

RMHP Saphenous Vein Stripping

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MCG Health
Ambulatory
Care
27th Edition

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Clinical Indications for Procedure

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For members with **RMHP Medicare (CareAdvantage or DSNP Dual Special Needs Plan)** coverage, the request will be pended. The reviewer will apply the Medicare Local Coverage Determination L34924 and Article A55229 guidance. The requester will be notified of the decision per RMHP protocol. See References.

- For members with **PRIME (Medicaid), CHP+ or Individual and Family Plan (IFP) Commercial** coverage, saphenous vein stripping may be indicated when **ALL** of the following are present⁽¹⁾⁽²⁾ :
 - Incompetence of saphenous vein ^[A] documented by duplex ultrasound or other imaging test with valve closure time of greater than 500 msec⁽⁴⁾⁽⁵⁾⁽⁶⁾
 - Saphenous venous insufficiency symptoms causing functional impairment, including **1 or more** of the following⁽³⁾⁽⁷⁾⁽⁸⁾:
 - Bleeding or ruptured superficial varicose veins
 - Leg edema
 - Leg fatigue
 - Leg pain
 - Persistent or recurrent superficial thrombophlebitis
 - Persistent or recurrent venous stasis ulcer
 - Skin changes (eg, lipodermatosclerosis, hemosiderosis)
 - No clinically significant lower extremity arterial disease
 - No deep venous thrombosis on duplex ultrasound or other imaging test
 - Radiofrequency or laser ablation contraindicated or not available⁽⁵⁾⁽⁹⁾⁽¹⁰⁾

Alternatives to Procedure

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- Alternatives include(11)(5)(6)(9)(8):
 - Compression stockings.(12) See [Graduated Compression Stockings](#) AC for further information.
 - Laser saphenous vein ablation. See [Saphenous Vein Ablation, Laser](#) AC for further information.
 - Radiofrequency saphenous vein ablation. See [Saphenous Vein Ablation, Radiofrequency](#) AC for further information.
 - Saphenous vein ablation with adhesive injection. See [Saphenous Vein Ablation, Adhesive Injection](#) AC for further information.
 - Sclerotherapy. See [Sclerotherapy, Leg Veins](#) AC for further information.
 - Stab phlebectomy. See [Stab Phlebectomy](#) AC for further information.

Evidence Summary

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Background

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Saphenous vein stripping is a surgical procedure used to treat symptomatic saphenous vein insufficiency. The vein stripper is usually surgically inserted through the saphenous vein at the level of the groin, and the saphenous vein is then removed by pulling the stripper. Attached perforator veins are avulsed during the procedure. Saphenous nerve damage occurs in approximately 20% to 40% of cases when the vein is stripped to the ankle, though this complication can be reduced to 7% if there is limited stripping below the knee. In comparison, for endovenous laser or radiofrequency ablation, a groin incision is not required because the radiofrequency catheter or laser fiber is introduced into the saphenous vein percutaneously.(11)(13)(14) (EG 2)

Criteria

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For saphenous vein incompetence, A specialty society practice guideline states that a cutoff value of 500 msec confirms the diagnosis of saphenofemoral incompetence.(9) (EG 2) Long-term results from randomized trials have demonstrated similar efficacy of saphenous vein stripping and endovenous laser ablation in the treatment of great saphenous vein incompetence, but saphenous vein stripping has been found to be superior to endovenous laser ablation and ultrasound-guided foam sclerotherapy with regard to same-site clinical recurrence and saphenofemoral refluxes at 5 years of follow-up. Relief of venous symptoms and quality of life are similar between the 3 groups up to 5 years after treatment.(15)(16)(17) (EG 1) A randomized controlled trial comparing ultrasound-guided foam sclerotherapy vs standard surgery (involving saphenous vein stripping) in 155 patients with varicose veins found that, at 3-year and 5-year follow-up, treatment efficacy was equal in the 2 groups, although patient-reported quality of life was better in the surgical group.(18) (EG 1) A randomized multicenter trial involving 798 patients with primary symptomatic varicose veins and saphenous vein incompetence found that patients who underwent foam sclerotherapy had slightly worse disease-specific quality-of-life scores at 6 months as compared with those who underwent proximal ligation and stripping; foam sclerotherapy also resulted in less successful ablation of the great saphenous vein as compared with either surgery or laser ablation (55% vs 84% vs 83%, respectively).(19) (EG 1) At 6 months, ablation rates were equivalent for surgery and endovenous laser ablation, and both procedures were found to be more effective than foam sclerotherapy.(20) (EG 1) At 5-year follow-up, disease-specific quality-of-life (Aberdeen Varicose Vein Questionnaire) scores were improved from baseline in all treatment groups; both laser ablation and surgical ligation and stripping were associated with improved scores compared with foam sclerotherapy.(21) (EG 1) A randomized trial of 100 patients with great saphenous vein incompetence found that there was no significant difference in quality-of-life scores and patient satisfaction at 5-year follow-up between conventional high ligation and stripping and endovenous laser ablation plus high

ligation; similar recurrence rates were found on clinical examination and duplex ultrasound.(22) (EG 1) A randomized trial of 280 patients with symptomatic varicose veins secondary to saphenous vein reflux comparing endovenous laser ablation with surgical ligation found, at 5-year follow-up, that laser ablation was associated with a lower clinical recurrence rate (defined as new varicose veins greater than 3 mm in diameter that were not evident before 12 weeks post procedure) and lower venous clinical severity scores compared with surgery.(23) (EG 1) A randomized trial of 153 patients with superficial venous reflux found that surgery improved quality of life when compared with therapy with compression stockings alone.(24) (EG 1) A systematic review and meta-analysis of 49 studies evaluating treatment of small saphenous vein incompetence, 9 of which were studies of conventional surgery, found that the pooled anatomic success rate was lowest for conventional surgery, at 58.0%, as compared with 98.5% for endovenous laser ablation, 97.1% for radiofrequency ablation, and 63.6% for ultrasound-guided foam sclerotherapy. The authors concluded that endovenous thermal ablation should be preferred over surgery or foam sclerotherapy for the treatment of small saphenous vein incompetence.(25) (EG 1) A review article noted that while compression therapy and great saphenous vein surgery had similar efficacy in promoting ulcer healing, surgical intervention was more effective in preventing ulcer recurrence.(26) (EG 2) A consensus statement indicates that while invasive therapy, compression therapy, and pharmacologic treatment may all offer symptomatic improvement, only invasive treatment has the potential to provide functional improvement.(27) (EG 2)

Alternatives

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Compression therapy is sometimes used for treatment of symptomatic venous insufficiency, but patient adherence is the major factor causing failure of compression therapy. Reported rates of nonadherence have ranged from 12% to 60%, even under clinical supervision in venous ulcer clinics.(28)(29) (EG 1) Evidence-based clinical guidelines state that patients with confirmed varicose veins and truncal reflux should first be offered endothermal ablation (radiofrequency or laser), ultrasound-guided foam sclerotherapy, or surgery prior to resorting to compression stockings for therapy.(3)(5)(9) (EG 2)

Policy History

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History Summary: RMHP uses the current edition MCG guideline for all non-Medicare plans. Medicare plans use the LCD/LCA. Annual review 10/31/2023 with upgrade to MCG 27th edition.

References

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The Centers for Medicare & Medicaid Services Local Coverage Determination (LCD) L34924 Treatment of Chronic Venous Insufficiency of the Lower Extremities, [Original Effective Date](#) For services performed on or after 10/01/2015, [Revision Effective Date](#) For services performed on or after 12/27/2020. Reviewed 10/31/2023.

The Centers for Medicare & Medicaid Services Local Coverage Article Title Billing and Coding: Treatment of Chronic Venous Insufficiency of the Lower Extremities, Article ID A55229, Original Effective Date 8/11/2016, Revision Effective Date 3/11/2021, Reviewed 10/31/2023.

References

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1. Eberhardt RT, Raffetto JD. Chronic venous insufficiency. *Circulation* 2014;130(4):333-346. DOI: 10.1161/CIRCULATIONAHA.113.006898. [[Context Link 1](#)]
2. De Maeseneer MG, et al. Editor's Choice - European Society for Vascular Surgery (ESVS) 2022 clinical practice guidelines on the management of chronic venous disease of the lower limbs. *European Journal of Vascular and Endovascular Surgery* 2022;63(2):184-267. DOI: 10.1016/j.ejvs.2021.12.024. [[Context Link 1](#)]

3. Brown KR, Rossi PJ. Superficial venous disease. *Surgical Clinics of North America* 2013;93(4):963-982, ix-x. DOI: 10.1016/j.suc.2013.04.007. [Context Link [1](#)]
4. Varicose Veins in the Legs. NICE Quality Standards QS67 [Internet] National Institute for Health and Care Excellence. 2014 Aug Accessed at: <https://www.nice.org.uk/guidance/>. [accessed 2022 Oct 24] [Context Link [1](#), [2](#), [3](#), [4](#)]
5. Nicolaidis A, et al. Management of chronic venous disorders of the lower limbs. Guidelines according to scientific evidence. Part II. *International Angiology* 2020;39(3):175-240. DOI: 10.23736/S0392-9590.20.04388-6. [Context Link [1](#), [2](#)]
6. Gohel MS. Varicose veins. In: Loftus I, Hinchiffe RJ, editors. *Vascular and Endovascular Surgery: A Companion to Specialist Surgical Practice*. 6th ed. Elsevier; 2019:266-284. [Context Link [1](#)]
7. Masuda E, et al. The 2020 appropriate use criteria for chronic lower extremity venous disease of the American Venous Forum, the Society for Vascular Surgery, the American Vein and Lymphatic Society, and the Society of Interventional Radiology. *Journal of Vascular Surgery. Venous and Lymphatic Disorders* 2020;8(4):505-525.e4. DOI: 10.1016/j.jvsv.2020.02.001. [Context Link [1](#), [2](#)]
8. Gloviczki P, et al. The 2022 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 I. Duplex Scanning and Treatment of superficial truncal reflux: endorsed by the Society for Vascular Medicine and the International Union of Phlebology. *Journal of Vascular Surgery. Venous and Lymphatic Disorders* 2022;Online. DOI: 10.1016/j.jvsv.2022.09.004. [Context Link [1](#), [2](#), [3](#), [4](#)]
9. Gloviczki P, Gloviczki ML. Guidelines for the management of varicose veins. *Phlebology* 2012;27 Suppl 1:2-9. DOI: 10.1258/phleb.2012.012S28. [Context Link [1](#)]
10. Palfreyman SJ, Michaels JA. A systematic review of compression hosiery for uncomplicated varicose veins. *Phlebology* 2009;24 Suppl 1:13-33. DOI: 10.1258/phleb.2009.09s003. [Context Link [1](#)]
11. Lo YF, Yang CH. Stripping and ligation of the saphenous vein. *Seminars in Cutaneous Medicine and Surgery* 2005;24(4):200-8. DOI: 10.1016/j.sder.2005.10.004. [Context Link [1](#)]
12. Iafrazi MD. Varicose veins: surgical treatment. In: Sidawy AN, Perler BA, editors. *Rutherford's Vascular Surgery and Endovascular Therapy*. 10th ed. Elsevier; 2023:2031-2048.e2. [Context Link [1](#)]
13. Gauw SA, Lawson JA, van Vlijmen-van Keulen CJ, Pronk P, Gaastra MT, Mooij MC. Five-year follow-up of a randomized, controlled trial comparing saphenofemoral ligation and stripping of the great saphenous vein with endovenous laser ablation (980 nm) using local tumescent anesthesia. *Journal of Vascular Surgery* 2016;63(2):420-428. DOI: 10.1016/j.jvs.2015.08.084. [Context Link [1](#)]
14. Rass K, Frings N, Glowacki P, Graber S, Tilgen W, Vogt T. 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). *European Journal of Vascular and Endovascular Surgery* 2015;50(5):648-656. DOI: 10.1016/j.ejvs.2015.07.020. [Context Link [1](#)]
15. Vahaaho S, Halmesmaki K, Alback A, Saarinen E, Venermo M. Five-year follow-up of a randomized clinical trial comparing open surgery, foam sclerotherapy and endovenous laser ablation for great saphenous varicose veins. *British Journal of Surgery* 2018;105(6):686-691. DOI: 10.1002/bjs.10757. [Context Link [1](#)]
16. Kalodiki E, Lattimer CR, Azzam M, Shawish E, Bountouroglou D, Geroulakos G. Long-term results of a randomized controlled trial on ultrasound-guided foam sclerotherapy combined with saphenofemoral ligation vs standard surgery for varicose veins. *Journal of Vascular Surgery* 2012;55(2):451-457. DOI: 10.1016/j.jvs.2011.08.040. [Context Link [1](#)]
17. Brittenden J, et al. A randomized trial comparing treatments for varicose veins. *New England Journal of Medicine* 2014;371(13):1218-1227. DOI: 10.1056/NEJMoa1400781. [Context Link [1](#)]
18. Brittenden J, et al. Clinical effectiveness and cost-effectiveness of foam sclerotherapy, endovenous laser ablation and surgery for varicose veins: results from the Comparison of LAser, Surgery and foam Sclerotherapy (CLASS) randomised controlled trial. *Health Technology Assessment* 2015;19(27):1-342. DOI: 10.3310/hta19270. [Context Link [1](#)]

19. Brittenden J, et al. Five-year outcomes of a randomized trial of treatments for varicose veins. *New England Journal of Medicine* 2019;381(10):912-922. DOI: 10.1056/NEJMoa1805186. [[Context Link 1](#)]
20. Kalteis M, Adelsgruber P, Messie-Werndl S, Gangl O, Berger I. Five-year results of a randomized controlled trial comparing high ligation combined with endovenous laser ablation and stripping of the great saphenous vein. *Dermatologic Surgery* 2015;41(5):579-586. DOI: 10.1097/DSS.0000000000000369. [[Context Link 1](#)]
21. Wallace T, et al. Long-term outcomes of endovenous laser ablation and conventional surgery for great saphenous varicose veins. *British Journal of Surgery* 2018;105(13):1759-1767. DOI: 10.1002/bjs.10961. [[Context Link 1](#)]
22. Sell H, et al. Compression therapy versus surgery in the treatment of patients with varicose veins: a RCT. *European Journal of Vascular and Endovascular Surgery* 2014;47(6):670-677. DOI: 10.1016/j.ejvs.2014.02.015. [[Context Link 1](#)]
23. Boersma D, et al. Treatment modalities for small saphenous vein insufficiency: systematic review and meta-analysis. *Journal of Endovascular Therapy* 2016;23(1):199-211. DOI: 10.1177/1526602815616375. [[Context Link 1](#)]
24. Mosti G. Compression and venous surgery for venous leg ulcers. *Clinics in Plastic Surgery* 2012;39(3):269-280. DOI: 10.1016/j.cps.2012.04.004. [[Context Link 1](#)]
25. Stucker M, et al. Consensus statement on the symptom-based treatment of chronic venous diseases. *Journal of the German Society of Dermatology* 2016;14(6):575-583. DOI: 10.1111/ddg.13006. [[Context Link 1](#)]
26. Bar L, Brandis S, Marks D. Improving Adherence to Wearing Compression Stockings for Chronic Venous Insufficiency and Venous Leg Ulcers: A Scoping Review. *Patient Preference and Adherence* 2021;15:2085-2102. DOI: 10.2147/PPA.S323766. [[Context Link 1](#)]
27. Hamdan A. Management of varicose veins and venous insufficiency. *Journal of the American Medical Association* 2012;308(24):2612-2621. DOI: 10.1001/jama.2012.111352. [[Context Link 1](#)]

Footnotes

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[A] Vessels amenable to stripping include the greater saphenous vein, anterior and posterior accessory saphenous veins, and small saphenous vein.⁽³⁾ [[A in Context Link 1](#)]

Codes

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