

## Clinical Policy: Sclerotherapy and Chemical Endovenous Ablation for Varicose Veins and Other Symptomatic Venous Disorders

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[Coding Implications](#)[Revision Log](#)

### Description

Sclerotherapy is a minimally invasive procedure to diminish abnormally dilated and symptomatic veins.<sup>1</sup> In this procedure, liquid or foam irritants or glue are injected into unwanted varicose veins causing their eventual reduction.<sup>1-2</sup> This policy describes the medical necessity requirements for sclerotherapy and endovenous ablation with chemical adhesives.

### Policy/Criteria

- I. It is the policy of Pennsylvania Health and Wellness<sup>®</sup> (PHW) that sclerotherapy using liquid or foam irritants (including, but not limited to, Varithena<sup>®</sup>) is **medically necessary** when meeting all the following:
  - A. Documentation of symptomatic venous disorder of CEAP (Clinical Class, Etiology, Anatomy, Pathology) class two (C2s) or greater (see table 1 for CEAP classification);
  - B. One of the following:
    1. Perforating vein located beneath an open venous ulcer, and both of the following:
      - a. Reflux  $\geq$  500 milliseconds;
      - b. Diameter  $\geq$  3.5 mm;
    2. Perforating vein located beneath a healed venous ulcer, and all of the following:
      - a. Reflux  $\geq$  500 milliseconds;
      - b. Diameter  $\geq$  3.5 mm;
      - c. Truncal reflux has already been treated;
    3. Both of the following:
      - a. One of the following:
        - i. Axial reflux  $\geq$  500 milliseconds and vein diameter  $\geq$  3 mm in the great saphenous vein or accessory veins;
        - ii. Reflux  $\geq$  500 milliseconds and vein diameter  $\geq$  3 mm in the small saphenous vein;
      - b. Complications attributed to venous reflux, including any of the following:
        - i. Ulceration;
        - ii. Hemorrhage or recurrent bleeding episodes from a ruptured varicosity or telangiectasia;
        - iii. Superficial thrombophlebitis;
        - iv. Severe and persistent pain and/or swelling that interferes with the quality of daily life and persists despite six weeks of conservative treatment, including any of the following, unless contraindicated (i.e., suspected or proven peripheral arterial disease, severe peripheral neuropathy, etc.):
          - a) Compression therapy;
          - b) Ambulation;

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- c) Limb elevation;
- d) Avoiding prolonged sitting and standing;
- 4. Documentation of Revised Venous Clinical Severity Score (r-VCSS)  $\geq 6$ ;
- C. None of the following contraindications:
  1. Previous administration of sclerotherapy agent in the same vein less than six weeks prior;
  2. Allergy to sclerotherapy agent;
  3. Pregnancy or within three months after delivery;
  4. Acute febrile illness;
  5. Local or general infection;
  6. Severe distal arterial occlusive disease (ankle-brachial index 0.4 or less);
  7. Critical limb ischemia, arterial ulcer(s), or gangrene;
  8. Obliteration of deep venous system;
  9. Acute deep venous thrombophlebitis or acute superficial thrombophlebitis;
  10. Prolonged immobility;
  11. Tortuosity of the great saphenous vein severe enough to impede catheter placement;
  12. Klippel-Trenaunay Syndrome or other congenital venous abnormalities;
  13. Potential requirement of the great or small saphenous vein for an arterial or coronary bypass;
- D. If cyanoacrylate adhesive (e.g. VenaSeal™) is requested, treatment is for one of the following:
  1. The small saphenous vein only;
  2. The great saphenous vein in a member/enrollee who has a documented lidocaine allergy.

**Note:** Photographic documentation and/or ultrasound images may be requested to support written documentation.

Table 1. CEAP classification system<sup>3-4</sup>

C (Clinical Manifestations), E (Etiology), A (Anatomic Distribution), P (Pathophysiology)	
Class	Description
C0	No visible or palpable signs of venous disease
C1	Telangiectasias or reticular veins
C2	Varicose veins
C2r	Recurrent varicose veins
C3	Edema
C4	Changes in skin and subcutaneous tissue secondary to chronic venous disease
C4a	Pigmentation or eczema
C4b	Lipodermatosclerosis or atrophie blanche
C4c	Corona phlebectatica
C5	Healed venous ulcer
C6	Active venous ulcer
C6r	Recurrent active venous ulcer
s	Symptomatic (may be assigned to classes above)
a	Asymptomatic (may be assigned to classes above)

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- II. It is the policy of PHW that there is insufficient evidence in the published peer-reviewed literature to support the use of sclerotherapy for any of the following indications:
- A. Asymptomatic varicose veins: superficial reticular veins and/or telangiectasias;
  - B. For the treatment of all other conditions than those specified above.

#### Background

Varicose veins are enlarged, twisted blood vessels often found in the lower extremities. Although commonly asymptomatic, they can cause significant pain and discomfort and can negatively impact quality of life.<sup>1,5-7</sup> Varicose veins are considered a sign of chronic venous insufficiency, a condition characterized by dysfunction of the valves in veins with venous reflux, which can cause increased local venous blood pressure and blood pooling in affected areas.<sup>5</sup> Additionally, varicose veins can uncommonly be associated with superficial thrombophlebitis, bleeding, and ulceration. The pathophysiology that leads to varicosities include inadequate muscle pump function, incompetent venous valves (reflux), venous thrombosis, and nonthrombotic venous obstruction.<sup>8</sup>

#### *Sclerotherapy*

According to clinical practice guidelines by the Society for Vascular Surgery and the American Venous Forum, sclerotherapy is an acceptable treatment option for varicose veins.<sup>2</sup> Sclerotherapy is a minimally invasive and cost-effective procedure used to treat varicose veins.<sup>9-11</sup> To perform this procedure, chemical irritants are injected into the unwanted vein to close varicosities.<sup>1-2,8,10</sup> Destruction of venous endothelial cells and the formation of a fibrotic obstruction facilitate the venous closure due to injection of sclerosing agents.<sup>2,12</sup> Liquid and foam sclerotherapy are the two predominant modalities for the introduction of sclerosing agents.<sup>2,7</sup> Categories of sclerosing agents include osmotic, alcohol, and detergent agents.<sup>2</sup>

Systematic reviews of randomized controlled trials of sclerotherapy have found that choice of sclerosing agents, dose, formulation (foam versus liquid), among other factors lack a significant effect on the efficacy of sclerotherapy for varicose veins.<sup>6,10</sup> Trials using standardized sclerosant doses and clearly defined outcomes are needed to obtain higher quality evidence.<sup>6</sup>

There is no consensus in the literature regarding the optimal number of sclerotherapy treatments required to reduce the symptoms associated with varicose veins. Treatment of symptomatic recurrent varicose veins should be performed after careful evaluation of the patient with duplex scanning to assess the etiology, source, type, and extent of recurrent varicose veins.<sup>2</sup> Unnecessary retreatment of an effectively sclerosed vein should not be performed since retreatment of any single area should be delayed for six to eight weeks to allow the treated veins to completely heal.<sup>5</sup>

Clinical practice guidelines updated in 2022 by the Society for Vascular Surgery, the American Venous Forum, and the American Vein and Lymphatic Society recommend that evaluation of venous reflux performed with duplex ultrasound scanning and all of the following<sup>13</sup>:

1. Performed with the member standing whenever possible (if member cannot stand then a sitting of reverse Trendelenburg position can be used);
2. Use of either a Valsalva maneuver or distal augmentation when assessing the common femoral vein and saphenofemoral junction;

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3. Use of distal augmentation with either manual compression or cuff deflation when evaluating more distal segments;
4. Performed in an accredited lab by a credentialed ultrasonographer;
5. Ultrasound scan interpreted by a physician trained in venous duplex ultrasound evaluation.

#### *Endovenous ablation with cyanoacrylate*

Cyanoacrylate adhesive closure (CAC) uses cyanoacrylate glue (ie VenaSeal) to seal the vein from the saphenofemoral junction without the use of tumescent anesthesia.<sup>14-15</sup> This technique has been shown to be safe and effective and prevents the potential complication of nerve injury.<sup>12,14-15</sup> According to a Hayes review of nine studies, there is an overall low-quality body of evidence regarding the use of VenaSeal due to overall study limitations, lack of follow up on the effectiveness past one year, small amount of studies comparing cyanoacrylate with other alternatives, and “limited numbers of studies reporting the same patient-centered outcomes.”<sup>12</sup>

#### **Coding Implications**

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2023, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

#### **Codes that support medical necessity**

CPT® Codes	Description
36465	Injection of non-compounded foam sclerosant with ultrasound compression maneuvers to guide dispersion of the injectate, inclusive of all imaging guidance and monitoring; single incompetent extremity truncal vein (eg, great saphenous vein, accessory saphenous vein)
36466	Injection of non-compounded foam sclerosant with ultrasound compression maneuvers to guide dispersion of the injectate, inclusive of all imaging guidance and monitoring; multiple incompetent truncal veins (eg, great saphenous vein, accessory saphenous vein), same leg
36470	Injection of sclerosant; single incompetent vein (other than telangiectasia)
36471	Injection of sclerosant; multiple incompetent veins (other than telangiectasia), same leg
36482	Endovenous ablation therapy of incompetent vein, extremity, by transcatheter delivery of a chemical adhesive (eg, cyanoacrylate) remote from the access site, inclusive of all imaging guidance and monitoring, percutaneous; first vein treated
36483	Endovenous ablation therapy of incompetent vein, extremity, by transcatheter delivery of a chemical adhesive (eg, cyanoacrylate) remote from the access site, inclusive of all imaging guidance and monitoring, percutaneous; subsequent vein(s) treated in a single extremity, each through separate access sites (List separately in addition to code for primary procedure)

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Reviews, Revisions, and Approvals	Revision Date	Approval Date
Policy Developed	10/17	
References reviewed and updated. CPT codes updated.	05/18	11/18
Updated description to include mention of glue irritants. Added contraindication for previous administration of sclerotherapy and syndrome/congenital abnormalities. In “I.” added stipulation that liquid or foam agents to be used in sclerotherapy. Added statement that cyanoacrylate adhesive is investigational with supporting background information. In I.A.2.d. removed failure of $\geq 3$ weeks prescription dose analgesic medications for pain and added failure of $\geq 3$ months of conservative treatment including compression therapy unless contraindicated.	10/19	1/10/2020
Added VenaSeal as an example of cyanoacrylate in the investigational statement in section III. Added codes for cyanoacrylate to a new table of codes that do not support medical necessity. Added perforating veins under a current or healed ulcer as an indication; Edited previous criteria for saphenous veins to apply to saphenous veins or perforating veins. Specialist review. Changed requirement for junctional reflux of greater saphenous veins to 3 mm, from 2.5 mm. Background updated with no impact on criteria. References reviewed and updated. Revised policy statement adding Varithena as an example of a foam irritant. In I.A.2., added tributary and accessory vein treatment as indications when meeting the established criteria.	2/18/2021	
Annual review. “Experimental/investigational” verbiage replaced in policy statement with descriptive language. Renamed policy from “Sclerotherapy for Varicose Veins” to “Sclerotherapy and chemical endovenous ablation for Varicose Veins.” Clarified in III to cyanoacrylate is used in endovenous ablation and not sclerotherapy. Updated background accordingly. Changed “review date” in policy header to “date of last revision,” and “date” in the revision log header to “revision date.” Added I.C, that if cyanoacrylate adhesive (VenaSeal) is requested, it is for the small saphenous vein only. Removed section III stating that cyanoacrylate adhesive is not medically necessary. Removed table of codes that do not support medical necessity and added codes 36482 and 36483 to table of codes that support medical necessity. References reviewed and updated. Description and background updated with no impact on criteria. Specialist reviewed.	6/24/2022	
Annual review. Policy title updated to include other symptomatic venous disorders. Minor rewording in policy description with no impact on criteria. Added Criteria I.A. for documentation of symptomatic CEAP Class 2 or greater. Added Criteria I.B. regarding ultrasound documentation requirements. Updated Criteria C. to reflect current guidelines. Removed recent deep vein thrombosis from Criteria I.D.9. Changed “Inability to ambulate” to “prolonged immobility” in I.D.10.	04/23	

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Reviews, Revisions, and Approvals	Revision Date	Approval Date
<p>Added I.D.13. regarding potential requirement of the great or small saphenous vein for an arterial or coronary bypass. Updated E.2. to include the great saphenous vein in a member/enrollee with a documented lidocaine allergy. Added note at the end of section I. regarding potential requests for photographic documentation and/or ultrasound images to support written documentation. Added table 1., CEAP classification system. Background updated to include 2022 clinical practice guidelines by the Society for Vascular Surgery, the American Venous Form, and the American Vein and Lymphatic Society regarding best practice recommendations for performing and interpreting duplex ultrasound scanning for venous reflux. References reviewed and updated. Reviewed by internal specialist.</p>		
<p>Removed criterion I.B. regarding positioning during ultrasound.</p>	<p>04/2024</p>	

References

1. Scovell S. Injection sclerotherapy techniques for the treatment of telangiectasias, reticular veins, and small varicose veins. UpToDate. [www.uptodate.com](http://www.uptodate.com). Published January 14, 2022. Accessed March 02, 2023.
2. Kabnick LS, Scovell S. Overview of lower extremity chronic venous disease. UpToDate. [www.uptodate.com](http://www.uptodate.com). Published January 23, 2023. Accessed March 02, 2023.
3. Lurie F, Passman M, Meisner M, et al. The 2020 update of the CEAP classification system and reporting standards [published correction appears in J Vasc Surg Venous Lymphat Disord. 2021 Jan;9(1):288]. *J Vasc Surg Venous Lymphat Disord*. 2020;8(3):342 to 352. doi:10.1016/j.jvsv.2019.12.075
4. Moneta G. Classification of lower extremity chronic venous disorders. UpToDate. [www.uptodate.com](http://www.uptodate.com). Published June 11, 2021. Accessed April 19, 2023.
5. Weiss MA, Hsu JT, Neuhaus I, Sadick NS, Duffy DM. Consensus for sclerotherapy. *Dermatol Surg*. 2014;40(12):1309 to 1318. doi:10.1097/DSS.0000000000000225
6. Kaygin MA, Halici U. Evaluation of liquid or foam sclerotherapy in small varicose veins (ceap c1) with venous clinical severity score. *Rev Assoc Med Bras (1992)*. 2018;64(12):1117 to 1121. doi:10.1590/1806-9282.64.12.1117
7. Koramaz İ, El Kılıç H, Gökalp F, et al. Ablation of the great saphenous vein with nontumescent n-butyl cyanoacrylate versus endovenous laser therapy. *J Vasc Surg Venous Lymphat Disord*. 2017;5(2):210 to 215. doi:10.1016/j.jvsv.2016.09.007
8. Lim CS, Davies AH. Graduated compression stockings. *CMAJ*. 2014;186(10):E391 to E398. doi:10.1503/cmaj.131281
9. Behraves S, Yakes W, Gupta N, et al. Venous malformations: clinical diagnosis and treatment. *Cardiovasc Diagn Ther*. 2016;6(6):557 to 569. doi:10.21037/cdt.2016.11.10
10. de Ávila Oliveira R, Riera R, Vasconcelos V, Baptista-Silva JC. Injection sclerotherapy for varicose veins. *Cochrane Database Syst Rev*. 2021;12(12):CD001732. Published 2021 Dec 10. doi:10.1002/14651858.CD001732.pub3
11. Worthington-Kirsch RL. Injection sclerotherapy. *Semin Intervent Radiol*. 2005;22(3):209 to 217. doi:10.1055/s-2005-921954

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12. Health Technology Assessment. Cyanoacrylate embolization with the VenaSeal closure system (Medtronic Inc) for the treatment of varicose veins. Hayes. [www.hayesinc.com](http://www.hayesinc.com). Published September 02, 2022. Accessed March 08, 2023.
13. Gloviczki P, Lawrence PF, Wasan SM, 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. *J Vasc Surg Venous Lymphat Disord*. 2023;11(2):231 to 261.e6. doi:10.1016/j.jvsv.2022.09.004
14. Dillavou ED, Kiguchi M. Comparison of methods for endovenous ablation for chronic venous disease. UpToDate. [www.uptodate.com](http://www.uptodate.com). Updated August 31, 2021. Accessed April 11, 2023.
15. Scovell, S. Nonthermal, nontumescent ablation techniques for the treatment of lower extremity superficial venous insufficiency. UpToDate. [www.uptodate.com](http://www.uptodate.com). Updated November 04, 2022. Accessed April 11, 2023.
16. Local coverage article Treatment of chronic venous insufficiency of the lower extremities (L38720). Centers for Medicare and Medicaid Services Web site. <http://www.cms.hhs.gov/mcd/search.asp>. Published December 27, 2020. Accessed March 31, 2023.
17. Armstrong DG, Meyr AJ. Compression therapy for the treatment of chronic venous insufficiency. UpToDate. [www.uptodate.com](http://www.uptodate.com). Updated July 06, 2021. Accessed March 27, 2023.