Treatment of Varicose Veins/Venous Insufficiency
Corporate Medical Policy

Description/Summary

A variety of treatment modalities are available to treat varicose veins/venous insufficiency, including surgery, thermal ablation, sclerotherapy, mechanochemical ablation (MOCA), cyanoacrylate adhesive (CAC), and cryotherapy. The application of each modality is influenced by the severity of the symptoms, type of vein, source of venous reflux, and the use of other (prior or concurrent) treatment.

Saphenous Veins

For individuals who have varicose veins/venous insufficiency and saphenous vein reflux who receive endovenous thermal ablation (radiofrequency or laser), the evidence includes randomized controlled trials (RCTs) and systematic reviews of controlled trials. The relevant outcomes are symptoms, change in disease status, morbid events, quality of life (QOL), and treatment-related morbidity (TRM). There are a number of large RCTs and systematic reviews of RCTs assessing endovenous thermal ablation of the saphenous veins. Comparison with the standard of ligation and stripping at 2- to 5-year follow-up has supported the use of both endovenous laser ablation and radiofrequency ablation (RFA). Evidence has suggested that ligation and stripping lead to more neovascularization, while thermal ablation leads to more recanalization, resulting in similar clinical outcomes for endovenous thermal ablation and surgery. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have varicose veins/venous insufficiency and saphenous vein reflux who receive microfoam sclerotherapy, the evidence includes RCTs. The relevant outcomes are symptoms, change in disease status, morbid events, QOL, and TRM. For physician-compounded sclerotherapy, there is high variability in success rates and some reports of serious adverse events. By comparison, rates of occlusion with the microfoam sclerotherapy (polidocanol 1%) approved by the Food and Drug Administration are similar to those reported for endovenous laser ablation or stripping. Results of a noninferiority trial of physician-compounded sclerotherapy have indicated that once occluded, recurrence rates at two years
are similar to those of ligation and stripping. Together, this evidence indicates that the more consistent occlusion with the microfoam sclerotherapy preparation will lead to recurrence rates similar to ligation and stripping in the longer term. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

Based on the available evidence, clinical input obtained in 2015, and clinical practice guidelines, the use of endovenous RFA, endovenous laser ablation, and microfoam sclerotherapy are considered to improve outcomes when used in the saphenous veins. For treatment of saphenous tributaries at the same time or following treatment of the saphenous vein, stab avulsion, hook phlebectomy, sclerotherapy, or transilluminated powered phlebectomy improve outcomes.

For individuals who have varicose veins/venous insufficiency and saphenous vein reflux who receive MOCA, the evidence includes two RCTs and case series. The relevant outcomes are symptoms, change in disease status, morbid events, QOL, and TRM. MOCA is a combination of liquid sclerotherapy with mechanical abrasion. Potential advantages of this procedure compared with thermal ablation are that MOCA does not require multiple needle sticks with tumescent anesthesia and may result in less pain during the procedure. The evidence on MOCA includes an RCT that compared MOCA to thermal ablation with one year results, an RCT with short-term results that compared MOCA with RFA, and case series with follow-up out to three years. The short-term results of one RCT suggested that intraprocedural pain is slightly lower with MOCA than with RFA. However, the second RCT showed lower occlusion rates than thermal ablation. MOCA has been assessed in relatively few patients and for short durations. Longer follow-up in RCTs with a larger number of patients is needed to evaluate the efficacy and durability of this procedure compared with established procedures. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have varicose veins/venous insufficiency and saphenous vein reflux who receive CAC, the evidence includes two RCTs and a prospective cohort. The relevant outcomes are symptoms, change in disease status, morbid events, QOL, and TRM. Evidence includes a multicenter noninferiority trial with follow-up through 36 months, an RCT with follow-up through 24 months, and a prospective cohort with 30 month follow-up. The short-term efficacy of VenaSeal CAC has been shown to be noninferior to RFA at up to 36 months. At 24 and 36 months the study had greater than 20% loss to follow-up, but loss to follow-up was similar in the two groups at the long-term follow-up and is not expected to influence the comparative results. A second RCT (n=525) with the same active CAC ingredient (N-butyl cyanoacrylate) that is currently available outside of the U.S. found no significant differences in vein closure between CAC and thermal ablation controls at 24-month follow-up. The CAC procedure and return to work were shorter and pain scores were lower compared to thermal ablation, although the subjective pain scores may have been influenced by differing expectations in this study. A prospective cohort reported high closure rates at 30 months. Overall, results indicate that outcomes from CAC are at least as good as thermal ablation techniques, the current standard of care. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have varicose veins/venous insufficiency and saphenous vein reflux who receive cryoablation, the evidence includes RCTs and multicenter series. The relevant outcomes are symptoms, change in disease status, morbid events, QOL,
and TRM. Results from a recent RCT of cryoablalation have indicated that this therapy is inferior to conventional stripping. Studies showing a benefit on health outcomes are needed. The evidence is insufficient to determine the effects of the technology on health outcomes.

**Varicose Tributary Veins**

For individuals who have varicose tributary veins who receive ablation (stab avulsion, sclerotherapy, or phlebectomy) of tributary veins, the evidence includes RCTs and systematic reviews of RCTs. The relevant outcomes are symptoms, change in disease status, morbid events, QOL, and TRM. The literature has shown that sclerotherapy is effective for treating tributary veins following occlusion of the saphenofemoral or saphenopopliteal junction and saphenous veins. No studies have been identified comparing RFA or laser ablation of tributary veins with standard procedures (microphlebectomy and/or sclerotherapy). Transilluminated powered phlebectomy is effective at removing varicosities; outcomes are comparable to available alternatives such as stab avulsion and hook phlebectomy. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

**Perforator Veins**

For individuals who have perforator vein reflux who receive ablation (eg, subfascial endoscopic perforator surgery) of perforator veins, the evidence includes RCTs and systematic reviews of RCTs. The relevant outcomes are symptoms, change in disease status, morbid events, QOL, and TRM. The literature has indicated that the routine ligation or ablation of incompetent perforator veins is not necessary for the treatment of varicose veins/venous insufficiency at the time of superficial vein procedures. However, when combined superficial vein procedures and compression therapy have failed to improve symptoms (ie, ulcers), treatment of perforator vein reflux may be as beneficial as an alternative (eg, deep vein valve replacement). Comparative studies are needed to determine the most effective method of ligating or ablating incompetent perforator veins. Subfascial endoscopic perforator surgery has been shown to be as effective as the Linton procedure with a reduction in adverse events. Although only one case series has been identified showing an improvement in health outcomes, endovenous ablation with specialized laser or radiofrequency probes has been shown to effectively ablate incompetent perforator veins with a potential decrease in morbidity compared with surgical interventions. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

**Policy**

**Coding Information**

Click the links below for attachments, coding tables & instructions.  
[Attachment I - CPT® Code List & Instructions]

When a service may be considered medically necessary/not medically necessary or investigational.

**Great or Small Saphenous Veins**
Treatment of the great or small saphenous veins by surgery (ligation and stripping), endovenous radiofrequency or laser ablation, microfoam sclerotherapy, or cyanoacrylate adhesive may be considered medically necessary for symptomatic varicose veins/venous insufficiency when the following criteria have been met:

There is demonstrated saphenous reflux and CEAP [Clinical, Etiology, Anatomy, Pathophysiology] class C2 or greater; AND documentation of one or more of the following indications:

- Ulceration secondary to venous stasis; OR
- Recurrent superficial thrombophlebitis OR
- Hemorrhage or recurrent bleeding episodes from a ruptured superficial varicosity; OR
- Persistent pain, swelling, itching, burning, or other symptoms are associated with saphenous reflux, AND the symptoms significantly interfere with activities of daily living, AND conservative management including compression therapy for at least 3 months has not improved the symptoms.

Treatment of great or small saphenous veins by surgery, endovenous radiofrequency or laser ablation, microfoam sclerotherapy, or cyanoacrylate adhesive that do not meet the criteria described above is considered cosmetic and therefore a benefit exclusion.

Accessory Saphenous Veins

Treatment of accessory saphenous veins by surgery (ligation and stripping) or endovenous radiofrequency, laser ablation, microfoam sclerotherapy, or cyanoacrylate adhesive may be considered medically necessary for symptomatic varicose veins/venous insufficiency when the following criteria have been met:

Incompetence of the accessory saphenous vein is isolated, OR the great or small saphenous veins had been previously eliminated (at least 3 months); AND

There is demonstrated accessory saphenous reflux; AND

There is documentation of one or more of the following indications:

- Ulceration secondary to venous stasis; OR
- Recurrent superficial thrombophlebitis; OR
- Hemorrhage or recurrent bleeding episodes from a ruptured superficial varicosity; OR
- Persistent pain, swelling, itching, burning, or other symptoms are associated with saphenous reflux, AND the symptoms significantly interfere with activities of daily living, AND conservative management including compression therapy for at least 3 months has not improved the symptoms.

Concurrent treatment of the accessory saphenous veins along with the great or small saphenous veins may be considered medically necessary when criteria is met for each vein and there is documentation of anatomy showing that the accessory saphenous vein discharged directly into the common femoral vein.

Treatment of accessory saphenous veins by surgery, endovenous radiofrequency or laser
ablation, microfoam sclerotherapy, or cyanoacrylate adhesive that do not meet the criteria described above is considered cosmetic and therefore a benefit exclusion.

Symptomatic Varicose Tributaries

The following treatments are considered medically necessary as a component of the treatment of symptomatic varicose tributaries when performed either at the same time or following prior treatment (surgical, radiofrequency or laser) of the saphenous veins (none of these techniques has been shown to be superior to another):

- Stab avulsion
- Hook phlebectomy
- Sclerotherapy
- Transilluminated powered phlebectomy

Treatment of symptomatic varicose tributaries when performed either at the same time or following prior treatment of saphenous veins using any other techniques than noted above is considered investigational.

Perforator Veins

Surgical ligation (including subfascial endoscopic perforator surgery) or endovenous radiofrequency or laser ablation of incompetent perforator veins may be considered medically necessary as a treatment of leg ulcers associated with chronic venous insufficiency when the following conditions have been met:

- There is demonstrated perforator reflux; AND
- The superficial saphenous veins (great, small, or accessory saphenous and symptomatic varicose tributaries) have been previously eliminated; AND
- Ulcers have not resolved following combined superficial vein treatment and compression therapy for at least 3 months; AND
- The venous insufficiency is not secondary to deep venous thromboembolism.

Ligation or ablation of incompetent perforator veins performed concurrently with superficial venous surgery is not medically necessary.

Telangiectasias, and Reticular Veins, and other CEAP Category 1 veins

Treatment of reticular veins, or telangiectasia such as spider veins, angiomata, and hemangiomata is considered cosmetic and therefore a benefit exclusion.

Other Veins

Techniques for conditions not specifically listed above are investigational, including, but not limited to:

- Sclerotherapy techniques, other than microfoam sclerotherapy, of great, small, or accessory saphenous veins
- Sclerotherapy of perforator veins
• Sclerotherapy of isolated tributary veins without prior or concurrent treatment of saphenous veins
• Stab avulsion, hook phlebectomy, or transilluminated powered phlebectomy of perforator, great or small saphenous, or accessory saphenous veins
• Endovenous radiofrequency or laser ablation of tributary veins
• Endovenous cryoablation of any vein
• Mechanoochemical ablation of any vein
• Cyanoacrylate adhesive of any vein

Policy Guidelines

The standard classification of venous disease is the CEAP (Clinical, Etiologic, Anatomic, Pathophysiological) classification system. The following is the Clinical portion of the CEAP.

Clinical Classification

C0 No visible or palpable signs of venous disease
C1 Telangiectasies or reticular veins
C2 Varicose veins
C3 Edema
C4a Pigmentation and eczema
C4b Lipodermatosclerosis and atrophic blanche
C5 Healed venous ulcer
C6 Active venous ulcer
S Symptoms including ache, pain, tightness, skin irritation, heaviness, muscle cramps, as well as other complaints attributable to venous dysfunction
A Asymptomatic

The Etiologic, Anatomic, And Pathophysiological portions of the classifications are online (http://www.veinforum.org/uploadDocs/1/Revised-CEAP-Classification---May-2004.pdf).

It should be noted that the bulk of the literature discussing the role of ultrasound guidance refers to sclerotherapy of the saphenous vein, as opposed to the varicose tributaries. When ultrasound guidance is used to guide sclerotherapy of the varicose tributaries, it would be considered either not medically necessary or incidental to the injection procedure.

There is no specific CPT® code for transilluminated powered phlebectomy. Providers might elect to use CPT® codes describing stab phlebectomy (37765 or 37766) or unlisted vascular surgery procedure (37799).

Mechanochemical ablation should be reported with the unlisted vascular surgery procedure code 37799.

There is no specific CPT® for microfoam sclerotherapy. Providers might elect to use CPT® codes describing sclerotherapy (36468-36471) or the unlisted vascular surgery procedure code 37799. Use of codes 36475-36476 would be inappropriate as the procedure is not ablation therapy.
Reference Resources


Document Precedence

Blue Cross and Blue Shield of Vermont (BCBSVT) Medical Policies are developed to provide clinical guidance and are based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. The applicable group/individual contract and member certificate language, or employer’s benefit plan if an ASO group, determines benefits that are in effect at the time of service. Since medical practices and knowledge are constantly evolving, BCBSVT reserves the right to review and revise its medical policies periodically. To the extent that there may be any conflict between medical policy and contract/employer benefit plan language, the member’s contract/employer benefit plan language takes precedence.

Audit Information

BCBSVT reserves the right to conduct audits on any provider and/or facility to ensure compliance with the guidelines stated in the medical policy. If an audit identifies instances of non-compliance with this medical policy, BCBSVT reserves the right to recoup all non-compliant payments.

Administrative and Contractual Guidance

Benefit Determination Guidance

Prior approval is required and benefits are subject to all terms, limitations and conditions of the subscriber contract.

Incomplete authorization requests may result in a delay of decision pending submission of missing information. To be considered compete, see policy guidelines above.

NEHP/ABNE members may have different benefits for services listed in this policy. To confirm benefits, please contact the customer service department at the member’s health plan.

Federal Employee Program (FEP): Members may have different benefits that apply. For further information please contact FEP customer service or refer to the FEP Service Benefit Plan Brochure. It is important to verify the member’s benefits prior to providing the service to determine if benefits are available or if there is a specific exclusion in the member’s benefit.

Coverage varies according to the member’s group or individual contract. Not all groups are required to follow the Vermont legislative mandates. Member Contract language takes precedence over medical policy when there is a conflict.

If the member receives benefits through an Administrative Services Only (ASO) group, benefits may vary or not apply. To verify benefit information, please refer to the member’s employer benefit plan documents or contact the customer service department. Language in the
employer benefit plan documents takes precedence over medical policy when there is a conflict.

Policy Implementation/Update information

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>03/2014</td>
<td>ICD 10 remediation. Revised /updated standard language (document precedence and audit information sections) added. Code tables reformatted. Hyperlinks created for attachments. ICD diagnosis list hyperlink also created for URL for website.</td>
</tr>
<tr>
<td>03/2015</td>
<td>Local expert input and changes to be c/w BCBSA policy- eliminates prior requirement for treating saphenous vein if no reflux is identified for accessory, tributary and perforators.</td>
</tr>
<tr>
<td>10/2016</td>
<td>Adopted BCBSA MPRM 7.01.124, Updated coding table ICD 10 Section.</td>
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<tr>
<td>10/2017</td>
<td>Policy updated with literature review; references added, CPT Codes 37473, 37474 &amp; 37243 added to coding table Policy statements remain unchanged.</td>
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<tr>
<td>11/2017</td>
<td>Added codes effective 01/01/2018 36465 &amp;36466 to require prior authorization.</td>
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<tr>
<td>07/2018</td>
<td>Policy reviewed, aligned with MPRM 7.01.124 added language. The use of cyanoacrylate adhesive for permanent closure of lower extremity superficial truncal veins, such as the great saphenous vein (GSV), through endovascular embolization with coaptation is considered not medically necessary.</td>
</tr>
<tr>
<td>11/2018</td>
<td>Policy clarified as to the definition of CEAP Category 1 veins. Removed ICD 10-CM table.</td>
</tr>
<tr>
<td>07/2019</td>
<td>Updated to align with MPRM 7.01.124. Use of cyanoacrylate adhesive is now medically necessary under certain conditions. Codes 36482&amp; 36483 added to require prior authorization.</td>
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Eligible providers

Qualified healthcare professionals practicing within the scope of their license(s).

Approved by BCBSVT Medical Directors Date Approved

Joshua Plavin, MD, MPH, MBA
Chief Medical Officer

Kate McIntosh, MD, MBA, FAAP
Senior Medical Director
## Attachment I

**CPT® Code List & Instructions**

<table>
<thead>
<tr>
<th>Code</th>
<th>Number</th>
<th>Description</th>
<th>Policy Instructions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>36465</td>
<td>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)</td>
<td>Prior approval required</td>
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<td></td>
<td>36466</td>
<td>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</td>
<td>Prior approval required</td>
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<tr>
<td></td>
<td>36468</td>
<td>Single or multiple injections of sclerosing solutions, spider veins (telangiectasia); limb or trunk</td>
<td>Prior approval required</td>
</tr>
<tr>
<td></td>
<td>36470</td>
<td>Injection of sclerosing solution; single vein</td>
<td>Prior approval required</td>
</tr>
<tr>
<td></td>
<td>36471</td>
<td>Injection of sclerosing solution; multiple veins, same leg</td>
<td>Prior approval required</td>
</tr>
<tr>
<td></td>
<td>36473</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, mechanochemical; first vein treated</td>
<td>Prior approval required</td>
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<td>36474</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, mechanochemical; subsequent vein(s) treated in a single extremity, each through separate access sites (List separately in addition to code for primary procedure)</td>
<td>Prior approval required</td>
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<td>36475</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, radiofrequency; first vein treated</td>
<td>Prior approval required</td>
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<td>36476</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, radiofrequency; second and subsequent veins treated in a single extremity, each through separate access sites (List separately in addition to code for primary procedure)</td>
<td>Prior approval required</td>
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<tr>
<td>Code</td>
<td>Number</td>
<td>Description</td>
<td>Policy Instructions</td>
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<tr>
<td>CPT</td>
<td>36478</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, laser; first vein treated</td>
<td>Prior approval required</td>
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<td>CPT</td>
<td>36479</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, laser; second and subsequent veins treated in a single extremity, each through separate access sites (List separately in addition to code for primary procedure)</td>
<td>Prior approval required</td>
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<td>CPT</td>
<td>36482</td>
<td>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</td>
<td>Prior approval required</td>
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<tr>
<td>CPT</td>
<td>36483</td>
<td>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)</td>
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<td>CPT</td>
<td>37243</td>
<td>Vascular embolization or occlusion, inclusive of all radiological supervision and interpretation, intraprocedural roadmapping, and imaging guidance necessary to complete the intervention; for tumors, organ ischemia, or infarction</td>
<td>Prior approval required</td>
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<td>CPT</td>
<td>37500</td>
<td>Vascular endoscopy, surgical, with ligation of perforator veins, subfascial (SEP5)</td>
<td>Prior approval required</td>
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<td>CPT</td>
<td>37700</td>
<td>Ligation and division of long saphenous vein at saphenofemoral junction, or distal interruptions</td>
<td>Prior approval required</td>
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<td>CPT</td>
<td>37718</td>
<td>Ligation, division, and stripping, short saphenous vein</td>
<td>Prior approval required</td>
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<td>CPT</td>
<td>37722</td>
<td>Ligation, division, and stripping, long (greater) saphenous veins from saphenofemoral junction to knee or below</td>
<td>Prior approval required</td>
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<tr>
<td>Code</td>
<td>Number</td>
<td>Description</td>
<td>Policy Instructions</td>
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<tr>
<td>CPT®</td>
<td>37735</td>
<td>Ligation and division and complete stripping of long or short saphenous veins with radical excision of ulcer and skin graft and/or interruption of communicating veins of lower leg, with excision of deep fascia</td>
<td>Prior approval required</td>
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<td>CPT®</td>
<td>37760</td>
<td>Ligation of perforator veins, subfascial, radical (Linton type), including skin graft, when performed, open, 1 leg</td>
<td>Prior approval required</td>
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<td>CPT®</td>
<td>37761</td>
<td>Ligation of perforator vein(s), subfascial, open, including ultrasound guidance, when performed, 1 leg</td>
<td>Prior approval required</td>
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<tr>
<td>CPT®</td>
<td>37765</td>
<td>Stab phlebectomy of varicose veins, 1 extremity; 10-20 stab incisions</td>
<td>Prior approval required</td>
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<tr>
<td>CPT®</td>
<td>37766</td>
<td>Stab phlebectomy of varicose veins, one extremity; more than 20 incisions</td>
<td>Prior approval required</td>
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<td>CPT®</td>
<td>37780</td>
<td>Ligation and division of short saphenous vein at saphenopopliteal junction (separate procedure)</td>
<td>Prior approval required</td>
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<td>CPT®</td>
<td>37785</td>
<td>Ligation, division, and/or excision of varicose vein cluster(s), 1 leg</td>
<td>Prior approval required</td>
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<td>CPT®</td>
<td>37799</td>
<td>Unlisted procedure, vascular surgery</td>
<td>Prior approval required</td>
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<td>HCPCS</td>
<td>S2202</td>
<td>Echosclerotherapy</td>
<td>Prior approval required</td>
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