VARICOSE VEINS AND VENOUS INSUFFICIENCY  
SURGICAL AND ABLATION TREATMENTS

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POLICY DESCRIPTION:

This medical policy provides information on varicose veins/venous insufficiency. Often, varicose veins initially present only a cosmetic concern, but they can become clinically important when symptoms such as cramping, throbbing, burning, swelling, feeling of heaviness or fatigue, and alterations in skin pigmentation in the afflicted area become pronounced. Severe varicosities may be associated with dermatitis, ulceration, and thrombophlebitis.

Treatments for symptomatic varicose veins include conservative measures, such as the wearing of compression hosiery, elevating the legs, walking, and managing weight. In some cases, particularly if there is severe discomfort, ulceration, or thrombosis, a variety of treatment modalities are available to treat varicose veins/venous insufficiency, including surgical approaches, thermal ablation, and sclerotherapy.

The application of each of these treatment options is influenced by the severity of the symptoms, type of vein, source of venous reflux, and the use of other (prior or concurrent) treatments.

The objectives of these treatments for symptomatic varicose veins are: (1) to prevent complications related to the varicose disease; (2) to relieve symptoms; and (3) to improve the appearance of the leg.

COVERAGE RATIONALE / CLINICAL CONSIDERATIONS:

I. Greater or Lesser Saphenous Veins

Treatment of the greater or lesser saphenous veins by surgery (ligation and stripping), endovenous radiofrequency (VNUS procedure), or endovenous laser ablation (EVLT) may be considered MEDICALLY NECESSARY for symptomatic varicose veins/venous insufficiency when the following criteria have been met:

A. There has been a trial of at least three months of compressive stockings, unless there is medical contraindication to the use of compressive stockings, AND
B. There is bilateral patent deep vein system on Doppler or duplex ultrasonography, AND,
C. There is demonstrated saphenous reflux by Doppler or duplex ultrasound scanning, with at least 0.5 msec of reflux, AND
D. There is documentation of one or more of the following indications:
   • Ulceration secondary to venous stasis that fails to respond to compressive therapy, 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.

Treatment of greater or lesser saphenous veins by surgery or endovenous radiofrequency or laser ablation that do not meet the criteria described above is considered COSMETIC AND NOT MEDICALLY NECESSARY.

II. Accessory Saphenous Veins

Treatment of accessory saphenous veins (anterior, posterior, or giacomini veins) or perforator veins by surgery (ligation and stripping), or endovenous radiofrequency or laser ablation, may be considered
### MEDICALLY NECESSARY for symptomatic varicose veins/venous insufficiency when the following criteria have been met:

A. There has been a trial of at least three months of compressive stockings, unless there is medical contraindication to the use of compressive stockings, AND

B. There is bilateral patent deep vein system on duplex ultrasonography, AND,

C. There has been at least three months since treatment of the greater or lesser saphenous veins, or there is no significant incompetence of the greater or lesser saphenous veins, AND,

D. Symptoms correlate anatomically with the veins to be treated, AND

E. There is demonstrated accessory saphenous reflux of at least 0.5 msec, or perforator vein reflux of at least 0.35msec, by Doppler or duplex ultrasound scanning, AND

F. There is documentation of one or more of the following indications:
   - Ulceration secondary to venous stasis that fails to respond to compressive therapy, 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.

Treatment of accessory saphenous veins or perforator veins by surgery or endovenous radiofrequency or laser ablation that do not meet the criteria described above is considered COSMETIC AND NOT MEDICALLY NECESSARY.

### III. Small Varicose Veins (tributary, truncal, pudendal, or branch veins)

Treatment of small varicose veins by stab avulsion, hook phlebectomy, ultrasound-guided foam sclerotherapy, or transilluminated powered phlebectomy (Trivex System), may be considered MEDICALLY NECESSARY for symptomatic varicose veins/venous insufficiency when the following criteria have been met:

A. There has been a trial of at least three months of compressive stockings, unless there is medical contraindication to the use of compressive stockings, AND

B. There is bilateral patent deep vein system on duplex ultrasonography, AND

C. Significant accessory or perforator vein reflux is being concurrently treated or is not present, AND

D. Symptoms correlate anatomically with the veins to be treated, AND

E. The small varicose veins are at least 3 mm in diameter and have significant reflux of at least 0.5 msec, AND

F. There is documentation of at least one of the following:
   - Ulceration secondary to venous stasis that fails to respond to compressive therapy, 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.

Treatment of symptomatic small varicose veins, using any other techniques than noted above is considered EXPERIMENTAL AND/OR INVESTIGATIONAL.

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*Note: The table above is a structured representation of the policy text.*
IV. The following interventional treatments are considered to be **COSMETIC AND NOT MEDICALLY NECESSARY:**

A. Interventional treatment of asymptomatic varicosities.

B. Treatment of superficial varicose veins such as telangiectasia, spider veins, angiomata, and hemangiomata.

V. Other techniques for conditions not specifically listed above are **EXPERIMENTAL AND/OR INVESTIGATIONAL**, including, but not limited to:

A. Sclerotherapy of perforator, greater or lesser saphenous, accessory saphenous veins, or any vessel larger than 4 mm in diameter.

B. Sclerotherapy of isolated tributary veins without prior or concurrent treatment of saphenous veins.

C. Endovenous radiofrequency or laser ablation of tributary veins.

D. Endovenous cryoablation of any vein.

E. Mechnanochemical ablation of any vein (MOCA) (ClariVein).

F. Transdermal laser (Nd: YAG) for the treatment of large varicose veins.

    *Note: Although transdermal laser has been shown to be effective for the treatment of telangiectasias and reticular veins, treatment of these small veins is considered cosmetic.*

**Clinical Considerations:**

- Treatment of some varicose veins may be considered cosmetic in nature if not associated with significant clinical symptoms and documented reflux at the saphenofemoral or saphenopopliteal junction, and thus benefit exclusions for cosmetic therapies may apply to coverage eligibility. The distinction between cosmetic and medically necessary treatment of varicose veins is an ongoing challenge. Photographs or chart notes in conjunction with the results of duplex ultrasound scanning demonstrating incompetent veins may be required to establish medical necessity. Note that the term "varicose veins" does not apply to the telangiectatic dermal veins, which may be described as "spider veins" or "broken blood vessels." While abnormal in appearance, these veins typically are not associated with any other symptoms (such as pain or heaviness), and their treatment is considered cosmetic.

- Doppler or duplex ultrasound studies are considered necessary prior to varicose vein treatment to assess the anatomy and to determine whether there is significant reflux at the saphenofemoral or saphenopopliteal junction requiring surgical repair, and after completion of the treatment to determine the success of the procedure and detect thrombosis. Ultrasound guidance is inclusive of the VNUS or EVLT procedures.

- All forms of lower-extremity venous insufficiency treatment are subject to recurrence, recannulation of the vein, and neovascularization. This occurs more frequently following treatment with endovenous techniques. Additional risks of vein ligation and stripping surgery include: anesthetic risk, scarring, pain, bleeding, deep venous injury or thrombosis, nerve injury, and infection. Possible complications include, but are not limited to, swelling, transient numbness, cellulitis, hematoma, ecchymosis or bruising and rarely deep venous thrombosis.
Relevant safety outcomes include the incidence of paresthesia, thermal skin injury, thrombus formation, thrombophlebitis, wound infection, and transient neurologic effects.

**BACKGROUND:**

Varicose veins are enlarged and tortuous vessels that develop when the thin flaps of the venous valves no longer meet in the midline, allowing blood to reflux, or flow in a retrograde direction. Approximately 80 million Americans are affected by some form of venous disorder, including varicose veins. Women are more likely to suffer from varicose veins than men, with as many as 50% of American women affected. Great saphenous vein (GSV) reflux is most commonly responsible for the development of varicose veins.

The venous system of the lower extremities consists of the superficial veins (this includes the greater and lesser saphenous and accessory, or duplicate, veins that travel in parallel with the greater and lesser saphenous veins), the deep system (popliteal and femoral veins), and perforator veins that cross through the fascia and connect the deep and superficial systems. One-way valves are present within all veins to direct the return of blood up the lower limb. Since venous pressure in the deep system is generally greater than that of the superficial system, valve incompetence at any level may lead to backflow (venous reflux) with pooling of blood in superficial veins. Varicose veins with visible varicosities may be the only sign of venous reflux, although itching, heaviness, tension, and pain may also occur. Chronic venous insufficiency secondary to venous reflux can lead to thrombophlebitis, leg ulcerations, and hemorrhage. The Comprehensive classification system for chronic venous disorders (CEAP) considers the clinical, etiologic, anatomic, and pathologic characteristics of venous insufficiency, ranging from class 0 (no visible sign of disease) to class 6 (active ulceration).

Treatment of venous reflux/venous insufficiency is aimed at reducing abnormal pressure transmission from the deep to the superficial veins. Treatments for symptomatic varicose veins of the legs include conservative measures such as compression hosiery, elevating the legs, walking, weight management, and wound care when indicated.

Conventional surgical treatment consists of identifying and correcting the site of reflux by ligation of the incompetent junction followed by stripping of the vein to redirect venous flow through veins with intact valves. While most venous reflux is secondary to incompetent valves at the saphenofemoral or saphenopopliteal junctions, reflux may also occur at incompetent valves in the perforator veins or in the deep venous system. The competence of any single valve is not static and may be pressure-dependent. For example, accessory saphenous veins may have independent saphenofemoral or saphenopopliteal junctions that become incompetent when the greater or lesser saphenous veins are eliminated and blood flow is diverted through the accessory veins.

In cases with severe discomfort, ulceration, or thrombosis, minimally invasive procedures (sclerotherapy, endovenous laser ablation [EVLA], radiofrequency ablation [RFA]) or surgical ligation and excision (vein stripping) may be used to destroy or remove affected vessels.

**Saphenous Veins and Tributaries:** Saphenous veins include the greater and lesser saphenous and accessory saphenous veins that travel in parallel with the greater or lesser saphenous veins. Tributaries are veins that empty into a larger vein. Treatment of venous reflux typically includes the following:

1. Identification by preoperative Doppler ultrasonography of the valvular incompetence.
2. Control of the most proximal point of reflux, traditionally by suture ligation of the incompetent saphenofemoral or saphenopopliteal junction
3. Removal of the superficial vein from circulation, for example by stripping of the greater and/or lesser saphenous veins
4. Removal of varicose tributaries (at the time of the initial treatment or subsequently) by stab avulsion (phlebectomy) or injection sclerotherapy

Minimally invasive alternatives to ligation and stripping include sclerotherapy, transilluminated-powered phlebotomy, and thermal ablation using cryotherapy, high frequency radiowaves (200–300 kHz), or laser energy.

Sclerotherapy: The objective of sclerotherapy is to destroy the endothelium of the target vessel by injecting an irritant solution (either a detergent, osmotic solution, or chemical irritant), ultimately resulting in the occlusion of the vessel. The success of the treatment depends on accurate injection of the vessel, an adequate injectate volume and concentration of sclerosant, and compression. Larger veins in diameter (> 4 mm) and very tortuous veins are not considered to be good candidates for sclerotherapy due to technical limitations. Technical improvements in sclerotherapy have included the routine use of Duplex ultrasound to target refluxing vessels, luminal compression of the vein with anesthetics, and a foam/sclerosant injectate in place of liquid sclerosant. Foam sclerosants are produced by forcibly mixing a gas (e.g., air or carbon dioxide) with a liquid sclerosant (e.g., polidocanol or sodium tetradecyl sulfate). The foam is produced at the time of treatment and is considered an off-label use. A proprietary microfoam sclerosant (Varisolve, BTG PLC, London) with a controlled density and more consistent bubble sizes is being developed in Europe.

Endovenous Mechanochemical Ablation: Endovenous mechanochemical ablation utilizes both sclerotherapy and mechanical damage to the lumen. Following ultrasound imaging, a disposable catheter with a motor drive is inserted into the distal end of the target vein and advanced to the saphenofemoral junction. As the catheter is pulled back, a wire rotates at 3,500 rpm within the lumen of the vein, abrading the lumen. At the same time, a liquid sclerosant (sodium tetradecyl sulfate) is infused near the rotating wire. It is proposed that mechanical ablation allows for better efficacy of the sclerosant, without the need for the tumescent anesthesia used in radiofrequency (RF) ablation or endovenous laser ablation (EVLT).

Thermal Ablation: Radiofrequency ablation is performed by means of a specially designed catheter inserted through a small incision in the distal medial thigh to within 1–2 cm of the saphenofemoral junction. The catheter is slowly withdrawn, closing the vein. Laser ablation is performed similarly; a laser fiber is introduced into the greater saphenous vein under ultrasound guidance; the laser is activated and slowly removed along the course of the saphenous vein. Cryoablation uses extreme cold to cause injury to the vessel. The objective of endovenous techniques is to cause injury to the vessel, causing retraction and subsequent fibrotic occlusion of the vein. Technical developments since thermal ablation procedures were initially introduced include the use of perivenous tumescent anesthesia, which allows successful treatment of veins larger than 12 mm in diameter and helps to protect adjacent tissue from thermal damage during treatment of the lesser saphenous vein.

Transilluminated Powered Phlebectomy (TIPP): TIPP is an alternative to stab avulsion or hook phlebectomy. This procedure uses 2 instruments: an illuminator, which also provides irrigation, and a resector, which has an oscillating tip and can perform suction. Following removal of the saphenous vein, the illuminator is introduced via a small incision in the skin and tumescence solution (anesthetic and epinephrine) is infiltrated along the course of the varicosity. The resector is then inserted under the skin...
from the opposite direction, and the oscillating tip is placed directly beneath the illuminated veins to fragment and loosen the veins from the supporting tissue. Irrigation from the illuminator is used to clear the vein fragments and blood through aspiration and additional drainage holes. The illuminator and resector tips may then be repositioned, thereby reducing the number of incisions needed when compared with stab avulsion or hook phlebectomy. It has been proposed that TIPP might result in decreased operative time, decreased complications such as bruising, and faster recovery compared to the established procedures.

**Treatment of Perforator Veins:** Perforator veins cross through the fascia and connect the deep and superficial venous systems. Incompetent perforating veins were originally addressed with an open surgical procedure, called the Linton procedure, which involved a long medial calf incision to expose all posterior, medial, and paramedial perforators. While this procedure was associated with healing of ulcers, it was largely abandoned due to a high incidence of wound complications. The Linton procedure was subsequently modified by using a series of perpendicular skin flaps instead of a longitudinal skin flap to provide access to incompetent perforator veins in the lower part of the leg. The modified Linton procedure may be occasionally utilized for the closure of incompetent perforator veins that cannot be reached by less invasive procedures. Subfascial endoscopic perforator surgery (SEPS) is a less-invasive surgical procedure for treatment of incompetent perforators and has been reported since the mid-1980s. Guided by Duplex ultrasound scanning, small incisions are made in the skin, and the perforating veins are clipped or divided by endoscopic scissors. The operation can be performed as an outpatient procedure. Endovenous ablation of incompetent perforator veins with sclerotherapy and RF has also been reported.

**Deep vein valve replacement:** It is being investigated.

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**REGULATORY STATUS:**

**1. U.S. FOOD AND DRUG ADMINISTRATION (FDA):**

The following devices have received specific U.S. Food and Drug Administration (FDA) marketing clearance for the endovenous treatment of superficial vein reflux:

- In 1999, the VNUS® Closure™ system (a radiofrequency device) received FDA clearance through the 510(k) process for "endovascular coagulation of blood vessels in patients with superficial vein reflux." The VNUS RFS™ and RFSFlex™ devices received FDA clearance in 2005 for “use in vessel and tissue coagulation including: treatment of incompetent (i.e., refluxing) perforator and tributary veins.” The modified VNUS® ClosureFAST™ Intravascular Catheter received FDA clearance through the 510(k) process in 2008.

- In 2002, the Diomed 810 nm surgical laser and EVLT™ (endovenous laser therapy) procedure kit received FDA clearance through the 510(k) process, "... for use in the endovascular coagulation of the greater saphenous vein of the thigh in patients with superficial vein reflux."

- The Trivex® system (InaVein, LLC) is a device for transilluminated powered phlebectomy that received FDA clearance through the 510(k) process in October 2003. According to the label, the intended use is for “ambulatory phlebectomy procedures for the resection and ablation of varicose veins.”

- A modified Erbe Erbokryo® cryosurgical unit (Erbe USA) received FDA clearance for marketing in 2005. A variety of clinical indications are listed, including cryoablation of venous veins of the
lower limbs.

- The ClariVein® Infusion Catheter received marketing clearance through the 510(k) process in 2008 (K071468). It is used for mechanochemical ablation. Predicate devices were listed as the Trellis® Infusion System (K013635) and the Slip-Cath® Infusion Catheter (K882796). The system includes an infusion catheter, motor drive, stopcock and syringe and is intended for the infusion of physician-specified agents in the peripheral vasculature.

- Varisolve® (BTG PLC, London) is a sclerosant microfoam made with a proprietary gas mix. A Phase II safety study for the FDA has been completed. In late October 2009, the sponsor submitted a request to the FDA for a protocol assessment to agree on the design, endpoints, and statistical analyses for the Phase III trial.

- Asclera® (polidocanol injection). Asclera received Food and Drug Administration (FDA) approval for the treatment of telangiectasias and reticular veins less than 3 mm in diameter.

2. CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS):

**LCD for Treatment of Varicose Veins of the Lower Extremity (L25519. Last Modified: 1/13/14).**

Varicose veins are caused by venous insufficiency as a result of valve reflux (incompetence). The venous insufficiency results in dilated, tortuous, superficial vessels that protrude from the skin of the lower extremities. Spider veins (telangiectases) are dilated capillary veins that are most often treated for cosmetic purposes. Treatment of telangiectases (CPT code 36468) is not covered by Medicare.

**Ligation And Stripping:** Ligation and stripping, of varicose veins is a treatment option that aims to eliminate reflux at the saphenofemoral junction. The treatment of choice for moderate to large symptomatic varicose veins, ligation and stripping of the saphenous vein, has the lowest failure rate.

**Sclerotherapy:** Injecting sclerosing solutions directly into the abnormal veins is an alternative occasionally selected for the treatment of varicose veins without significant saphenofemoral or saphenopopliteal incompetence. However, it is not considered to be as reliable and effective as surgical ligation and stripping.

Sclerotherapy for cosmetic purposes is considered not medically necessary. Sclerotherapy is considered medically necessary for the treatment of small to medium sized vessels (less than 4 mm in diameter.) Sclerotherapy is not considered medically necessary for vessels larger than 4 mm in diameter.

Foam sclerotherapy of the saphenous vein at its junction with the deep venous system has been proposed as an alternative to ligation or saphenectomy, but its efficacy lacks significant scientific evidence to support its widespread use. The current consensus is that most recommendations for conventional sclerotherapy also apply to foam sclerotherapy.

Sclerotherapy of the saphenous vein at its junction with the deep system IS NOT COVERED by Medicare.

**Non-compressive sclerotherapy** involves injection of a sclerosant into a vein without the application of a compressive dressing. Because it is not effective in producing long-term obliteration of the incompetent veins, noncompressive sclerotherapy IS NOT COVERED by Medicare.

**Compressive sclerotherapy** is the injection of the sclerosant into an empty vein (elevated limb) followed by application of a compressive bandage or dressing. This is the most commonly performed sclerotherapy procedure for varicose veins of the lower extremity. Compressive sclerotherapy is
indicated for local small to medium symptomatic varices, isolated incompetent perforators, or recurrence of symptomatic varices after adequate surgical removal of varices. It is not considered an appropriate option for large, extensive or truncal varicosities.

High ligation and compression sclerotherapy refers to ligation of a truncal junction (saphenofemoral or saphenopopliteal) followed by compressive sclerotherapy of one or more veins.

**Endovenous radiofrequency ablation (EFRA) and laser ablation** are minimally invasive alternatives to vein ligation and stripping. Endovenous radiofrequency ablation is FDA-approved for treatment of the greater saphenous vein, perforators and tributary veins. Endovenous laser ablation is FDA-approved for the treatment of varicose veins and varicosities associated with superficial reflux of the greater saphenous vein.

**Indications:**
Medicare will consider interventional treatment of varicose veins (sclerotherapy, ligation with or without stripping, and endovenous radiofrequency or laser ablation) **MEDICALLY NECESSARY** if the patient remains symptomatic after a six-week trial of conservative therapy. The components of the conservative therapy include, but are not limited to:
- Weight reduction
- A daily exercise plan
- Periodic leg elevation
- The use of graduated compression stockings

The conservative therapy must be documented in the medical record.

The patient is considered symptomatic if any of the following signs and symptoms of significantly diseased vessels of the lower extremities are documented in the medical record:
- Stasis ulcer of the lower leg, as above
- Significant pain and significant edema that interferes with activities of daily living
- Bleeding associated with the diseased vessels of the lower extremities
- Recurrent episodes of superficial phlebitis
- Stasis dermatitis
- Refractory dependent edema

In addition to the requirement for failure of a six-week trial of conservative treatment and the symptoms described above, coverage of endovenous ablation therapy is limited to patients with:
- A maximum vein diameter of 20 mm for laser ablation
- Absence of thrombosis or vein tortuosity, which would impair catheter advancement
- Absence of significant peripheral artery disease

Radiofrequency/laser ablation is covered only for treatment of the lesser or greater saphenous veins to improve symptoms attributable to saphenofemoral or saphenopopliteal reflux. Coverage is only for FDA devices specifically approved for these procedures.

Non-cosmetic sclerotherapy will also be covered if performed in conjunction with surgical ligation or stripping procedures in appropriately selected patients.

**Limitations:**
Duplex ultrasound is often used in conjunction with other non-invasive physiologic testing to define the anatomy and physiology of the varicose vein network prior to injection or surgical intervention. There is
adequate evidence that the pre-procedural ultrasound is helpful, and Medicare will cover a pre-procedure Duplex scan (CPT code 93970 or 93971) used in conjunction with other non-invasive physiologic testing (CPT code 93965) to determine the extent and configuration of the varicosities. NGS expects that these studies will be performed by the provider planning to provide the therapy. NGS will allow this study once per provider or provider group. Clinical experience supports the use of ultrasound during the sclerotherapy procedure, and evidence shows that the outcomes may be improved and complication rates may be minimized when ultrasound guidance is used.

Medicare will cover intraoperative ultrasonic guidance in situations when it is medically necessary.

Medicare includes payment for the ultrasound in the payment for the ERFA and laser ablation procedures.

Cosmetic surgery is statutorily excluded from coverage by Medicare. The following interventional treatments are considered to be cosmetic and will be denied as such:

- Interventional treatment of asymptomatic varicosities
- Treatment of telangiectases (36468)
- Sclerotherapy for cosmetic purposes

Medicare cannot cover services which are not reasonable and necessary for the treatment of illness or injury or to improve the functioning of a body malformation. The following interventional treatments are not considered medically reasonable or necessary and are denied as such:

- Interventional treatment of symptomatic varicosities without documentation of a failed six week trial of conservative therapy
- Sclerotherapy for vessels larger than 4 mm in diameter
- Reinjection following recanalization or failure of vein closure without recurrent signs or symptoms
- Sclerotherapy of the saphenous vein at its junction with the deep system
- Noncompressive sclerotherapy
- Compressive sclerotherapy for large, extensive or truncal varicosities
- Sclerotherapy, ligation and/or stripping of varicose veins, or endovenous ablation therapy are not covered for pregnant women, patients on anti-coagulant therapy, or patients with the inability to tolerate compressive bandages or stockings; severe distal arterial occlusive disease; obliteration of deep venous system; an allergy to the sclerosant; or a hypercoaguable state
- Any interventional treatment that uses equipment or sclerosants not approved for such purposes by the FDA
- Laser ablation of veins with a diameter greater than 20 mm
- Endovenous ablation therapy in the presence of thrombosis or venous tortuosity which would impair catheter advancement

3. MINNESOTA DEPARTMENT OF HUMAN SERVICES (DHS): Minnesota DHS does not have a policy statement regarding varicose veins/venous insufficiency in its Provider Manual or other specific provider references.
CLINICAL EVIDENCE:

SUMMARY:
Although randomized, controlled trials with longer follow-up are needed to evaluate long-term durability, and repeat treatments may be required, evidence indicates that endovenous treatment of saphenous veins with radiofrequency or laser ablation improves short-term clinical outcomes (e.g., pain and return to work) in comparison with surgery. In contrast, results from a recent randomized, controlled trial of cryoablation indicate that this therapy is inferior to conventional stripping. Sclerotherapy as the sole treatment of saphenofemoral or saphenopopliteal reflux has not been demonstrated to be as effective as available alternatives, and there is insufficient evidence on mechanochemical ablation.

The literature indicates that sclerotherapy of tributaries following occlusion of the saphenofemoral or saphenopopliteal junction and saphenous veins may be considered medically necessary. Evidence is insufficient to evaluate the health benefit of sclerotherapy as a sole treatment of varicose tributaries without prior or concurrent treatment of the saphenous veins. No studies have been identified that compare radiofrequency 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 literature indicates that the routine ligation/ablation of incompetent perforator veins is not medically 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 (i.e., ulcers), treatment of perforator vein reflux may be as beneficial as any alternative (e.g., deep vein valve replacement). Therefore, treatment of incompetent perforator veins may be considered medically necessary in this specific situation.

Comparative studies are needed to determine the most effective method of ligating/ablatting incompetent perforator veins. SEPS 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 in comparison with surgical interventions. For sclerotherapy, concerns have been raised about the risk of deep vein occlusion, and evidence is currently insufficient to evaluate the safety or efficacy of this treatment for incompetent perforator veins.

APPLICABLE CODES:
The Current Procedural Terminology (CPT®) codes and HCPCS codes listed in this policy are for reference purposes only. Listing of a service or device code in this policy does not imply that the service described by this code is a covered or non-covered health service. The inclusion of a code does not imply any right to reimbursement or guarantee claims payment. Other medical policies and coverage determination guidelines may apply.

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<td>Surgical, lower veins, extraction, lesser saphenous vein, code by side (right or left) and approach</td>
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<tr>
<td>06DY0ZZ, 06DY3ZZ, 06DY4ZZ</td>
<td>Surgical, lower veins, extraction, lower vein, code by approach</td>
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<td>06LM0ZZ, 06LM3ZZ, 06LM4ZZ, 06LN0ZZ, 06LN3ZZ, 06LN4ZZ</td>
<td>Surgical, lower veins, occlusion, femoral vein, code by side (right or left) and approach</td>
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<td>06LP0ZZ, 06LP3ZZ, 06LP4ZZ, 06LQ0ZZ, 06LQ3ZZ, 06LQ4ZZ</td>
<td>Surgical, lower veins, occlusion, greater saphenous vein, code by side (right or left) and approach</td>
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<td>06LR0ZZ, 06LR3ZZ, 06LR4ZZ, 06LS0ZZ, 06LS3ZZ, 06LS4ZZ</td>
<td>Surgical, lower veins, occlusion, lesser saphenous vein, code by side (right or left) and approach</td>
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<tr>
<th>CPT® Codes</th>
<th>Description</th>
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<tbody>
<tr>
<td>36468-36469</td>
<td>Single or multiple injections of sclerosing solutions, spider veins (telangiectasia); code range</td>
</tr>
<tr>
<td>36470</td>
<td>Injection of sclerosing solution; single vein</td>
</tr>
<tr>
<td>36471</td>
<td>Injection of sclerosing solution; multiple veins, same leg</td>
</tr>
<tr>
<td>36475</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, radiofrequency; first vein treated</td>
</tr>
<tr>
<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>
</tr>
<tr>
<td>36478</td>
<td>Endovenous ablation therapy of incompetent vein, extremity, inclusive of all imaging guidance and monitoring, percutaneous, laser; first vein treated</td>
</tr>
<tr>
<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>
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<tr>
<td>37500</td>
<td>Vascular endoscopy, surgical, with ligation of perforator veins, subfascial (SEPS)</td>
</tr>
<tr>
<td>37700</td>
<td>Ligation and division of long saphenous vein at saphenofemoral junction, or distal interruptions</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
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<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>37718</td>
<td>Ligation, division, and stripping, short saphenous vein</td>
</tr>
<tr>
<td>37722</td>
<td>Ligation, division, and stripping, long (greater) saphenous veins from saphenofemoral junction to knee or below</td>
</tr>
<tr>
<td>37735</td>
<td>Ligation and division complete stripping of long and 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>
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<tr>
<td>37760</td>
<td>Ligation of perforator veins, subfascial, radical (Linton type) including skin graft, when performed, open, 1 leg</td>
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<tr>
<td>37761</td>
<td>Ligation of perforator vein(s), subfascial, open, including ultrasound guidance, when performed, 1 leg</td>
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<tr>
<td>37765</td>
<td>Stab phlebectomy of varicose veins, 1 extremity; 10-20 stab incisions</td>
</tr>
<tr>
<td>37766</td>
<td>Stab phlebectomy of varicose veins, 1 extremity; more than 20 incisions</td>
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<tr>
<td>37780</td>
<td>Ligation and division of short saphenous vein at saphenopopliteal junction (separate procedure)</td>
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<tr>
<td>37785</td>
<td>Ligation, division, and/or excision of varicose vein cluster(s), one leg</td>
</tr>
<tr>
<td>37799</td>
<td>Unlisted procedure, vascular surgery</td>
</tr>
<tr>
<td>76942</td>
<td>Ultrasonic guidance for needle placement (e.g., biopsy, aspiration, injection, localization device), imaging supervision and interpretation</td>
</tr>
<tr>
<td>93970</td>
<td>Duplex scan of extremity veins including responses to compression and other maneuvers; complete bilateral study</td>
</tr>
<tr>
<td>93971</td>
<td>Duplex scan of extremity veins including responses to compression and other maneuvers; unilateral or limited study</td>
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REFERENCES:


### POLICY HISTORY:

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<td>07/24/2014</td>
<td>Reviewed and approved by the Quality Improvement Advisory and Credentialing.</td>
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