LCD - Non-Invasive Vascular Studies (L33627)

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Contractor Information

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATES
National Government Services, Inc.	MAC - Part A	06101 - MAC A	J - 06	Illinois
National Government Services, Inc.	MAC - Part B	06102 - MAC B	J - 06	Illinois
National Government Services, Inc.	MAC - Part A	06201 - MAC A	J - 06	Minnesota
National Government Services, Inc.	MAC - Part B	06202 - MAC B	J - 06	Minnesota
National Government Services, Inc.	MAC - Part A	06301 - MAC A	J - 06	Wisconsin
National Government Services, Inc.	MAC - Part B	06302 - MAC B	J - 06	Wisconsin
National Government Services, Inc.	A and B and HHH MAC	13101 - MAC A	J - K	Connecticut
National Government Services, Inc.	A and B and HHH MAC	13102 - MAC B	J - K	Connecticut
National Government Services, Inc.	A and B and HHH MAC	13201 - MAC A	J - K	New York - Entire State
National Government Services, Inc.	A and B and HHH MAC	13202 - MAC B	J - K	New York - Downstate
National Government Services, Inc.	A and B and HHH MAC	13282 - MAC B	J - K	New York - Upstate
National Government Services, Inc.	A and B and HHH MAC	13292 - MAC B	J - K	New York - Queens
National Government Services, Inc.	A and B and HHH MAC	14111 - MAC A	J - K	Maine
National Government Services, Inc.	A and B and HHH MAC	14112 - MAC B	J - K	Maine
National Government Services, Inc.	A and B and HHH MAC	14211 - MAC A	J - K	Massachusetts
National Government Services, Inc.	A and B and HHH MAC	14212 - MAC B	J - K	Massachusetts

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATES
National Government Services, Inc.	A and B and HHH MAC	14311 - MAC A	J - K	New Hampshire
National Government Services, Inc.	A and B and HHH MAC	14312 - MAC B	J - K	New Hampshire
National Government Services, Inc.	A and B and HHH MAC	14411 - MAC A	J - K	Rhode Island
National Government Services, Inc.	A and B and HHH MAC	14412 - MAC B	J - K	Rhode Island
National Government Services, Inc.	A and B and HHH MAC	14511 - MAC A	J - K	Vermont
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CMS National Coverage Policy

Language quoted from Centers for Medicare and Medicaid Services (CMS), National Coverage Determinations (NCDs) and coverage provisions in interpretive manuals is italicized throughout the policy. NCDs and coverage provisions in interpretive manuals are not subject to the Local Coverage Determination (LCD) Review Process (42 CFR 405.860[b] and 42 CFR 426 [Subpart D]). In addition, an administrative law judge may not review an NCD. See Section 1869(f)(1)(A)(i) of the Social Security Act.

Unless otherwise specified, italicized text represents quotation from one or more of the following CMS sources:

Title XVIII of the Social Security Act (SSA):

Section 1862(a)(1)(A) excludes expenses incurred for items or services which are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member.

Section 1833(e) prohibits Medicare payment for any claim which lacks the necessary information to process the claim.

Code of Federal Regulations:

42 CFR, Section 410.32, indicates that diagnostic tests may only be ordered by the treating physician (or other treating practitioner acting within the scope of his or her license and Medicare requirements).

42 CFR, Section 410.33 provides guidelines for independent diagnostic testing facilities (IDTFs) including requirements for technician personnel and supervising physicians.

CMS Publications:

CMS Publication 100-02, *Medicare Benefit Policy Manual*, Chapter 11:

40 Other services, H. Noninvasive Vascular Studies for ESRD Patients

CMS Publication 100-03, *Medicare National Coverage Determinations Manual*, Chapter 1:

20.14 Plethysmography

20.17 Noninvasive Tests of Carotid Function

220.5 Ultrasound Diagnostic Procedures

220.11 Thermography

CMS Publication 100-08, *Medicare Program Integrity Manual*, Chapter 13:

13.5 Content of an LCD

13.5.1 Reasonable and Necessary Provisions in LCDs

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

Abstract:

Non-invasive vascular studies utilize ultrasonic Doppler and physiologic principles to assess irregularities in blood flow in arterial and venous systems. The display may be a two dimensional image with spectral analysis and color flow or a plethysmographic recording. For the purposes of this policy, non-invasive vascular studies include duplex scans, physiologic studies and plethysmography.

This local coverage determination specifies NGS policy for non-invasive vascular study testing.

INDICATIONS AND LIMITATIONS:

General Indications:

Non-invasive vascular studies are considered medically necessary if the ordering physician has reasonable expectation that their outcomes will potentially impact the clinical management of the patient. Services are deemed medically necessary when the following conditions are met:

- Significant signs/symptoms of arterial or venous disease are present; and/or
- The information is necessary for appropriate medical and/or surgical management; and/or
- The test is not redundant of other diagnostic procedures that must be performed.

In general, non-invasive studies of the arterial system are utilized when invasive correction is contemplated or when vessels are being harvested for potential use as grafts. It is the responsibility of the physician/provider to ensure the medical necessity of procedures and documentation of such in the medical record.

Credentialing and Accreditation Standards

The accuracy of non-invasive vascular diagnostic studies depends on the knowledge, skill, and experience of the technologist and interpreter. Consequently, the physician performing and/or interpreting the study must be capable of demonstrating documented training and experience and maintain any applicable documentation. A vascular diagnostic study may be personally performed by a physician or a technologist.

The GAO Report to Congressional Committees entitled Medicare Ultrasound Procedures. Consideration of Payment Reforms and Technician Qualifications Requirements states that "Findings from several peer-reviewed studies, the Medicare Payment Advisory Commission, and ultrasound-related professional organizations support requiring that sonographers either have credentials or operate in facilities that are accredited, where specific quality standards apply. In some localities and practice settings, CMS or its contractors have required that sonographers either be credentialed or work in an accredited facility." (GAO-07-734)

- All non-invasive vascular diagnostic studies must be performed under at least one of the following settings: (1) performed by a physician who is competent in diagnostic vascular studies or under the general supervision of physicians who have demonstrated minimum entry level competency by being credentialed in vascular technology, or (2) performed by a technician who is certified in vascular technology, or (3) performed in facilities with laboratories accredited in vascular technology.
- Examples of appropriate personnel certification include, but are not limited to, the Registered Physician in Vascular Interpretation (RPVI), Registered Vascular Technologist (RVT), the Registered Cardiovascular Technologist (RCVT), Registered Vascular Specialist (RVS), and the American Registry of Radiologic Technologists (ARRT) credentials in vascular technology. Appropriate laboratory accreditation includes the American College of Radiology (ACR) Vascular Ultrasound Program, and the Intersocietal Commission for the Accreditation of Vascular Laboratories (ICAVL).
- Additionally, transcutaneous oxygen tension measurements may be performed by individuals possessing the following credentials obtained from appropriate credentialing bodies, such as, but not limited to, the National Board of Diving and Hyperbaric Medicine Technology (NBDHMT): Certified Hyperbaric Technologist (CHT), or Certified Hyperbaric Registered Nurse (CHRN).

Please Note: 42 CFR Section 410.33, Independent Diagnostic Testing Facilities, requirements that supersede those above. For credentialing requirements please see Billing and Coding: Non-Invasive Vascular Studies (A56758)

General Limitations:

A referral must be on record for each non-invasive study performed. A referral for one type of study does not qualify as a referral for all tests.

Non-invasive vascular studies are considered medically necessary only if the outcome will potentially impact the clinical course of the patient. Non-invasive venous studies may be helpful in in assessing the adequacy of venous conduits, prior to various vascular interventions. However, if the medical records suggest the patient is proceeding directly to angiography or another more potentially definitive study, and the specific rationale for the non-invasive studies is not noted, they will be considered as not medically necessary.

Non-invasive vascular studies include patient care required to perform the studies, supervision of the studies, and interpretation of study results with hard copy output or imaging. Digital storage of imaging is acceptable.

The use of any Doppler device that produces a record that does not permit analysis of bidirectional vascular flow or that does not provide a hard copy printout is part of the physical exam of the vascular system and is not reported separately. (*CPT Expert*, 2004, 4th Edition)

It may be necessary to perform simultaneous arterial and venous studies during the same encounter. Documentation must be available to support the medical necessity for both studies.

It is rarely necessary to perform cerebrovascular and upper extremity studies on the same day. Clinical suspicion of extra-cranial carotid disease as justification for pre-operative Doppler studies must be supported in the medical records.

I. Cerebrovascular Arterial Studies

Extracranial Arterial Studies

Covered cerebrovascular arterial study testing methods include (real-time) duplex scans; and Doppler ultrasound waveform with spectral analysis.

Non-covered/non-reimbursed methods include testing methods that have not been found to be useful based on authoritative technological assessments or that are included as part of the physical examination.

Indications:

Cerebrovascular arterial studies may be considered medically necessary if one or more of the following signs and symptoms are present:

- Asymptomatic or symptomatic cervical bruits;
- Amaurosis fugax;
- Focal cerebral or ocular transient ischemic attacks (including but not limited to):
    - localizing symptoms, e.g., sensory loss; and/or
    - weakness of one side of the face; and/or
    - slurred speech; and/or
    - weakness of a limb;
- Syncope that is strongly suggestive of vertebrobasilar or bilateral carotid artery disease in etiology, as suggested by medical history;
- Recent history of a previous neurologic or cerebrovascular event;
- Before major cardiac and vascular surgery when a bruit is noted, there is history of previous neurologic or cerebrovascular event, or there is documented clinical suspicion of extracranial carotid occlusion and the rationale for the study is included in the chart;
- After carotid endarterectomy (outside the global period), or follow-up of previously documented stenoses;
- Pulsatile neck mass;
- Evaluation of blunt or penetrating neck trauma;
- Ocular microembolism (optic nerve/retinal arterial-Hollenhorst plaques/ocular);

Limitations:

Studies may **not** be considered medically necessary if performed for the following signs and symptoms:

- Drop attack or syncope are rare indications usually seen with vertebrobasilar or bilateral carotid artery disease.
- Dizziness is not a typical indication unless associated with other localizing signs or symptoms. However, episodic dizziness with symptom characteristics typical of transient ischemic attacks may indicate medical necessity, especially when other more common sources, e.g., postural hypotension or transiently decreased cardiac output as demonstrated by cardiac event monitoring, have been previously excluded; and/or
- Headaches (including migraines).

Transcranial Doppler (TCD) Studies

Transcranial Doppler (TCD) studies of the intracranial arteries and transcranial duplex imaging of extracranial arteries are approved methods of testing. The presence, location, and extent of disease can be evaluated by utilizing directional pulsed Doppler to estimate flow velocities and assess intracranial vessel hemodynamics and physiology.

Indications:

TCD studies are **allowed** for the following:

- Detection and evaluation of the hemodynamic effects of severe stenosis or occlusion of the extracranial (greater than or equal to 60% diameter reduction) and major basal intracranial arteries (greater than or equal to 50% diameter reduction);
- Detection and serial evaluation of cerebral vasospasm complicating subarachnoid hemorrhage;
- Evaluation of intracranial hemodynamic abnormalities in patients with suspected brain death;
- Intraoperative and perioperative monitoring of intracranial flow velocity and hemodynamic patterns during carotid endarterectomy, (although the professional component could only be reimbursed if it is provided during the operative procedure by a physician that is not a member of the operating team);
- Evaluation of cerebral embolization; and/or
- Assessing hemodynamic effects, patterns, and extent of collateral circulation in patients with known regions of severe stenosis or occlusion when necessary to care for the patient; and
- Assessing stroke risk in children aged two to sixteen with homozygous sickle cell disease; and
- As an alternative to an echocardiogram to detect residual right to left shunting after repair/closure of an intracardiac or intrapulmonary shunt.

Multiple cerebrovascular procedures may be allowed during the same encounter given the physician/provider can demonstrate medical necessity as documented in the patient's medical record. For example, physiologic studies and a duplex scan are allowed on the same date of service given the provider is able to document medical necessity, e.g., greater than or equal to 50% stenosis on duplex scan or significant symptoms as demonstrated by the indications for the study.

Limitations:

TCD studies are **not** indicated for:

- Evaluation of brain tumors;
- Assessment of familial and degenerative disease of the cerebrum, brainstem, cerebellum, basal ganglia and motor neurons;
- Evaluation of infectious and inflammatory conditions;
- Psychiatric disorders; and/or
- Epilepsy.

Transcranial Doppler (TCD) is considered investigational and not medically necessary for the following indications:

- Assessing patients with migraine;
- Monitoring during cardiopulmonary bypass and other cerebrovascular and cardiovascular interventions, and surgical procedures (except during carotid endarterectomy, as noted above);
- Evaluation of patients with dilated vasculopathies such as fusiform aneurysms;
- Assessing autoregulation, physiologic, and pharmacological responses of cerebral arteries; and/or
- Evaluating children with various vasculopathies, such as moyamoya disease and neurofibromatosis.

II. Peripheral Arterial Examinations

Covered peripheral arterial study testing methods include duplex scans; Doppler waveform or spectral analysis; volume, impedance or strain gauge plethysmography; and transcutaneous oxygen tension measurement.

Non-covered peripheral arterial study testing methods include thermography, mechanical oscillometry, inductance or capacitance plethysmography, photoelectric plethysmography, differential plethysmography, and light reflective rheography.

Indications:

Non-invasive peripheral arterial examinations, performed to establish the level and/or degree of arterial occlusive disease, are medically necessary if (1) clinical evidence of limb ischemia is present and (2) the patient is a candidate for invasive/surgical therapeutic interventions. Acute ischemia is often characterized by the sudden onset of severe pain, coldness, numbness and pallor of the extremity. Chronic ischemia can be manifested by intermittent claudication, pain at rest, diminished pulse, ulceration, and gangrene.

A routine history and physical examination, which includes ankle/brachial indices (ABIs), can readily document the presence or absence of ischemic disease in the majority of cases. An ABI is not a reimbursable procedure by itself; rather, ABI may be reimbursed when derived from a more comprehensive procedure which includes a permanent chart copy of the measured pressures and waveforms in the examined vessels.

An ABI should be abnormal, e.g., <0.9 at rest, **and** accompanied by other appropriate indications before proceeding to additional studies.

Peripheral artery studies may be considered **medically necessary** if the following signs and symptoms are present:

- Claudication of such severity that it interferes significantly with the patient's occupation or lifestyle, or claudication with inability to stress the patient;
- Rest pain (typically including the forefoot), usually associated with absent pulses, which becomes increasingly severe with elevation and diminishes with placement of the leg in a dependent position;
- Tissue loss defined as gangrene or pre-gangrenous changes of the extremity, or ischemic ulceration of the extremity occurring in the absence of pulses;
- Aneurysmal disease;
- Evidence of thromboembolic events;
- Blunt or penetrating trauma (including complications of diagnostic and/or therapeutic procedures); and/or
- Follow-up of grafts or other vascular intervention

Pre-surgical conduit assessment of the upper extremity/radial artery(ies) may be performed prior to use in coronary artery bypass grafting (CABG) or as other arterial conduits.

Limitations:

Peripheral artery studies may **not** be considered medically necessary if specific clinical descriptions are not provided. Vague and anatomically imprecise terms such as "burning of the feet"," pain in the limb", and "edema" should be avoided, and more precise anatomic and pathologic descriptions included.

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, if the physician/provider can document medical necessity in the patient's medical record.

In general, non-invasive studies of the arterial system are to be utilized when invasive correction is contemplated or severity of findings dictate non-invasive study follow-up, but not for following non-invasive medical treatment regimens. The latter may be followed with physical findings and/or progression or relief of signs and/or symptoms. Screening of the asymptomatic patient is not covered by Medicare.

III. Peripheral Venous Examinations

Indications for venous examinations are separated into three major categories: deep vein thrombosis (DVT), chronic venous insufficiency, and vein mapping. Studies are medically necessary only if the patient is a candidate for anticoagulation, thrombolysis or invasive therapeutic procedure(s).

Since the signs and symptoms of arterial occlusive disease and venous disease are so divergent, the performance of simultaneous arterial and venous studies during the same encounter should be accompanied by a clear assessment of the clinical need for both studies. Consequently, documentation clearly supporting the medical necessity of both procedures performed during the same encounter must be available in the patient's medical record.

Deep Vein Thrombosis (DVT)

The signs and/or 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:

- Clinical signs and/or symptoms of DVT including, but not limited to, edema, tenderness, inflammation, and/or erythema;
- Clinical signs and/or symptoms of pulmonary embolus (PE) including, but not limited to, hemoptysis, chest pain, and/or dyspnea;
- Unexplained lower extremity edema status, post major surgical procedures, trauma, other or progressive illness/condition; and/or
- Unexplained lower extremity pain, excluding pain of skeletal origin.

These studies are rarely considered medically necessary for the following:

- Bilateral limb edema in the presence of signs and/or symptoms of congestive heart failure, exogenous obesity and/or arthritis; and/or
- Follow-up of phlebitis unless signs/symptoms suggest possible extension of thrombus.

Chronic Venous Insufficiency

Chronic venous insufficiency may be divided into three categories: primary varicose veins, recurrent DVT, and post-thrombotic (post-phlebitic) syndrome. Peripheral venous studies may be indicated for the evaluation of:

- Venous function in patients with ulceration suspected to be secondary to venous insufficiency when documenting venous valvular incompetence prior to invasive therapeutic intervention;
- 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; and/or
- Superficial thrombophlebitis involving the proximal thigh (to investigate whether there was thrombus at the saphenofemoral junction that would demand either anticoagulation or surgical ligation).

Vein Mapping

Mapping the saphenous veins prior to scheduled revascularization procedures is covered by Medicare when it is expected that an autologous vein will be used to help select an optimal native vessel for grafting .

Vein mapping is not always necessary as a routine pre-operative study, and clinical indications should be noted on the request.

Vein mapping may be performed prior to creating a dialysis fistula. Please see "VI. Vessel Mapping of Vessels for Hemodialysis Access".

IV. Visceral Vascular Studies

Indications:

This procedure is indicated in the evaluation and/or management of vascular disease involving vessels of the abdominal, pelvic, scrotal contents, and/or retroperitoneal organs.

Limitations:

Duplex scanning may be of value in the evaluation of an abdominal aortic aneurysm. Findings supportive of the medical necessity for the study should be included in the request and the medical record/report. Follow-up of an abdominal aneurysm on a periodic basis using abdominal ultrasound rather than visceral vascular studies to determine growth and potential need for intervention is allowed.

Vascular studies are not the initial diagnostic modality for the evaluation of abdominal pain/tenderness. There must be a high index of suspicion that the pain is caused by a vascular disorder, such as mesentery ischemia.

Noninvasive vascular studies are medically necessary only if the outcome will potentially impact the clinical course of the patient. For example, if a patient is going to proceed on to other diagnostic and/or therapeutic procedures regardless of the outcome of noninvasive studies, noninvasive vascular procedures are usually not medically necessary. That is, if it is obvious from the findings of the history and physical examination that the patient is going to proceed to angiography, then noninvasive vascular studies may not be medically necessary.

V. Hemodialysis Access Examination

Indications:

Medicare will consider separate payment for vascular studies on symptomatic ESRD patients, when Doppler flow studies are used to provide diagnostic information to determine the appropriate medical intervention. Medicare considers a Doppler flow study medically necessary when the beneficiary's dialysis access site manifests signs or symptoms associated with vascular compromise, and when the results of this test are necessary to determine the clinical course of treatment.

Signs or symptoms in patients with ESRD of impending failure of the hemodialysis access site, **including:**

- Elevated venous pressure > 200mm Hg on a 200 cc/min. pump;
- Elevated recirculation of time of 12% or greater, and
- Low urea reduction rate < 60%

- An access with a palpable "water hammer" pulse on examination (which implies venous outflow obstruction)

VI. Vessel Mapping of Vessels for Hemodialysis Access

Indications:

Vessel mapping of vessels for hemodialysis access is considered for Medicare payment when it is performed preoperatively prior to creation of hemodialysis access using an autogenous hemodialysis conduit, including arterial inflow and venous outflow.

Limitations:

Medicare will limit payment to either a Doppler flow study or an angiogram, but not both, unless documentation is provided to support the medical necessity for both studies.

> An example of a clinical situation demonstrating the need for both studies would be a scenario where a Doppler flow study demonstrates reduced flow (blood flow rate less than 800 cc/min or a decreased flow of 25% or greater from previous study), and the physician requires an arteriogram, to define the extent of the problem. The patient's medical record(s) must provide documentation supporting the need for more than one imaging study.

Summary of Evidence

Pursuant to a meeting between NGS staff and clinical directors of three academic cardiovascular programs in Jurisdiction K for a discussion of the literature, and clinical experience with non-invasive vascular imaging at their facilities, the seven recommended articles for discussion are now included in the bibliography. Two of the articles, Taggart and Agrifoglio are persuasive in characterizing the general acceptance of the use of arterial grafts, particularly the radial artery, in the performance of coronary bypass grafting. Lin et al, is an up to date review of the use of carotid duplex ultrasound prior to cardiac surgery reviewing over 3000 cases. The remaining articles are persuasive in the use of ultrasound in the mapping of vessels for hemodialysis, extremity revascularization, and the development of perforator flaps.

Analysis of Evidence (Rationale for Determination)

The articles demonstrate that the historical concern about the performance of venous and arterial Doppler studies on the same Date of Service is outdated. The use of these concurrent studies to optimize graft selection for coronary bypass surgery and other vascular interventions has become standard of care, and subjecting beneficiaries to undue travel, time and effort in preparation for major surgery is not justifiable. These revisions seek to permit appropriate pre-operative studies, while maintaining reasonable prohibition of venous and arterial studies performed together for vague and poorly documented symptoms. The recent review of clinical utility of carotid duplex ultrasound (Lin, JC et al) is less conclusive. However, it does suggest that a number of physical findings or historical events warrant anatomic assessment of the carotids prior to major vascular surgeries. The policy will accommodate these patients with coverage based on documentation by the operative team.

General Information

Associated Information

N/A

Sources of Information

This bibliography presents those sources that were obtained during the development of this policy. National Government Services is not responsible for the continuing viability of Web site addresses listed below.

Carrier Advisory Committee

National Government Services and other Medicare contractors' local coverage determinations.

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References added to support reconsideration request review – 08/23/2011

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N/A

Revision History Information

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
10/01/2019	R26	LCD revised to correct typographical errors in CMS National Coverage Policy section.	• Typographical Error
10/01/2019	R25	This LCD was converted to the new "no-codes" format. There has been no change in coverage with this LCD revision.	• Revisions Due To Code Removal
08/01/2019	R24	Consistent with Change Request 10901, all coding information, National coverage provisions, and Associated Information (Documentation Requirements, Utilization Guidelines) have been removed from the LCD and placed in the related Billing and Coding Article, A56758. There has been no change in coverage with this LCD revision.	• Provider Education/Guidance
10/01/2018	R23	Sources of Information section revised to reflect active URL - https://www.acr.org/. 10/01/18 *At this time, the 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires*	• Other

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
		comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.	
10/01/2018	R22	Due to the annual ICD-10-CM update, ICD-10-CM code I63.8 was deleted from the "ICD-10-CM Codes that Support Medical Necessity" section- Group 1 and Group 2 and was replaced by I63.81 and I63.89. Based on a provider request, ICD-10-CM codes I82.591, I82.592 and I82.593 have been added to the "ICD-10-CM Codes that Support Medical Necessity" section- Group 4, effective for dates of service on or after 10/01/2017. *10/01/2018: At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.*	• Request for Coverage by a Provider (Part A) • Revisions Due To ICD-10-CM Code Changes
01/01/2018	R21	LCD revised to clarify provisions for performing arterial and venous studies or cerebrovascular and upper extremity studies during the same encounter. Indications for cerebrovascular studies were revised to add "Before major cardiac and vascular surgery when a bruit is noted, there is history of previous neurologic or cerebrovascular event, or there is documented clinical suspicion of extracranial carotid occlusion and the rationale for the study is included in the chart". Indications for peripheral arterial studies were revised to add "An ABI is not a reimbursable procedure by itself; rather, ABI may be reimbursed when derived from a more comprehensive procedure which includes a permanent chart copy of the measured pressures and waveforms in the examined vessels." Limitations was revised to state " Peripheral artery studies may not be considered medically necessary if specific clinical descriptions are not provided. Vague and anatomically imprecise terms such as “burning of the feet”,” pain in the limb”, and “edema” should be avoided, and more precise anatomic and pathologic descriptions included" and to remove the list of specific signs and symptoms.	• Provider Education/Guidance • Request for Coverage by a Provider (Part A)

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
		Indications for vein mapping were revised to remove specific conditions for pre-operative testing. Sources of Information were added to support the changes in the LCD. *DATE 01/01/2018: At this time, the 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which require comment and notice. This revision is not a restriction to the coverage determination; and therefore, not all the fields included are applicable as noted in this policy.*	
10/01/2017	R20	LCD revised for annual ICD-10 updates for 2018. • ICD-10 codes I21.9, I21.A1, and I21.A9 were added for Group 7 (CPT codes 93930, 93931, 93970, and 93971) • ICD-10 codes L97.115, L97.116, L97.118, L97.125, L97.126, L97.128, L97.215, L97.216, L97.218, L97.225, L97.226, L97.228, L97.315, L97.316, L97.318, L97.325, L97.326, L97.328, L97.415, L97.416, L97.418, L97.425, L97.426, L97.428, L97.515, L97.516, L97.518, L97.525, L97.526, L97.528, L97.815, L97.816, L97.818, L97.825, L97.826, L97.828, L97.915, L97.916, L97.918, L97.925, L97.926, and L97.928 were added to Group 3 (CPT codes 93922, 93923, 93924, 93925, 93926, 93930 and 93931). *DATE (10/01/2017): At this time, the 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.*	• Revisions Due To ICD-10-CM Code Changes

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
01/01/2017	R19	LCD revised for annual CPT/HCPCS update. References to CPT code 93965 were removed from the LCD, as this code was deleted for 2017.	• Revisions Due To CPT/HCPCS Code Changes
10/01/2016	R18	Added ICD-10 codes H53.8 and I63.00 to Group 1 (CPT codes 93880, 93882), and added ICD-10 codes T82.856A, T82.856D and T82.856S to Group 3 (CPT codes 93922, 93923, 93924, 93925, 93926, 93930 and 93931), effective 10/1/2016. Added two sources of information.	• Request for Coverage by a Practitioner (Part B)
10/01/2016	R17	Added ICD-10 code I60.2 to Group 2 (CPT codes 93886, 93888, 93890, 93892, 93893), replacing deleted codes I60.21 and I60.22.	• Revisions Due To ICD-10-CM Code Changes
10/01/2016	R16	LCD revised for annual ICD-10 updates for 2017 with the following changes: • For group 1 (CPT codes 93880, 93882), ICD-10 codes H34.811, H34.812, H34.813, H34.831, H34.832 and H34.833 were deleted and replaced by H34.8110-H34.8112, H34.8120-H34.8122, H34.8130-H34.8132, H34.8310-H34.8312, H34.8320-H34.8322, H34.8330-H34.8332. • For group 1, ICD-10 codes I72.5, I72.6, I77.70, and I77.75 were added. • For group 3 (CPT codes 93922, 93923, 93924, 93925, 93926, 93930 and 93931), ICD-10 codes I77.70, I77.76, I77.77 were added. • For group 5 (CPT codes 93975, 93976, 93978, 93979), ICD-10 codes I16.0, I16.1, I16.9, I77.70 were added. In addition ICD-10 codes K55.011-K55.069 replaced deleted code K55.0, ICD-10 codes N50.811-N50.819, N50.82 and N50.89 replaced deleted code N50.8, ICD-10 codes N83.511-N83.519 replaced deleted code N83.51, and N83.521-N83.529 replaced deleted code N83.52. Group 4 was revised to add ICD-10 code R07.9, effective 10/1/2015. Group 5 was revised to add ICD-10 code K74.60, effective 10/01/2015.	• Request for Coverage by a Practitioner (Part B) • Revisions Due To ICD-10-CM Code Changes
10/01/2015	R15	ICD-10 codes I82.401, I82.402 and I82.403 have been added to the payable diagnoses for Group 4, Extremity Venous Evaluation (93965, 93970 and 93971), effective 10/01/2015.	• Request for Coverage by a Practitioner (Part B)

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
10/01/2015	R14	ICD 10 code Z01.810 has been added as a primary diagnosis to be reported with payable diagnoses for Group 7, Pre-surgical Conduit Mapping for Coronary Artery Bypass Graft Procedures (93930, 93931, 93965, 93970, and 93971), effective 10/01/2015. This reference was added to Sources: Gomik HL, Gerhard-Herman MD, Misra S, et al. Appropriate use criteria for peripheral vascular ultrasound and physiological testing part II: testing for venous disease and evaluation of hemodialysis access. *JACC*. 2013;62(7). http://content.onlinejacc.org. Accessed / 07/19/2013.	• Request for Coverage by a Practitioner (Part B)
10/01/2015	R13	ICD-10 code R60.9 has been added to the payable diagnoses for Group 4, Extremity Venous Evaluation (93965, 93970 and 93971), effective 10/01/2015.	• Provider Education/Guidance • Request for Coverage by a Practitioner (Part B)
10/01/2015	R12	ICD-10 code N50.9 has been added to the payable diagnoses for Group 5, Visceral Vascular Studies (93975, 93976, 93978, 93979) effective 10/01/2015. The credentialing statement below was corrected to include information from the ICD-9 version of this LCD: "Additionally, transcutaneous oxygen tension measurements may be performed by individuals possessing the following credentials obtained from appropriate credentialing bodies, such as, but not limited to, the National Board of Diving and Hyperbaric Medicine Technology (NBDHMT): Certified Hyperbaric Technologist (CHT), or Certified Hyperbaric Registered Nurse (CHRN)."	• Provider Education/Guidance • Request for Coverage by a Practitioner (Part B)
10/01/2015	R11	Effective for dates of service on or after 10/1/2015, ICD-10 codes I97.611 and I97.618 were added to the payable diagnoses for Group 3, Extremity Arterial Evaluation (93922, 93923, 93924, 93925, 93926, 93930 and 93931).	• Request for Coverage by a Provider (Part A)
10/01/2015	R10	Effective for dates of service on or after 10/1/2015, ICD-10 codes I97.410 and I97.610 were added to the payable diagnoses for Group 3, Extremity Arterial Evaluation (93922, 93923, 93924, 93925, 93926, 93930 and 93931). Effective for dates of service on or after 10/1/2015, ICD-10 code I80.3 was added to the payable diagnoses for Group 4,	• Request for Coverage by a Provider (Part A)

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASONS FOR CHANGE
		Extremity Venous Evaluation (93965, 93970 and 93971).	
10/01/2015	R9	ICD-10 code I65.29 was added to Groups 1 and 2, payable diagnoses for CPT codes 93880, 93882, 93886, 93888, 93890, 93892, 93893. ICD-10 codes I82.4Y1-I82.4Y9, I82.4Z1-I82.4Z9, I82.5Y1-I82.5Y9, I82.5Z1-I82.5Z9 were added to Group 4, payable diagnoses for CPT codes 93965, 93970 and 93971. These changes are effective 10/1/2015.	• Request for Coverage by a Practitioner (Part B)
10/01/2015	R8	ICD-10 code M54.2 was added to Group 1, payable diagnoses for Cerebrovascular Evaluation (93880, 93882), to be used to report suspicion of carotid artery dissection. For dates of service prior to 10/1/2015, this condition should be reported with ICD-9 code 723.1.	• Request for Coverage by a Beneficiary
10/01/2015	R7	Effective for dates of service on or after 10/1/2015, ICD-10 code I63.9 was added to Group 1, payable diagnoses for Cerebrovascular Evaluation (93880, 93882), and Group 2, payable diagnoses for Transcranial Doppler Studies (93886, 93888, 93890, 93892, 93893).	• Request for Coverage by a Practitioner (Part B)
10/01/2015	R6	Effective for dates of service on or after 10/1/2015, ICD-10 code I73.9 was added to the payable diagnoses for Extremity Arterial Evaluation (93922, 93923, 93924, 93925, 93926, 93930 and 93931).	• Request for Coverage by a Practitioner (Part B)
10/01/2015	R5	CPT code groups were rearranged to align more closely with the ICD-10 code group numbers. ICD-10 code I87.2 added to Group 8 diagnoses.	• Other
10/01/2015	R4	ICD-10 codes were revised to add the 7th digit for D=subsequent encounter and S=sequela, where the 7th digit, A=initial encounter was already included.	• Provider Education/Guidance
10/01/2015	R3	LCD revised 7/1/2015 to add sources reviewed for a reconsideration request. No change in coverage was made.	• Reconsideration Request
10/01/2015	R2	Added ICD-10 code R10.2 to Group 3 and added ICD-10 code I12.9 to Group 9 covered diagnoses.	• Other
10/01/2015	R1	LCD updated with changes made since this version was initially posted.	• Other

Associated Documents

Attachments

N/A

Related Local Coverage Documents

Articles

A56758 - Billing and Coding: Non-Invasive Vascular Studies

Related National Coverage Documents

N/A

Public Versions

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- Clots