

Non-Invasive Peripheral Vascular Venous Studies (93970, 93971) L35751

Indications:

Diagnostic tests must be ordered by the physician who is treating the beneficiary and who will use the results in the management of the beneficiary's specific medical problem. Services are deemed medically necessary when all of the following conditions are met:

1. Signs/symptoms of ischemia or altered blood flow are present;
2. The information is necessary for appropriate medical and/or surgical management;
3. The test is not redundant of other diagnostic procedures that must be performed.

Deep Vein Thrombosis (DVT)

The signs and symptoms of DVT are relatively non-specific; and due to the risk associated with pulmonary embolism (PE), objective testing is allowed in patients who are candidates for anticoagulation or invasive therapeutic procedures for the following conditions:

1. Clinical signs and/or symptoms of DVT including edema, tenderness, inflammation, and/or erythema.
2. Clinical signs and/or symptoms of pulmonary embolism (PE) including hemoptysis, chest pain, and/or dyspnea.
3. Unexplained lower extremity edema status, post major surgical procedures, trauma, other or progressive illness/condition; surveillance following high-risk surgical procedures, such as orthopedic or pelvic. Individual consideration will be given to surveillance of patients on prolonged bed rest (e.g., due to neurologic, condition / procedures, congestive heart failure, and paradoxical emboli). In general, surveillance is not necessary when effective antithrombotic measures (e.g., anticoagulants, alternating pressure devices) are being used. However, it may be necessary in some patients prior to applying alternating pressure devices or compression dressings under appropriate clinical circumstances.
4. Unexplained lower extremity pain, excluding pain of skeletal origin.
5. Bilateral limb edema is rarely an indicator for medical necessity in the presence of signs and symptoms of heart failure, exogenous obesity, and/or arthritis.

Chronic Venous Insufficiency

Chronic venous insufficiency may be divided into three categories: primary varicose veins, post-thrombotic (post-phlebotic) syndrome, and recurrent deep vein thrombosis. Peripheral vascular studies may be indicated in patients with:

1. Ulceration suspected to be secondary to venous insufficiency. These tests may be indicated to confirm this diagnosis by documenting venous valvular incompetence prior to invasive therapeutic treatment.
2. Varicose veins by themselves do not indicate medical necessity, but medical necessity may be indicated when they are accompanied by significant pain or stasis dermatitis. It is not medically necessary to study asymptomatic primary varicose veins (See WPS policy L34536, Treatment of Varicose Veins of the Lower Extremities).

3. Superficial thrombophlebitis involving the proximal thigh, to investigate whether there was thrombus at the saphenofemoral junction that would demand either anticoagulation or surgical ligation.
4. Evaluation is medically necessary in patients with symptoms of recurrent DVT or in patients prior to compression therapy to exclude superimposed acute DVT which may be at risk for embolization with such therapy.

Venous Mapping

Vein mapping is considered medically reasonable and necessary when the patient's clinical evaluation indicates one of the following:

1. Previous partial harvest of the vein.
2. Previous thrombophlebitis or DVT in the leg.
3. Severe varicose veins.
4. Previous history of vein stripping, ligation, or sclerotherapy.
5. Obesity to the degree it interferes with clinical determination.
6. Other indications must be clearly supported by medical documentation.
7. Vein mapping may be performed prior to creating a dialysis fistula. See section III in this policy on vessel mapping of vessels for hemodialysis
8. Mapping the saphenous veins prior to scheduled revascularization procedures is covered when it is expected that an autologous vein will be used, but only if there is uncertainty regarding the availability of a suitable vein for bypass

Limitations:

Vein mapping as a routine preoperative study is not covered.

Duplex scan of extremity veins including responses to compression and other maneuvers; unilateral or limited study is indicated for the preoperative examination of potential harvest vein grafts to be utilized during bypass surgery. This is a covered service only when the results of the study are necessary to locate suitable graft vessels. The need for the bypass surgery must be determined prior to the performance of the test.

Each patient's condition and response to treatment must medically warrant the number of services reported for payment. Medicare requires the medical necessity for each study reported to be clearly documented in the patient's medical record.

Frequency of follow-up studies will be carefully monitored for medical necessity and it is the responsibility of the physician/provider to maintain documentation of medical necessity in the patient's medical record.

Generally, it is expected that noninvasive vascular studies would **not be performed more than once in a year**, excluding inpatient hospital (21) and emergency room (23) places of services.

Only one preoperative scan is considered reasonable and necessary for hemodialysis access

site surgery. If a more current preoperative scan is indicated for a patient with multiple comorbidities having difficulty being stabilized for surgery or a change in condition, the medical record would need to support the medical necessity of the second scan.

Only one limited study is considered reasonable and necessary post operatively within 72 hours of a saphenous vein ablation, whether surgery is performed on one side or bilaterally.

Pre-surgical conduit mapping of the radial artery(ies) should only be accompanied by vein-mapping studies when the arterial studies demonstrate a non-acceptable conduit, or an insufficient conduit is available for multiple bypass procedures.

Duplex scanning and physiologic studies may be reimbursed during the same encounter if the physiologic studies are abnormal and/or to evaluate vascular trauma, thromboembolic events or aneurysmal disease. The documentation must support the medical necessity.

Documentation must be provided supporting the need for more than one imaging study Doppler flow or vessel mapping and arteriogram.

Performance of both non-invasive extracranial arterial studies and non-invasive evaluation of extremity veins during the same encounter is not appropriate as a general practice or standing protocol, and therefore, generally would not be expected to be done together. Consequently, documentation must clearly support the medical necessity if both procedures are performed during the same encounter.

Preventive and/or screening services unless covered in Statute are not covered by Medicare.

Most Common Diagnoses for Peripheral Venous Vascular Studies (which meet medical necessity) *	
I26.99	Acute pulmonary embolism
I27.82	Chronic pulmonary embolism
I80.01	Phlebitis and thrombophlebitis of superficial vessels of right lower extremity
I80.02	Phlebitis and thrombophlebitis of superficial vessels of left lower extremity
I82.401	Acute embolism and thrombosis of deep veins of right lower extremity
I82.402	Acute embolism and thrombosis of deep veins of left lower extremity
I82.403	Acute embolism and thrombosis of deep veins of lower extremity, bilateral
I82.411	Acute embolism and thrombosis of right femoral vein
I82.412	Acute embolism and thrombosis of left femoral vein
I82.413	Acute embolism and thrombosis of femoral vein, bilateral
I82.431	Acute embolism and thrombosis of right popliteal vein
I82.432	Acute embolism and thrombosis of left popliteal vein
I82.433	Acute embolism and thrombosis of popliteal vein, bilateral
I82.441	Acute embolism and thrombosis of right tibial vein
I82.442	Acute embolism and thrombosis of left tibial vein
I82.443	Acute embolism and thrombosis of tibial vein, bilateral
I82.451	Acute embolism and thrombosis of right peroneal vein
I82.452	Acute embolism and thrombosis of left peroneal vein

I82.453	Acute embolism and thrombosis of peroneal vein, bilateral
I82.461	Acute embolism and thrombosis of right calf muscular vein
I82.462	Acute embolism and thrombosis of left calf muscular vein
I82.463	Acute embolism and thrombosis of calf muscular vein, bilateral
I82.4Y1	Acute embolism and thrombosis of deep veins of right proximal lower extremity
I82.4Y2	Acute embolism and thrombosis of deep veins of left proximal lower extremity
I82.4Z1	Acute embolism and thrombosis of deep veins of right distal lower extremity
I82.4Z2	Acute embolism and thrombosis of deep veins of left distal lower extremity
I82.4Z3	Acute embolism and thrombosis of deep veins of distal lower extremity, bilateral
I82.501	Chronic embolism and thrombosis of deep veins of right lower extremity
I82.502	Chronic embolism and thrombosis of deep veins of left lower extremity
I82.503	Chronic embolism and thrombosis of deep veins of lower extremity, bilateral
I82.511	Chronic embolism and thrombosis of right femoral vein
I82.512	Chronic embolism and thrombosis of left femoral vein
I82.513	Chronic embolism and thrombosis of bilateral femoral vein
I82.531	Chronic embolism and thrombosis of right popliteal vein
I82.532	Chronic embolism and thrombosis of left popliteal vein
I82.533	Chronic embolism and thrombosis of popliteal vein, bilateral
I82.541	Chronic embolism and thrombosis of right tibial vein
I82.542	Chronic embolism and thrombosis of left tibial vein
I82.551	Chronic embolism and thrombosis of right peroneal vein
I82.552	Chronic embolism and thrombosis of left peroneal vein
I82.553	Chronic embolism and thrombosis of peroneal vein, bilateral
I82.561	Chronic embolism and thrombosis of right calf muscular vein
I82.562	Chronic embolism and thrombosis of left calf muscular vein
I82.611	Acute embolism and thrombosis of superficial veins of right upper extremity
I82.612	Acute embolism and thrombosis of superficial veins of left upper extremity
I82.613	Acute embolism and thrombosis of superficial veins of upper extremity, bilateral
I82.621	Acute embolism and thrombosis of deep veins of right upper extremity
I82.622	Acute embolism and thrombosis of deep veins of left upper extremity
I82.623	Acute embolism and thrombosis of deep veins of upper extremity, bilateral
I82.711	Chronic embolism and thrombosis of superficial veins of right upper extremity
I82.712	Chronic embolism and thrombosis of superficial veins of left upper extremity
I82.721	Chronic embolism and thrombosis of deep veins of right upper extremity
I82.722	Chronic embolism and thrombosis of deep veins of left upper extremity
I82.811	Embolism and thrombosis of superficial veins of right lower extremity
I82.812	Embolism and thrombosis of superficial veins of left lower extremity
I82.813	Embolism and thrombosis of superficial veins of lower extremity, bilateral
I83.11	Varicose veins of right lower extremity with inflammation
I83.12	Varicose veins of left lower extremity with inflammation
I83.811	Varicose veins of right lower extremity with pain
I83.812	Varicose veins of left lower extremity with pain
I83.813	Varicose veins of bilateral lower extremities with pain
I83.91	Asymptomatic varicose veins of right extremity
I83.92	Asymptomatic varicose veins of left extremity
I83.93	Asymptomatic varicose veins of bilateral lower extremities

I87.1	Compression of vein/ vena cava syndrome
I87.2	Venous insufficiency (chronic) (peripheral) / stasis dermatitis
I87.301	Chronic venous hypertension without complications, bilateral lower extremities
I87.313	Chronic venous hypertension with ulcer, bilateral lower extremity
M79.601	Pain in right arm
M79.602	Pain in left arm
M79.604	Pain in right leg
M79.605	Pain in left leg
M79.621	Pain in right upper arm
M79.622	Pain in left upper arm
M79.651	Pain in right thigh
M79.652	Pain in left thigh
M79.661	Pain in right lower leg
M79.662	Pain in left lower leg
M79.671	Pain in right foot
M79.672	Pain in left foot
R06.00	Dyspnea
R06.02	Shortness of breath
R07.89	Anterior chest wall pain
R09.02	Hypoxemia
R22.31	Localized swelling, mass and lump, right upper limb
R22.32	Localized swelling, mass and lump, left upper limb
R22.33	Localized swelling, mass and lump, upper limb, bilateral
R22.41	Localized swelling, mass and lump, right lower limb
R22.42	Localized swelling, mass and lump, left lower limb
R22.43	Localized swelling, mass and lump, lower limb, bilateral
R60.0	Localized edema
Z01.810	Encounter for cardiovascular preprocedural examination
Z01.818	Encounter for other preprocedural examination
Z86.711	Personal history of pulmonary embolism
Z86.718	Personal history of other venous thrombosis and embolism

*Note: See the complete list of Medicare covered diagnoses and payment rules:

<https://www.cms.gov/medicare-coverage-database/view/article.aspx?articleId=57594&ver=18>

To see the complete coverage indications and limitations:

<https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?LCDId=35751>

The above CMS and WPS-GHA guidelines are current as of: 04/01/2025.