carelon

Status: Revised
Doc ID: RBM15-0926.1
Effective Date: 09/19/2026
Last Review Date: 01/29/2026

Approval and implementation dates for specific health plans may vary. Please consult the applicable health plan for more details.

Clinical Appropriateness Guidelines

Radiology

Appropriate Use Criteria: Vascular Ultrasound and Physiologic Testing

Proprietary

Table of Contents

Description and Application of the Guidelines

The Carelon Clinical Appropriateness Guidelines (hereinafter “the Carelon Clinical Appropriateness Guidelines” or the “Guidelines”) are designed to assist providers in making the most appropriate treatment decision for a specific clinical condition for an individual. The Guidelines establish objective and evidence-based criteria for medical necessity determinations, where possible, that can be used in support of the following:

- To establish criteria for when services are medically necessary
- To assist the practitioner as an educational tool
- To encourage standardization of medical practice patterns
- To curtail the performance of inappropriate and/or duplicate services
- To address patient safety concerns
- To enhance the quality of health care
- To promote the most efficient and cost-effective use of services

The Carelon guideline development process complies with applicable accreditation and legal standards, including the requirement that the Guidelines be developed with involvement from appropriate providers with current clinical expertise relevant to the Guidelines under review and be based on the most up-to-date clinical principles and best practices. Resources reviewed include widely used treatment guidelines, randomized controlled trials or prospective cohort studies, and large systematic reviews or meta-analyses. Carelon reviews all of its Guidelines at least annually.

Carelon makes its Guidelines publicly available on its website. Copies of the Guidelines are also available upon oral or written request. Additional details, such as summaries of evidence, a list of the sources of evidence, and an explanation of the rationale that supports the adoption of the Guidelines, are included in each guideline document.

Although the Guidelines are publicly available, Carelon considers the Guidelines to be important, proprietary information of Carelon, which cannot be sold, assigned, leased, licensed, reproduced or distributed without the written consent of Carelon. Use of the Guidelines by any external AI entity without the express written permission of Carelon is prohibited.

Carelon applies objective and evidence-based criteria, and takes individual circumstances and the local delivery system into account when determining the medical appropriateness of health care services. The Carelon Guidelines are just guidelines for the provision of specialty health services. These criteria are designed to guide both providers and reviewers to the most appropriate services based on a patient’s unique circumstances. In all cases, clinical judgment consistent with the standards of good medical practice should be used when applying the Guidelines. Guideline determinations are made based on the information provided at the time of the request. It is expected that medical necessity decisions may change as new information is provided or based on unique aspects of the patient’s condition. The treating clinician has final authority and responsibility for treatment decisions regarding the care of the patient and for justifying and demonstrating the existence of medical necessity for the requested service. The Guidelines are not a substitute for the experience and judgment of a physician or other health care professionals. Any clinician seeking to apply or consult the Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment.

The Guidelines do not address coverage, benefit or other plan specific issues. Applicable federal and state coverage mandates take precedence over these clinical guidelines, and in the case of reviews for Medicare Advantage Plans, the Guidelines are only applied where there are not fully established CMS criteria. If requested by a health plan, Carelon will review requests based on health plan medical policy/guidelines in lieu of the Carelon Guidelines. Pharmaceuticals, radiotracers, or medical devices used in any of the diagnostic or therapeutic interventions listed in the Guidelines must be FDA approved or conditionally approved for the intended use. However, use of an FDA-approved or conditionally approved product does not constitute medical necessity or guarantee reimbursement by the respective health plan.

The Guidelines may also be used by the health plan or by Carelon for purposes of provider education, or to review the medical necessity of services by any provider who has been notified of the need for medical necessity review, due to billing practices or claims that are not consistent with other providers in terms of frequency or some other manner.

General Clinical Guideline

Clinical Appropriateness Framework

Critical to any finding of clinical appropriateness under the guidelines for a specific diagnostic or therapeutic intervention are the following elements:

- Prior to any intervention, it is essential that the clinician confirm the diagnosis or establish its pretest likelihood based on a complete evaluation of the patient. This includes a history and physical examination and, where applicable, a review of relevant laboratory studies, diagnostic testing, and response to prior therapeutic intervention.
- The anticipated benefit of the recommended intervention is likely to outweigh any potential harms, including from delay or decreased access to services that may result (net benefit).
- Widely used treatment guidelines and/or current clinical literature and/or standards of medical practice should support that the recommended intervention offers the greatest net benefit among competing alternatives.
- There exists a reasonable likelihood that the intervention will change management and/or lead to an improved outcome for the patient.

Providers may be required to submit clinical documentation in support of a request for services. Such documentation must a) accurately reflect the clinical situation at the time of the requested service, and b) sufficiently document the ordering provider's clinical intent.

If these elements are not established with respect to a given request, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would justify a finding of clinical appropriateness. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account to the extent permitted by law.

Simultaneous Ordering of Multiple Diagnostic or Therapeutic Interventions

Requests for multiple diagnostic or therapeutic interventions at the same time will often require a peer-to-peer conversation to understand the individual circumstances that support the medical necessity of performing all interventions simultaneously. This is based on the fact that appropriateness of additional intervention is often dependent on the outcome of the initial intervention.

Additionally, either of the following may apply:

- Current literature and/or standards of medical practice support that one of the requested diagnostic or therapeutic interventions is more appropriate in the clinical situation presented; or
- One of the diagnostic or therapeutic interventions requested is more likely to improve patient outcomes based on current literature and/or standards of medical practice.

Repeat Diagnostic Intervention

In general, repeated testing of the same anatomic location for the same indication should be limited to evaluation following an intervention, or when there is a change in clinical status such that additional testing is required to determine next steps in management. At times, it may be necessary to repeat a test using different techniques or protocols to clarify a finding or result of the original study.

Repeated testing for the same indication using the same or similar technology may be subject to additional review or require peer-to-peer conversation in the following scenarios:

- Repeated diagnostic testing at the same facility due to technical issues
- Repeated diagnostic testing requested at a different facility due to provider preference or quality concerns

- Repeated diagnostic testing of the same anatomic area based on persistent symptoms with no clinical change, treatment, or intervention since the previous study
- Repeated diagnostic testing of the same anatomic area by different providers for the same member over a short period of time

Repeat Therapeutic Intervention

In general, repeated therapeutic intervention in the same anatomic area is considered appropriate when the prior intervention proved effective or beneficial and the expected duration of relief has lapsed. A repeat intervention requested prior to the expected duration of relief is not appropriate unless it can be confirmed that the prior intervention was never administered. Requests for ongoing services may depend on completion of previously authorized services in situations where a patient's response to authorized services is relevant to a determination of clinical appropriateness.

Vascular Ultrasound and Physiologic Testing

General Information/Overview

Scope

These guidelines address vascular imaging (arterial ultrasound and physiologic studies) in both adult and pediatric populations. For interpretation of the Guidelines, and where not otherwise noted, “adult” refers to persons aged 19 and older, and “pediatric” refers to persons aged 18 and younger. Where separate indications exist, they are specified as **Adult** or **Pediatric**. Where not specified, indications and prerequisite information apply to persons of all ages.

See the Coding section for a list of modalities included in these guidelines.

Technology Considerations

Duplex imaging is a combination of direct vascular ultrasound imaging and Doppler interrogation of arterial and/or venous flow. In many clinical scenarios, duplex imaging is recommended before advanced vascular imaging because it is readily available, portable, not associated with radiation exposure, and lower cost. Duplex imaging is, however, highly operator dependent. Furthermore, in evaluation prior to revascularization, duplex imaging may not need to be performed if advanced imaging will also be required.

Ankle brachial index, the ratio of blood pressure at the ankle to blood pressure in the brachial artery, is a noninvasive metric used in the diagnosis of peripheral artery disease, particularly lower extremity arterial disease, and a predictor of cardiovascular disease risk. Ankle brachial index is one of several approaches to physiological assessments of downstream blood flow. Others include volume plethysmography, transcutaneous oxygen tension, and pulse volume recordings. Physiological testing may be performed at rest and following exercise.

Definitions

Phases of the care continuum are broadly defined as follows:

- **Screening** is testing in the absence of signs or symptoms of disease
- **Diagnosis** is testing based on a reasonable suspicion of a particular condition or disorder, usually due to the presence of signs or symptoms
- **Management** is testing to direct therapy of an established condition, which may include preoperative or postoperative imaging, or imaging performed to evaluate the response to nonsurgical intervention. Patients will usually have new or worsening signs or symptoms although progressive imaging findings may be sufficient in some scenarios.
- **Surveillance** is the periodic assessment following completion of therapy, or for monitoring known disease that is stable or asymptomatic

Cannot be performed or is nondiagnostic – applies when the test:

- Is positive or indeterminate for clinically significant pathology when the information provided about the abnormality by the test is not sufficient to direct subsequent management
- Is negative when the negative likelihood ratio of the test is both insufficient to confidently exclude the absence of suspected disease and unable to direct subsequent management. This typically applies in scenarios with moderate to high clinical pretest probability with negative testing or low pretest probability with clear evidence for net benefit
- Has been previously nondiagnostic because of a persistent clinical factor (e.g., body habitus, immobility) that is very likely to make retesting nondiagnostic as well

- Cannot be performed due to a medical contraindication (e.g., contrast nephrotoxicity, allergy, or in highly radiation sensitive populations such as pediatrics and pregnancy) or reasonable unavailability related to lack of local expertise or service availability.

Clinical Indications

The following section includes indications for which vascular imaging is considered medically necessary, along with prerequisite information and supporting evidence where available. Indications, diagnoses, or imaging modalities not specifically addressed are considered not medically necessary.

It is recognized that imaging often detects abnormalities unrelated to the condition being evaluated. Such findings must be considered within the context of the clinical situation when determining whether additional imaging is required.

Neck

Aneurysm, extracranial (carotid or vertebral)

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Arteriovenous malformation (AVM) or fistula (AVF)

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Dissection, extracranial, including evaluation for Horner's syndrome

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Fibromuscular dysplasia

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Rationale

An international consensus statement on fibromuscular dysplasia states that "there are inadequate data to recommend one imaging modality over another for the diagnosis of cerebrovascular FMD. Catheter-based angiography remains the gold standard, however, in most centers this modality has been replaced by CTA or contrast-enhanced MRA as the initial imaging modality… in high-volume centers with experience in vascular duplex ultrasonography for the evaluation of carotid FMD, it is reasonable to start with a carotid duplex exam although this modality is inadequate to assess the vertebral and intracranial arteries for FMD."[1]

Giant cell arteritis (temporal arteritis)

Vascular imaging is considered medically necessary for the diagnosis and management of giant cell arteritis.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Rationale

Evidence-based guidelines recommend the use of ultrasound for cranial giant cell arteritis.[2] While biopsy often remains necessary for confirmation of the diagnosis, treatment can be initiated on the basis of imaging findings without compromising the biopsy results.[3] Some guidelines recommend ultrasound of both the temporal and axillary arteries when considering giant cell arteritis, in order to improve the diagnostic yield.[4]

Signs, symptoms, and abnormal imaging (including stroke and transient ischemic attack (TIA))

Vascular imaging is medically necessary for **ANY** of the following scenarios when vascular imaging has not been performed for evaluation of these signs and symptoms:

- Hollenhorst plaques (cholesterol emboli) or retinal neovascularity on retinal examination
- Stroke or TIA symptoms*
- Evidence of stroke on brain imaging
- Subclavian steal syndrome

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

**Examples include unilateral motor or sensory deficit, slurred speech and visual field deficits*

Rationale

For subacute and chronic strokes or transient ischemic attacks (TIAs), primary medical management options include secondary stroke prevention with antiplatelets and risk reduction. Surgical options include carotid endarterectomy or stenting for patients with moderate or several extracranial stenosis, or rarely extracranial-intracranial bypass.[5]

When evaluating a patient with syncope or presyncope, cardiac workup is appropriate for initial evaluation in many cases. The American College of Radiology, in their Appropriateness Criteria for syncope, state, “In patients with an abnormal ECG or findings on history or physical examination suggesting a cardiac etiology of syncope or presyncope, transthoracic echocardiography can be used to assess for structural heart disease or to help identify risk factors for malignant arrhythmias and is validated by multiple studies and supported by numerous societies.”[6]

A guideline from the American College of Cardiology, American Heart Association, and Heart Rhythm Society states that in patients with uncomplicated syncope events in the absence of neurological features on history or examination, “The evidence suggests that routine neurological testing is of very limited value in the context of syncope evaluation and management,” noting a low diagnostic yield in these patients. They recommend against carotid artery imaging and neuroimaging in these patients.[7]

Stenosis or occlusion of the extracranial carotid and vertebrobasilar arteries without symptoms

Duplex ultrasound is considered medically necessary when the results are expected to influence patient management, including determining need for procedures or a change in medication regimen in **ANY** of the following scenarios:

- **Screening of asymptomatic patients**
    - Starting 5 years post-neck irradiation and every 3 years thereafter
    - For patients at high risk of atherosclerotic carotid stenosis

    - *High Risk is defined as presence of peripheral artery disease (PAD), coronary artery disease (CAD), diabetes mellitis or 2 of the following: hypertension, hyperlipidemia, current tobacco use,*

- **Surveillance of established carotid disease in asymptomatic persons with no prior revascularization:**
    - Moderate (50%-69%) stenosis: every 12 months
    - Severe (70% or greater) stenosis: every 6 months
- **Post-revascularization**
    - Baseline evaluation, then every 6 months for 2 years, then annually

Note: Revascularization refers to carotid endarterectomy or carotid artery stenting.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Rationale

In the absence of symptoms, multiple high-quality evidence-based guidelines do not recommend screening for high-grade carotid stenosis in low or average risk patients.[8-10] The U.S. Preventive Services Task Force does not recommend screening for asymptomatic carotid artery stenosis in the general adult population, as there is no direct evidence that screening reduces stroke mortality or morbidity and low-level evidence that the harms of screening may outweigh the benefits, with the 30-day risk of post-revascularization stroke slightly higher than the absolute stroke risk reduction from screening.[9] With regard to screening in high-risk patients, much of the evidence is based on non-randomized and observational data. There is inconsistency regarding specific risk factors that confer a high risk, but the factors most commonly addressed include diabetes mellitus, coronary artery disease, and peripheral arterial disease. Other risk factors for which the Society for Vascular Surgery recommends consideration of screening include current cigarette smoking, hypertension, and hypercholesterolemia, citing a systematic review in which these cohorts "might be expected to have an approximate prevalence of ≥ 20% of significant carotid artery stenosis even if asymptomatic." While carotid bruit is listed among the risk factors for which screening can be considered, the authors note that "this physical finding is not particularly specific or sensitive for clinically significant carotid artery stenosis." 2023 ESVS Clinical Practice Guidelines are the most recent guidelines that define patients considered to be high risk for carotid stenosis and state "For patients with two or more vascular risk factors, selective screening for asymptomatic carotid stenosis may be considered in order to optimise risk factor control and medical therapy."[10]

The CREST-2 trial reported that in asymptomatic patients with carotid stenosis, the addition of carotid stenting to intensive medical management led to a lower risk of ipsilateral stroke within 4 years compared to intensive medical management alone. A similar trial did not find that endarterectomy was associated with such a benefit. There were some limitations including selection bias as well as heterogeneity in the medical therapies administered, raising questions as to whether the practices used in the trial could be replicated in real-world practice settings However, the potential benefit associated with stent placement in asymptomatic patients with carotid stenosis supports screening evaluation of carefully selected high-risk patients.

Outside of acute stroke or TIA (see separate criteria for signs, symptoms, and abnormal imaging), ultrasound is recommended in the initial evaluation of known or suspected carotid stenosis with CTA or MRA used as an add-on or alternative test when duplex ultrasound is not available or is nondiagnostic.[8, 9, 11] While operator dependent, duplex ultrasound has diagnostic accuracy for carotid stenosis comparable to advanced vascular imaging with sensitivities and specificities of 92% and 89% respectively, based on a recent systematic review.[11, 12] Duplex ultrasound is further readily available, does not require contrast, is non-ionizing (versus CTA), and less prone to motion (versus MRA). Duplex ultrasound is less accurate in evaluating lesions in the distal cervical internal carotid artery and in differentiating high grade stenosis from occlusion. It may also be nondiagnostic due to patient-related or technical factors such as in the presence of moderate or severe calcified plaque in the carotid bulbs.[13] Duplex ultrasound has poor diagnostic accuracy for evaluation of the posterior (vertebrobasilar) circulation.

Recommended intervals for follow-up of carotid artery stenosis depends upon the degree of stenosis detected. Professional society guidelines do not recommend routine surveillance in patients with less than 50% stenosis.[8] For surveillance after carotid artery intervention (in patients who are asymptomatic or with stable symptoms after baseline imaging), duplex ultrasound every 12 months after the first two years is considered appropriate.[14]

Traumatic vascular injury

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Vascular evaluation prior to transcatheter aortic valve implantation/replacement (TAVI/TAVR) or cardiac surgery

IMAGING STUDY

- Duplex ultrasound of the extracranial arteries

Abdomen and Pelvis

Aneurysm of the abdominal aorta or iliac arteries

Vascular imaging is considered medically necessary in **ANY** of the following scenarios:

Screening

One time evaluation in:

- Males between 60 and 75 years who have ever smoked **OR** have a first-degree relative with an abdominal aortic aneurysm (AAA)
- Females between 60 and 75 years who have ever smoked **AND** have a first-degree relative with AAA
- Previously diagnosed aneurysm of the thoracic aorta, iliac, femoral or popliteal arteries

Suspected aortic or iliac aneurysm presenting with **ANY** of the following:

- Pulsatile abdominal mass or bruit
- Other imaging that is suggestive but not diagnostic

Management of known aneurysm

- New or worsening symptoms or signs of aortic disease or enlargement by imaging
- Pre-procedure planning

Surveillance

Stable aortic aneurysm or ectasia without prior repair:

- 4.5 cm or greater: every 6 months
- 3.5 to 4.4 cm: 6 months and 12 months following diagnosis, then annually
- 3 to 3.4 cm: one year following diagnosis, then every 3 years
- 2.5 to 2.9cm: a single follow-up study 5 years after initially detected

Stable iliac aneurysm without prior repair:

- 3 cm or greater: every 6 months
- Less than 3 cm: annually

Post-procedure imaging:

- Baseline evaluation following endograft repair
- Every 6 months for aneurysm sacs that are increasing in size or endoleaks after endograft repair
- Stable aneurysms treated with endografts: annually

- Stable aneurysms treated with open surgical repair: every 5 years

IMAGING STUDY

- Duplex ultrasound of the aorta, inferior vena cava and iliac vessels

Rationale

Given its wide availability and ability to diagnose or exclude a wide variety of causes of symptoms, ultrasound is generally the initial modality used in the evaluation of abdominal aortic aneurysm (AAA). Several studies have reported high sensitivity and specificity, 94%-100% and 98%-100%, respectively.[15]

A high-quality evidence-based guideline recommends follow up surveillance of AAA at 12-month intervals for AAA of 35 to 44 mm in diameter and at 6-month intervals for AAA 45 to 54 mm in diameter.[16] Following endovascular repair, surveillance is recommended after 1 month, 12 months, and annually thereafter. Shorter intervals may be appropriate when there are abnormal findings warranting closer surveillance. If there is no evidence of endoleak or AAA sac enlargement in the first year after endovascular repair, using duplex ultrasound for annual screening supplemented with noncontrast CT at 5-year intervals may be considered. Following open surgical repair, surveillance may be considered at approximately 5-year intervals.[15] When subaneurysmal aortic dilation (2.5-2.9 cm diameter) is detected, evidence-based guidelines recommend a single follow-up evaluation after 5 to 10 years.[15, 17] While the evidence supporting follow-up evaluation is largely low-quality, a multicenter study reported that among 1696 patients with subaneurysmal aortic dilation, 67.7% reached an aortic diameter of at least 3 cm within 5 years of initial detection, though less than 1% had reached a diameter of 5.4 cm or greater.[18]

Four randomized trials compared the outcomes of population-based studies with or without screening for AAA. The prevalence of AAA was 5.5% in these studies, and AAA screening in men greater than 65 years of age was associated with a statistically significant decline in AAA-related mortality over 10 years. No similar benefit was seen in women, though women were included in only 1 of the trials and comprised a small number of patients (9342 out of a total 127,891 patients). Rescreening of patients has demonstrated few positive results, suggesting that a single ultrasound scan should be sufficient for screening. [15]The Society for Vascular Surgery strongly recommends a one-time screening duplex ultrasound in patients 65-75 with a first degree relative with AAA. They do note that screening in women is more controversial due to limited data being available, and note that the USPSTF recommended against screening women aged 65-75 who had never smoked, and stating that there was insufficient evidence to recommend for or against screening in women aged 65-75 with a smoking history.[15]

Mesenteric ischemia or mesenteric stenosis/occlusion

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the aorta, inferior vena cava and iliac vessels

Rationale

For the evaluation of mesenteric ischemia, an evidence-based guideline from the European Society for Vascular Surgery recommends duplex ultrasound (after a minimum of four hours fasting) as the first-line imaging study.[19]

Stenosis or occlusion of the abdominal aorta or iliac arteries (aortoiliac peripheral arterial disease)

Vascular imaging is considered medically necessary in **ANY** of the following scenarios:

Intermittent Claudication with any of the following:

- Newly diagnosed thigh or buttock claudication with inconclusive physiologic testing
- Persistent thigh or buttock claudication following a trial of 3 months of guideline directed medical therapy including a structured exercise therapy program in patients being evaluated for revascularization
- New or worsening claudication after prior revascularization involving the abdominal aorta or iliac arteries

Chronic limb threatening ischemia (critical limb ischemia) with any of the following:

- Ischemic rest pain (pain in the foot that worsens with elevation of the foot and improves with dependency of the foot)

- Non healing ulcers
- Gangrene

Signs of atheroembolic disease of the lower extremities (such discolored toes or livedo reticularis)

Acute limb ischemia (sudden onset of pain associated with pulselessness, pallor, loss of motor or sensory function)

Post-Procedure Surveillance

- Post-procedure baseline evaluation
- After surgical or endovascular revascularization involving the aortoiliac vessels: 6 months and 12 months after the procedure and annually thereafter

IMAGING STUDY

- Duplex ultrasound of the aorta, inferior vena cava and iliac vessels

Rationale

Following aortoiliac revascularization, evidence-based guidelines recommend follow-up evaluation at baseline, 6 months, 12 months, and then annually thereafter. Guidelines recommend ABI, with or without duplex ultrasound. These recommendations apply to both surgical and endovascular revascularization procedures.[20]

Venous Indications

Vascular imaging is considered medically necessary in **ANY** of the following scenarios:

- Suspected or established venous thrombus in the abdomen or pelvis, including IVC/iliac veins
- Suspected or established IVC or iliac vein mass, including tumor extension into the IVC in patients with renal or adrenal tumors
- Suspected or established external compression or stenosis of the IVC or iliac veins
- To establish patency of the IVC in a patient with an IVC filter
- Suspected or known pelvic venous disease (pelvic congestion syndrome)

IMAGING STUDY

- Duplex ultrasound of the aorta, inferior vena cava and iliac vessels

Rationale

While there is little comparative data addressing the preferred modality for assessing pelvic venous disease, duplex ultrasound is often recommended as the first-line imaging modality due to its ability to assess vascular size as well as the direction and velocity of vascular flow.[21]

Visceral artery aneurysm

Vascular imaging is considered medically necessary for diagnosis, management, and surveillance of visceral artery aneurysm.

IMAGING STUDY

- Duplex ultrasound of the aorta, inferior vena cava and iliac vessels

Upper Extremity

Physiologic testing for peripheral arterial disease

Physiologic testing is considered medically necessary for diagnosis and management in **ANY** of the following scenarios:

- New or worsening signs or symptoms (**ANY** of the following):
  - Upper extremity claudication
  - Unilateral cold painful hand or ischemic rest pain
  - Non healing upper extremity ulcers or gangrene
  - Absent pulses of the arm or hand
  - Subclavian steal syndrome
  - Suspected complication of upper extremity dialysis access (including suspected arterial steal)
- Arterial entrapment syndrome or positional arterial obstruction (vascular thoracic outlet syndrome)
- Upper extremity trauma and a suspicion of vascular injury
- Preoperative evaluation in **EITHER** of the following:
  - Evaluation of native arteries prior to arteriovenous fistula or graft for dialysis access
  - Planned arterial harvesting (e.g., for CABG)
- Post-procedure surveillance:
  - Post procedure baseline evaluation
  - After surgical or endovascular revascularization: At 3-month intervals within the first 2 years, and annually thereafter

IMAGING STUDY

- Noninvasive physiologic studies

Rationale

An estimated 8 to 12 million people in the U.S. are affected by peripheral arterial disease (PAD). Symptomatic PAD often presents as intermittent claudication. Presenting signs and symptoms in the lower extremity may also include weak or absent distal pulses, absent distal hair growth, dry skin, and poor skin healing. Though evidence does not support the use of screening studies for PAD in the general population, the primary study for making the diagnosis in symptomatic patients is the ankle-brachial index (ABI).[22] Compared with arteriography, an ABI of 0.90 or less has a high sensitivity and specificity for hemodynamically significant PAD.[22] Additional imaging should be reserved for patients in whom revascularization treatment is being considered.

The Society for Vascular Surgery commissioned a systematic review which suggested that there was no clear benefit to screening for PAD in asymptomatic patients. The U.S. Preventive Services Task Force concluded in 2013 that there is insufficient evidence to support screening for PAD with the ABI, a recommendation that has remained consistent following literature surveillance in August 2023.[23]

Peripheral arterial disease (PAD)

Vascular imaging is considered medically necessary for diagnosis, management, and surveillance in **ANY** of the following scenarios:

Signs or Symptoms of PAD in **ANY** of the following scenarios:

- Unilateral cold painful hand or ischemic rest pain

- Signs of atheroembolic disease of the upper extremities (such as ischemic or discolored fingers, livedo reticularis etc.)
- Non healing upper extremity ulcers or gangrene
- Persistent upper extremity claudication despite a 3 month trial of guideline directed medical therapy in patients being evaluated for revascularization
- Post-revascularization, with any new or worsening upper extremity signs or symptoms

Post-Procedure Surveillance

- Post procedure baseline evaluation
- After surgical or endovascular revascularization: At 3-month intervals within the first 2 years, and annually thereafter

IMAGING STUDY

- Duplex ultrasound of the arteries of the upper extremities

Rationale

There is limited data regarding the evaluation and management of upper extremity peripheral arterial disease. Professional society guidance indicates that either physiologic testing or duplex ultrasound is considered generally appropriate in symptomatic individuals with clinical concern for peripheral arterial disease.[24] As in lower extremity peripheral arterial disease, anatomic studies are generally indicated in the presence of more severe symptoms and when revascularization is being considered.

Traumatic vascular injury

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound of the arteries of the upper extremities

Procedure related imaging

Vascular imaging is considered medically necessary in **ANY** of the following scenarios:

- Evaluation of native arteries prior to arteriovenous fistula or graft for dialysis access
- Planned arterial harvesting (e.g., for CABG)
- Complications of a vascular procedure suggested by **ANY** of the following:
    - Pulsatile mass, bruit, or thrill at the access site
    - Significant (more than expected post procedure) hematoma or abnormal skin changes at the access site
    - Severe (more than expected post procedure) pain at the access site

IMAGING STUDY

- Duplex ultrasound of the arteries of the upper extremities

Other vascular indications in upper extremity

Vascular imaging of the upper extremity is considered medically necessary when the results of imaging are essential to establish a diagnosis and/or direct management of the following vascular conditions:

- Aneurysm

- Arterial entrapment syndrome (vascular thoracic outlet syndrome)
- Arteriovenous malformation (AVM) or fistula (AVF)
- Dissection or intramural hematoma
- Vasculitis

IMAGING STUDY

- Duplex ultrasound of the arteries of the upper extremities

Lower Extremity

Physiologic testing for peripheral arterial disease

Physiologic testing is considered medically necessary for diagnosis and management in **ANY** of the following scenarios:

- New or worsening signs or symptoms (**ANY** of the following):
    - Intermittent Claudication
    - Ischemic rest pain (pain in the foot that worsens with elevation of the foot and improves with dependency of the foot)
    - Non healing lower extremity ulcers or gangrene
    - Absent pulses of the leg or foot
- Baseline prior to revascularization
- Post-procedure surveillance:
    - Post procedure baseline evaluation
    - After surgical or endovascular* revascularization: At 3-month intervals within the first 2 years, and annually thereafter

**Endovascular revascularization may include angioplasty, thrombectomy, atherectomy, or stent placement*

IMAGING STUDY

- Noninvasive physiologic studies

Rationale

An estimated 8 to 12 million people in the U.S. are affected by peripheral arterial disease (PAD). Symptomatic PAD often presents as intermittent claudication. Presenting signs and symptoms in the lower extremity may also include weak or absent distal pulses, absent distal hair growth, dry skin, and poor skin healing. Though evidence does not support the use of screening studies for PAD in the general population, the primary study for making the diagnosis in symptomatic patients is the ankle-brachial index (ABI).[22] Compared with arteriography, an ABI of 0.90 or less has a high sensitivity and specificity for hemodynamically significant PAD.[22] Additional imaging should be reserved for patients in whom revascularization treatment is being considered.

The Society for Vascular Surgery commissioned a systematic review which suggested that there was no clear benefit to screening for PAD in asymptomatic patients. The U.S. Preventive Services Task Force concluded in 2013 that there is insufficient evidence to support screening for PAD with the ABI, a recommendation that has remained consistent following literature surveillance in August 2023.[23]

Peripheral arterial disease (PAD)

Vascular imaging is considered medically necessary in **ANY** of the following scenarios:

Intermittent Claudication with any of the following:

- Newly diagnosed claudication following inconclusive physiologic testing
- Persistent claudication following a trial of 3 months of guideline directed medical therapy including a structured exercise therapy program in patients being evaluated for revascularization
- New or worsening claudication after prior revascularization in the same limb

Chronic limb threatening ischemia (critical limb ischemia) with any of the following:

- Ischemic rest pain (pain in the foot that worsens with elevation of the foot and improves with dependency of the foot)
- Non healing lower extremity ulcers or gangrene

Acute limb ischemia (sudden onset of pain associated with pulselessness, pallor, loss of motor or sensory function)

Post-Procedure Surveillance

- Post-procedure baseline evaluation
- After surgical or endovascular* revascularization: At 3-month intervals within the first 2 years, and annually thereafter

**Endovascular revascularization may include angioplasty, thrombectomy, atherectomy, or stent placement*

IMAGING STUDY

- Duplex ultrasound imaging of the arteries of the lower extremities

Rationale

An estimated 8 to 12 million people in the U.S. are affected by peripheral arterial disease (PAD). Symptomatic PAD often presents as intermittent claudication. Presenting signs and symptoms in the lower extremity may also include weak or absent distal pulses, absent distal hair growth, dry skin, and poor skin healing. Though evidence does not support the use of screening studies for PAD in the general population, the primary study for making the diagnosis in symptomatic patients is the ankle-brachial index (ABI).[76] Compared with arteriography, an ABI of 0.90 or less has a high sensitivity and specificity for hemodynamically significant PAD.[22] Additional imaging (Duplex, CTA, or MRA) should be reserved for patients in whom revascularization treatment is being considered. Advanced imaging is not indicated for patients with asymptomatic PAD or intermittent claudication who are not appropriate candidates for revascularization.[22]

The 2024 American Heart Association/American College of Cardiology Guideline for the Management of Lower Extremity Peripheral Artery Disease states, “The ABI, a simple, noninvasive physiological test, remains the cornerstone for initial diagnosis of PAD.” They state that “arterial imaging studies are generally obtained when revascularization is being considered but may also be used when there is clinical suspicion of PAD and the ABI and physiological tests are inconclusive.” This group further recommends against performing angiography, either invasive or noninvasive, to evaluate patients with asymptomatic PAD or those with chronic symptomatic PAD being managed with GDMT for whom no revascularization is being considered, stating that in these patients “there is no need to further define lower extremity artery anatomy, and the risks of these imaging studies outweigh any potential benefit.”[25]

Evidence-based guidelines state that “in patients with PAD who have undergone lower extremity revascularization (ie, surgical, endovascular, or both) with new lower extremity signs or symptoms, ABI and arterial duplex ultrasound is recommended,” and ”in patients with PAD who have undergone infrainguinal autogenous vein bypass graft(s) without new lower extremity signs or symptoms, it is reasonable to perform ACI and arterial duplex ultrasound surveillance within the first 1 to 3 months postprocedure, then repeat at 6 and 12 months, and then annually.”[25]

Popliteal artery aneurysm

Vascular imaging is considered medically necessary in **ANY** of the following scenarios:

- Diagnosis of suspected aneurysm
- Management of known aneurysm with signs or symptoms suggestive of change in size or patency
- Surveillance for:

- Unrepaired aneurysms less than 2 cm, if intervention would be considered based on imaging results: annually
- Unrepaired aneurysms =>2cm if intervention would be considered based on imaging results
- Following open or endovascular repair at 3, 6, and 12 months following repair, then annually

IMAGING STUDY

- Duplex ultrasound imaging of the arteries of the lower extremities

Rationale

The Society for Vascular Surgery (SVS) recommends that patients who undergo open or endovascular repair of popliteal artery aneurysm (PAA) be followed up using clinical examination, arterial-brachial index (ABI), and duplex ultrasound at 3, 6, and 12 months during the first postoperative year and, if stable, annually thereafter. SVS also suggests patients with asymptomatic PAA who are not offered repair should be monitored annually for changes in symptoms, pulse examination, extent of thrombus, patency of the outflow arteries, and aneurysm diameter.[26]

Traumatic vascular injury

Vascular imaging is considered medically necessary for diagnosis and management.

IMAGING STUDY

- Duplex ultrasound imaging of the arteries of the lower extremities

Procedure related imaging

Vascular imaging is considered medically necessary for suspected complications of a vascular procedure suggested by **ANY** of the following:

- Pulsatile mass, bruit, or thrill at the access site
- Significant (more than expected post procedure) hematoma or abnormal skin changes at the access site
- Severe (more than expected post procedure) pain at the access site

IMAGING STUDY

- Duplex ultrasound imaging of the arteries of the lower extremities

Other vascular indications in lower extremity

Vascular imaging of the lower extremity is considered medically necessary when the results of imaging are essential to establish a diagnosis and/or direct management of the following vascular conditions:

- Arterial entrapment syndrome
- Aneurysm/dilation of vessels other than the popliteal artery
- Arteriovenous malformation or arteriovenous fistula
- Dissection or intramural hematoma

IMAGING STUDY

- Duplex ultrasound imaging of the arteries of the lower extremities

References

1. Gornik HL, Persu A, Adlam D, et al. First International Consensus on the diagnosis and management of fibromuscular dysplasia. Vasc Med. 2019;24(2):164–89. PMID 30648921

2. Mackie SL, Dejaco C, Appenzeller S, et al. British Society for Rheumatology guideline on diagnosis and treatment of giant cell arteritis. Rheumatology (Oxford). 2020;59(3):e1–e23. PMID 31970405
3. Ahmed S, Fadlelseed H, Kennedy S, et al. Ultrasound vs. biopsy in diagnosing giant cell arteritis in the Royal Victoria Eye and Ear Hospital, Dublin: a clinical comparison. Ir J Med Sci. 2025;194(5):1767–72. PMID 40782233
4. Dejaco C, Ramiro S, Bond M, et al. EULAR recommendations for the use of imaging in large vessel vasculitis in clinical practice: 2023 update. Ann Rheum Dis. 2024;83(6):741–51. PMID 37550004
5. Aboyans V, Ricco JB, Bartelink MEL, et al. 2017 ESC guidelines on the diagnosis and treatment of peripheral arterial diseases, in collaboration with the European Society for Vascular Surgery (ESVS): document covering atherosclerotic disease of extracranial carotid and vertebral, mesenteric, renal, upper and lower extremity arteries endorsed by: the European Stroke Organization (ESO)The Task Force for the Diagnosis and Treatment of Peripheral Arterial Diseases of the European Society of Cardiology (ESC) and of the European Society for Vascular Surgery (ESVS). Eur Heart J. 2017. PMID 28886620
6. Kligerman SJ, Bykowski J, Hurwitz Koweek LM, et al. ACR Appropriateness Criteria syncope. J Am Coll Radiol. 2021;18(5s):S229–s38. PMID 33958116
7. Shen WK, Sheldon RS, Benditt DG, et al. 2017 ACC/AHA/HRS guideline for the evaluation and management of patients with syncope: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. J Am Coll Cardiol. 2017;70(5):e39–e110. PMID 28286221
8. Brott TG, Halperin JL, Abbara S, et al. 2011 ASA/ACCF/AHA/AANN/AANS/ACR/ASNR/CNS/SAIP/SCAI/SIR/SNIS/SVM/SVS guideline on the management of patients with extracranial carotid and vertebral artery disease. A report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, and the American Stroke Association, American Association of Neuroscience Nurses, American Association of Neurological Surgeons, American College of Radiology, American Society of Neuroradiology, Congress of Neurological Surgeons, Society of Atherosclerosis Imaging and Prevention, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, Society for Vascular Medicine, and Society for Vascular Surgery. Circulation. 2011;124(4):e54–130. PMID 21282504
9. LeFevre ML. Screening for asymptomatic carotid artery stenosis: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. 2014;161(5):356–62. PMID 25003392
10. Naylor R, Rantner B, Ancetti S, et al. Editor's Choice - European Society for Vascular Surgery (ESVS) 2023 clinical practice guidelines on the management of atherosclerotic carotid and vertebral artery disease. Eur J Vasc Endovasc Surg. 2023;65(1):7–111. PMID 35598721
11. Lo BM, Carpenter CR, Hatten BW, et al. Clinical policy: critical issues in the evaluation of adult patients with suspected transient ischemic attack in the emergency department. Ann Emerg Med. 2016;68(3):354–70.e29. PMID 27568419
12. Forjoe T, Asad Rahi M. Systematic review of preoperative carotid duplex ultrasound compared with computed tomography carotid angiography for carotid endarterectomy. Ann R Coll Surg Engl. 2019:1–9. PMID 30767557
13. Salmela MB, Mortazavi S, Jagadeesan BD, et al. ACR Appropriateness Criteria cerebrovascular disease. J Am Coll Radiol. 2017;14(5s):S34–s61. PMID 28473091
14. Zierler RE, Jordan WD, Lal BK, et al. The Society for Vascular Surgery practice guidelines on follow-up after vascular surgery arterial procedures. J Vasc Surg. 2018;68(1):256–84. PMID 29937033
15. Chaikof EL, Dalman RL, Eskandari MK, et al. The Society for Vascular Surgery practice guidelines on the care of patients with an abdominal aortic aneurysm. J Vasc Surg. 2018;67(1):2–77.e2. PMID 29268916
16. Erbel R, Aboyans V, Boileau C, et al. 2014 ESC Guidelines on the diagnosis and treatment of aortic diseases: Document covering acute and chronic aortic diseases of the thoracic and abdominal aorta of the adult. The Task Force for the Diagnosis and Treatment of Aortic Diseases of the European Society of Cardiology (ESC). Eur Heart J. 2014;35(41):2873–926. PMID 25173340

17. Wanhainen A, Van Herzeele I, Bastos Goncalves F, et al. Editor's Choice -- European Society for Vascular Surgery (ESVS) 2024 clinical practice guidelines on the management of abdominal aorto-Iliac artery aneurysms. Eur J Vasc Endovasc Surg. 2024;67(2):192–331. PMID 38307694
18. Wild JB, Stather PW, Biancari F, et al. A multicentre observational study of the outcomes of screening detected sub-aneurysmal aortic dilatation. Eur J Vasc Endovasc Surg. 2013;45(2):128–34. PMID 23273900
19. Koelemay MJ, Geelkerken RH, Kärkkäinen J, et al. Editor's Choice - European Society for Vascular Surgery (ESVS) 2025 clinical practice guidelines on the management of diseases of the mesenteric and renal arteries and veins. Eur J Vasc Endovasc Surg. 2025;70(2):153–218. PMID 40513642
20. Lawrence PF, Gloviczki P. The Society for Vascular Surgery practice guidelines on follow-up after vascular surgery arterial procedures. J Vasc Surg. 2018;68(1):1. PMID 29937028
21. Rochon PJ, Reghunathan A, Kapoor BS, et al. ACR Appropriateness Criteria lower extremity chronic venous disease. J Am Coll Radiol. 2023;20(11s):S481–s500. PMID 38040466
22. Conte MS, Pomposelli FB, Clair DG, et al. Society for Vascular Surgery practice guidelines for atherosclerotic occlusive disease of the lower extremities: management of asymptomatic disease and claudication. J Vasc Surg. 2015;61(3 Suppl):2s–41s. PMID 25638515
23. Abdul-Rahim AH, Perez AC, Fulton RL, et al. Risk of stroke in chronic heart failure patients without atrial fibrillation: analysis of the controlled rosuvastatin in Multinational Trial Heart Failure (CORONA) and the Gruppo Italiano per lo Studio della Sopravvivenza nell'Insufficienza Cardiaca-Heart Failure (GISSI-HF) trials. Circulation. 2015;131(17):1486–94; discussion 94. PMID 25810334
24. Mohler ER, 3rd, Gornik HL, Gerhard-Herman M, et al. ACCF/ACR/AIUM/ASE/ASN/ICAVL/SCAI/SCCT/SIR/SVM/SVS/SVU [corrected] 2012 appropriate use criteria for peripheral vascular ultrasound and physiological testing part I: arterial ultrasound and physiological testing: a report of the American College of Cardiology Foundation appropriate use criteria task force, American College of Radiology, American Institute of Ultrasound in Medicine, American Society of Echocardiography, American Society of Nephrology, Intersocietal Commission for the Accreditation of Vascular Laboratories, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, Society for Interventional Radiology, Society for Vascular Medicine, Society for Vascular Surgery, [corrected] and Society for Vascular Ultrasound. [corrected]. J Am Coll Cardiol. 2012;60(3):242–76. PMID 22694840
25. Gerhard-Herman MD, Gornik HL, Barrett C, et al. 2016 AHA/ACC guideline on the management of patients with lower extremity peripheral artery disease: executive summary: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Circulation. 2017;135(12):e686–e725. PMID 27840332
26. Farber A, Angle N, Avgerinos E, et al. The Society for Vascular Surgery clinical practice guidelines on popliteal artery aneurysms. J Vasc Surg. 2022;75(1s):109s–20s. PMID 34023430

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Specific CPT codes for services should be used when available. Nonspecific or not otherwise classified codes may be subject to additional documentation requirements and review.

CPT/HCPCS

93880	Duplex scan of extracranial arteries; complete bilateral study
93882	Duplex scan of extracranial arteries; unilateral or limited study

93922	Limited bilateral noninvasive physiologic studies of upper or lower extremity arteries, (e.g., for lower extremity: ankle/brachial indices at distal posterior tibial and anterior tibial/dorsalis pedis arteries plus bidirectional, Doppler waveform recording and analysis at 1-2 levels, or ankle/brachial indices at distal posterior tibial and anterior tibial/dorsalis pedis arteries plus volume plethysmography at 1-2 levels, or ankle/ brachial indices at distal posterior tibial and anterior tibial/dorsalis pedis arteries with, transcutaneous oxygen tension measurement at 1-2 levels)
93923	Complete bilateral noninvasive physiologic studies of upper or lower extremity arteries, 3 or more levels (e.g., for lower extremity: ankle/brachial indices at distal posterior tibial and anterior tibial/dorsalis pedis arteries plus segmental blood pressure measurements with bidirectional Doppler waveform recording and analysis, at 3 or more levels, or ankle/brachial indices at distal posterior tibial and anterior tibial/dorsalis pedis arteries plus segmental volume plethysmography at 3 or more levels, or ankle/brachial indices at distal posterior tibial and anterior tibial/dorsalis pedis arteries plus segmental transcutaneous oxygen tension measurements at 3 or more levels), or single level study with provocative functional maneuvers (e.g., measurements with postural provocative tests, or measurements with reactive hyperemia)
93924	Noninvasive physiologic studies of lower extremity arteries, at rest and following treadmill stress testing, (i.e., bidirectional Doppler waveform or volume plethysmography recording and analysis at rest with ankle/brachial indices immediately after and at timed intervals following performance of a standardized protocol on a motorized treadmill plus recording of time of onset of claudication or other symptoms, maximal walking time, and time to recovery) complete bilateral study
93925	Duplex scan of lower extremity arteries or arterial bypass grafts; complete bilateral study
93926	Duplex scan of lower extremity arteries or arterial bypass grafts; unilateral or limited study
93930	Duplex scan of upper extremity arteries or arterial bypass grafts; complete bilateral study
93931	Duplex scan of upper extremity arteries or arterial bypass grafts; unilateral or limited study
93978	Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; complete study
93979	Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; unilateral or limited study

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

History

Status	Review Date	Effective Date	Action
Revised	01/29/2026	09/19/2026	Independent Multispecialty Physician Panel (IMPP) review. Separated Vascular Imaging guideline into Advanced Imaging for Vascular Indications and Vascular Ultrasound and Physiologic Testing. Added indications for Giant cell arteritis, Traumatic vascular injury, and Other vascular indications in lower extremity. Revised indications: Signs, symptoms, and abnormal imaging, Stenosis or occlusion of the extracranial carotid and vertebrobasilar arteries without symptoms, Aneurysm of the abdominal aorta or iliac arteries, Stenosis or occlusion of the abdominal aorta or iliac arteries, Venous indications, Physiologic testing for peripheral arterial disease, Peripheral arterial disease, Procedure related imaging, Other vascular indications in upper extremity, and Popliteal artery aneurysm.
History of Vascular Imaging			
Updated codes 01/01/2026	n/a	Unchanged	CPT code update: added code 70471.
Revised	01/30/2025	11/15/2025	IMPP review. Revised indications: Vascular evaluation prior to transcatheter aortic valve implantation/replacement (TAVI/TAVR) or cardiac surgery, Stenosis or occlusion,

Status	Review Date	Effective Date	Action
			extracranial carotid arteries, Stroke or transient ischemic attack (TIA), intracranial evaluation, Stroke or transient ischemic attack (TIA), extracranial evaluation, Venous thrombosis or compression, intracranial, Acute aortic syndrome, Physiologic testing for peripheral arterial disease, and Physiologic testing for peripheral arterial disease.
Revised	01/23/2024	10/20/2024	Independent Multispecialty Physician Panel (IMPP) review. Revised indications: Aneurysm, intracranial, Stenosis or occlusion, vertebral or basilar arteries, Stroke or transient ischemic attack (TIA), intracranial evaluation, Venous thrombosis or compression, intracranial, Hematoma/hemorrhage within the abdomen or pelvis, IVC and iliac vein evaluation, Vascular access procedures (Upper and Lower extremity), and Peripheral arterial disease (Lower extremity).
Updated	01/23/2024	Unchanged	Expanded guideline rationale. Added required language per new Medicare regulations.
Revised	01/24/2023	09/10/2023	IMPP review. Revised indications: Vascular anatomic delineation prior to surgical and interventional procedures, not otherwise specified, Vascular evaluation prior to transcatheter aortic valve implantation/replacement, Stenosis or occlusion, extracranial carotid arteries, Pulmonary hypertension, Unexplained hypotension, Venous thrombosis or occlusion, Peripheral arterial disease, and Popliteal artery aneurysm.
Revised	11/11/2021	09/11/2022	IMPP review. Revised indications: Pulsatile tinnitus, Stenosis or occlusion, extracranial carotid arteries, Stroke or transient ischemic attack (TIA), intracranial evaluation, Stroke or transient ischemic attack (TIA), extracranial evaluation, Acute aortic syndrome, Pulmonary embolism, Aneurysm of the abdominal aorta or iliac arteries, Venous thrombosis or occlusion, and Peripheral arterial disease. Added indication for Popliteal artery aneurysm.
Revised	11/11/2021	06/12/2022; 09/11/2022 for Anthem Medicaid	IMPP review. Revised indications: Stenosis or occlusion, extracranial carotid arteries, Stroke or transient ischemic attack (TIA), intracranial evaluation, Stroke or transient ischemic attack (TIA), extracranial evaluation, Pulmonary embolism, and Aneurysm of the abdominal aorta or iliac arteries.
Revised	12/03/2020	09/12/2021	IMPP review. Revised definitions and these indications: Congenital or developmental vascular anomalies, not otherwise specified, Aneurysm, intracranial, Hemorrhage, intracranial, Horner’s syndrome, Pulsatile tinnitus, Stenosis or occlusion, intracranial, Stenosis or occlusion, extracranial carotid arteries, Stenosis or occlusion, vertebral or basilar arteries, Stroke or transient ischemic attack (TIA), acute (7 days or less), Trigeminal neuralgia, Venous thrombosis or compression, intracranial, Aortic aneurysm, Pulmonary embolism, Acute aortic syndrome, Aneurysm of the abdominal aorta or iliac arteries, Hematoma/hemorrhage within the abdomen, Renal artery stenosis (RAS)/Renovascular hypertension, Stenosis or occlusion of

Status	Review Date	Effective Date	Action
			the abdominal aorta or branch vessels, not otherwise specified, Venous thrombosis or occlusion, Peripheral arterial disease (PAD).
Revised	-	03/14/2021	Added HCPCS codes C8900, C8901, C8902, C8909, C8910, C8911, C8912, C8913, C8914, C8918, C8919, C8920, C8931, C8932, C8933, C8934, C8935, and C8936.
Revised	-	01/01/2021	Annual CPT code update: revised descriptions for 71250, 71260, 71270.
Revised	08/12/2019	05/17/2020	IMPP review. Surveillance of stable abdominal aortic or iliac aneurysms in patients who have had open surgical repair changed to every 5 years. Added annual surveillance of stenosis or occlusion of abdominal aortic/branch vessels in patients who have had surgical bypass grafts.
Revised	03/25/2019	11/10/2019	IMPP review. Added arterial ultrasound guideline content. Aligned peripheral arterial ultrasound and advanced vascular imaging criteria. Added clinical content to all document sections based on literature surveillance. Added CPT codes 93880, 93882, 93922, 93923, 93924, 93925, 93926, 93930, 93931, 93978, 93979.
Restructured	09/12/2018	01/01/2019	Advanced Imaging guidelines redesigned and reorganized to a condition-based structure
Revised	07/11/2018	03/09/2019	IMPP review. Renamed the Administrative Guidelines to “General Clinical Guideline.” Retitled Pretest Requirements to “Clinical Appropriateness Framework” to summarize the components of a decision to pursue diagnostic testing. Revised to expand applicability beyond diagnostic imaging, retitled Ordering of Multiple Studies to “Ordering of Multiple Diagnostic or Therapeutic Interventions” and replaced imaging-specific terms with “diagnostic or therapeutic intervention.” Repeated Imaging split into two subsections, “repeat diagnostic testing” and “repeat therapeutic intervention.”
Revised	03/01/2018	10/30/2018	IMPP review and revision.
Created	-	03/30/2005	Original effective date