

# EVIDENCE BASED STATEMENT

## DOMAIN **3**, Statement **3**

TOPIC: **surgical & thermal tumescent techniques for SSV reflux treatment**

### **SEARCH TERMS & SOURCES**

(small saphenous vein) AND (treatment)

#### **INCLUSION CRITERIA**

- Lower limb only
- Reviews
- Publication < 10 years, only ENG

### **SEARCH RESULT BEFORE - AFTER SELECTION**

44/9

#### **PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH**

1. Kibrik P, Chait J, Arustamyan M, et al. Success rate and factors predictive of redo endothermal ablation of small saphenous veins. J Vasc Surg Venous Lymphat Disord. 2022 Mar;10(2):395-401.
2. Giancesini S, Menegatti E, Sibilla MG, et al. Mini-invasive foam sclerotherapy-assisted ligation versus surgical flush ligation for incompetent sapheno-popliteal junction treatment. Phlebology. 2019 Oct;34(9):604-610.
3. Monahan TS, Belek K, Sarkar R. Results of radiofrequency ablation of the small saphenous vein in the supine position. Vasc Endovascular Surg. 2012 Jan;46(1):40-4.

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## Domain 3; Statement 3

### IDENTIFIED REFERENCES

1. Whiteley MS. Current Best Practice in the Management of Varicose Veins. *Clin Cosmet Investig Dermatol*. 2022 Apr 6;15:567-583.
2. Giannopoulos S, Rodriguez L, Chau M, et al. A Systematic Review About Outcomes of Percutaneous Treatment Modalities for Pathologic Saphenous And Perforating Veins. *J Vasc Surg Venous Lymphat Disord*. 2022 Mar 29:S2213-333X(22)00167-6.
3. Benfor B, Peden EK. A systematic review of management of superficial venous reflux in the setting of deep venous obstruction. *J Vasc Surg Venous Lymphat Disord*. 2022 Jan 20:S2213-333X(22)00003-8.
4. Kheirleisid EAH, Crowe G, Sehgal R, et al. Systematic review and meta-analysis of randomized controlled trials evaluating long-term outcomes of endovenous management of lower extremity varicose veins. *J Vasc Surg Venous Lymphat Disord*. 2018 Mar;6(2):256-270.
5. Paravastu SC, Horne M, Dodd PD. Endovenous ablation therapy (laser or radiofrequency) or foam sclerotherapy versus conventional surgical repair for short saphenous varicose veins. *Cochrane Database Syst Rev*. 2016 Nov 29;11(11):CD010878).
6. Boersma D, Kornmann VN, van Eekeren RR, et al. Treatment Modalities for Small Saphenous Vein Insufficiency: Systematic Review and Meta-analysis. *J Endovasc Ther*. 2016 Feb;23(1):199-211.
7. Joh JH, Kim WS, Jung IM, et al. Consensus for the Treatment of Varicose Vein with Radiofrequency Ablation. *Vasc Specialist Int*. 2014 Dec;30(4):105-12.
8. Endovascular Thermal Ablation Technologies for Treatment of Varicose Veins: A Review of Clinical Effectiveness, Safety, Cost-Effectiveness and Guidelines – An Update [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2014 Aug 19. PMID: 25473714.
9. Uhl JF, Gillot C. Anatomy and embryology of the small saphenous vein: nerve relationships and implications for treatment. *Phlebology*. 2013 Feb;28(1):4-15.

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### TEXT FOR INCLUSION IN THE DOCUMENT

(300 words, not counting the references)

DOMAIN 3, Statement 3: **“surgical & thermal tumescent techniques for SSV reflux treatment ”**

The small saphenous vein incompetence accounts for around 15% of varicose veins cases.

Its treatment requires proper hemodynamic and anatomic knowledge, considering also its proximity with neural structures.

**[Uhl JF, Gillot C. Anatomy and embryology of the small saphenous vein: nerve relationships and implications for treatment. Phlebology. 2013 Feb;28(1):4-15].**

Last Cochrane revision on the topic reported a better recurrence rate following endovenous laser ablation rather than traditional surgery, while uncertain evidence was found in the comparison between ultrasound guided foam sclerotherapy and surgery.

**\*[Boersma D, Kornmann VN, van Eekeren RR, et al. Treatment Modalities for Small Saphenous Vein Insufficiency: Systematic Review and Meta-analysis. J Endovasc Ther. 2016 Feb;23(1):199-211]**

Endovenous thermal ablation by both laser and radiofrequency showed potential usefulness also in redo cases, with no impact of age, gender, CEAP class, laterality, device, body mass index, or vein diameter on the final outcome.

**[Kibrik P, Chait J, Arustamyan M, et al. Success rate and factors predictive of redo endothermal ablation of small saphenous veins. J Vasc Surg Venous Lymphat Disord. 2022 Mar;10(2):395-401].**

Preliminary data demonstrated safety and efficacy of a hybrid technique combining intra-operative intraluminal foam sclerotherapy injection and surgery.

**[Gianesini S, Menegatti E, Sibilla MG, et al. Mini-invasive foam sclerotherapy-assisted ligation versus surgical flush ligation for incompetent sapheno-popliteal junction treatment. Phlebology. 2019 Oct;34(9):604-610].**

Further investigations and properly designed comparative trials are needed in the small saphenous vein incompetence field. Such studies should include longer than 5 years follow up, together with multiple outcome measures, among which pain, quality of life and cost effectiveness.

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## Domain 3; Statement 3

### STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 3, Statement 3

Preliminary data suggest endovenous thermal ablation of the small saphenous vein leads to a smaller percentage of reflux reappearance compared to surgical ablation.

### SELECTED REFERENCES

- Uhl JF, Gillot C. Anatomy and embryology of the small saphenous vein: nerve relationships and implications for treatment. *Phlebology*. 2013 Feb;28(1):4-15
- \*Boersma D, Kornmann VN, van Eekeren RR, et al. Treatment Modalities for Small Saphenous Vein Insufficiency: Systematic Review and Meta-analysis. *J Endovasc Ther*. 2016 Feb;23(1):199-211
- Kibrik P, Chait J, Arustamyan M, et al. Success rate and factors predictive of redo endothermal ablation of small saphenous veins. *J Vasc Surg Venous Lymphat Disord*. 2022 Mar;10(2):395-401
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### IDENTIFIED LITERATURE BIAS

Lack of homogeneity in anatomical and hemodynamic small saphenous vein characteristics

### SUGGESTED NEXT LINES OF RESEARCH

Longer than 5 y f up comparative trials involving homogeneous population