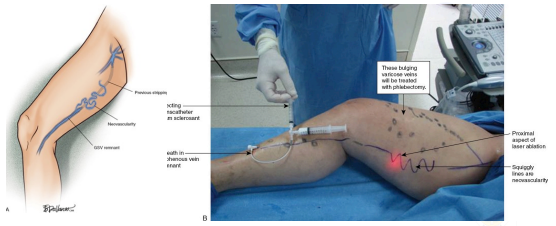
For patients with symptomatic recurrent varicosities due to persistent or recurrent reflux at the groin, either EVLA or RFA can be used if there is a straight GSV stump, long enough for thermal ablation. Sclerotherapy or phlebectomy should be performed for recurrence due to neovascularization.

For patients with symptomatic recurrent varicosities due to persistent or recurrent reflux of the SSV, UGFS should be performed.

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.

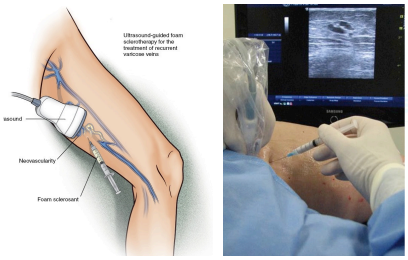
Neovascularization / Tortuosity

Trans-Cath UGFS

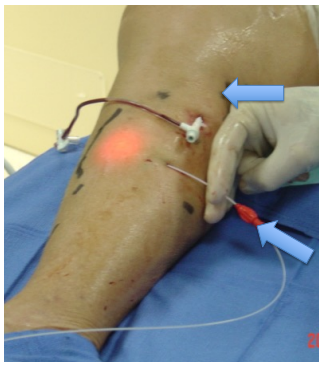


Neovascularization / Tortuosity

Direct UGFS



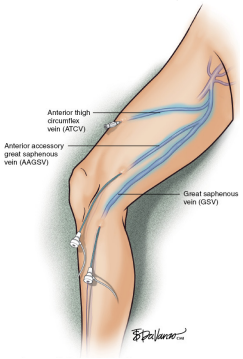
EVL SVR & Boyd's perf for recurrent VV



GSV remnant

Boyd's Perforator

Almeida JI. Atlas Endovasc Venous Surg 2012

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CONCLUSION
Not much data.
In my experience, when symptomatic, treat the problem.
If asymptomatic, can safely follow annually.
Thank you !