

# Evolut Clinical Guideline ~~061-12033~~ for Lower Extremity Computed Tomography CT Angiography (CTA) ~~ACTV~~

<b>Guideline <del>or Policy</del> Number:</b> Evolut_CG_ <del>061-12033</del>	<b><u>Applicable Codes</u></b>	
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## STATEMENT

### General Information

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

### Purpose

#### CTA/CTV

Computed tomography angiography (CTA) generates images of the arteries and veins that can be evaluated for evidence of stenosis, occlusion, or aneurysms. It is used to evaluate the arteries of the abdominal aorta and the renal arteries blood vessels of the lower extremities. CTA uses ionizing radiation and requires the administration of iodinated contrast agent, which is a potential hazard in patients with impaired renal function. Lower Extremity CTA is not used as a screening tool, e.g., evaluation of asymptomatic patients without a previous diagnosis.

**NOTE:** Authorization for ~~CTMR~~ Angiography (CTA) covers both arterial and venous imaging. The term *angiography* refers to both arteriography and venography

### Special Notes

#### Imaging Request

- When a separate CTA and CT exam is requested, documentation requires a medical reason that clearly indicates why additional CT imaging of the lower extremity is needed.
- When vascular imaging of the aorta **AND** both legs (CTA aortogram and runoff) is desired (sometimes incorrectly requested as Abd/Pelvis CTA & Lower Extremity CTA Runoff), only one authorization request is required, using CPT Code 75635 CTA Aortogram with bilateral lower extremity runoff. This study provides for imaging of the abdomen, pelvis, and both legs. A separate authorization for Lower Extremity CTA (CPT Code 73706) is **NOT** needed.

- If **ONLY** Extremity CTA is requested and Abdominal vascular imaging is **NOT** needed, Lower Extremity CTA ([CPT Code 73706](#)) can be [considered](#).

## **INDICATIONS FOR LOWER EXTREMITY COMPUTED TOMOGRAPHY ANGIOGRAPHY (CTA)**

### **Lower Extremity Peripheral Vascular Disease**

~~NOTE: When Aortograms CTA (CT Angiography) (CPT Code 75635) has not been recently approved, when aortoiliac disease is not a concern, or the state of the aorta and iliac arteries is already known.~~

For evaluation of known or suspected lower extremity [arterial vascular](#) disease <sup>(1)</sup>:

- ~~For known or suspected [atherosclerotic peripheral arterial disease](#) (such as claudication, or clinical concern for vascular causes of ulcers) when [any ONE](#) of the following non-invasive studies (pulse volume recording, ankle-brachial index, toe brachial index, segmental pressures, or doppler ultrasound) are abnormal or indeterminate<sup>(2-4)</sup>; **OR**~~
  - ~~[Ankle-brachial index \(ABI\) \(< 0.9 is the cutoff for diagnosis of peripheral arterial disease and >1.4 is considered inconclusive\)](#)~~
  - ~~[Toe brachial index \(< 0.7 is the cutoff for diagnosis of peripheral arterial disease\)](#)~~
  - ~~[Segmental pressure test \(a pressure gradient  \$\geq\$  20 mmHg is considered abnormal\)](#)~~
  - ~~[Doppler ultrasound](#)~~
  - ~~[Treadmill test](#)~~
  - ~~[6-minute walking test](#)~~
- For ~~[acute critical limb ischemia](#) with **ANY** any ONE of the below clinical signs of peripheral [artery vascular](#) disease<sup>(5,6)</sup>; (prior ultrasound is not needed; if done and negative, CTA should still be approved)<sup>(1,2)</sup>~~
  - Ischemic rest pain
  - Tissue loss
  - Gangrene
    - **NOTE:** Prior ultrasound is **NOT** needed
- ~~For known predisposing conditions (sSuch as Buerger disease, cystic adventitial disease, arterial endofibrosis, fibromuscular dysplasia, segmental arterial mediolysis and/or genetic conditions such as Marfan syndrome, Loeys-Dietz syndrome, or vascular Ehler-Danlos Syndrome) and any ONE of the following <sup>(7)</sup>:~~
  - ~~[Prior imaging suggestive of non-atherosclerotic peripheral vascular disease of the lower extremity](#)~~
  - ~~[Signs or symptoms of lower extremity vascular disease \(sSuch as claudication, weak pulses\) \(add lower leg sx\)](#)~~

- For leg/foot ulcers on exam from known/suspected peripheral vascular disease after prior abnormal or indeterminate ultrasound <sup>(1,2)</sup>
- After prior stenting or surgery (arterial and/or venous) with any ONE of the following <sup>(8,9)</sup>:
  - Recurrent symptoms
  - Signs of recurrent disease on examination
  - symptoms, Abnormal -/- indeterminate prior non-invasive testing or imaging (such as ankle/brachial index, ultrasound); abnormal or indeterminate arterial Doppler, or abnormal or indeterminate pulse volume recording <sup>(3)</sup>

## Popliteal Artery Entrapment Syndrome

- For known / suspected popliteal artery entrapment syndrome with ALL the following <sup>(10)</sup>:
  - Prior ultrasound is abnormal or inconclusive
  - Advanced after abnormal arterial ultrasound and when imaging study results will potentially change management

## Deep Venous Thrombosis (DVT)

- For known / suspected DVT with ALL the following <sup>(11,12)</sup>: Clinical suspicion of lower extremity DVT (when
  - Prior ultrasound is abnormal or inconclusive and

aAdvanced imaging positive study results would will potentially change management) <sup>(5,6,7)</sup>

○

## Arterial Thromboembolism

- Clinical findings (such as pulselessness, acute limb ischemia) and / or prior imaging suggestive of lower extremity arterial thromboembolism <sup>(9)</sup>

NOTE: Echocardiogram and advanced vascular imaging of the chest, abdomen, and / or pelvis may also be indicated to identify the source of the emboli.

## Clinical Suspicion of Vascular Disease

With abnormal or indeterminate ultrasound or other imaging

Trauma <sup>(8)</sup>

## ~~Vasculitis~~<sup>(9)(10)</sup>

## ~~Aneurysm~~<sup>(9)</sup>

## ~~Stenosis/occlusions~~<sup>(10)</sup>

### Clinical Suspicion of Aneurysm

- With prior abnormal or indeterminate ultrasound or other imaging<sup>(13)</sup>

### Clinical Suspicion of Vasculitis

- With prior abnormal or indeterminate ultrasound or other imaging<sup>(13)</sup>

## Hemodialysis Graft Dysfunction

- ~~After Doppler ultrasound, if findings were not adequate for treatment decisions~~ If Doppler prior ultrasound **was completed and** not adequate sufficient for **required** treatment decisions<sup>(14)</sup>

## Vascular Malformation (VM)<sup>(15,16)</sup>

- For known / suspected lower extremity VM with ALL the following:
  - Prior abnormal or indeterminate ultrasound
  - MR angiography is contraindicated or cannot be performed
  - Advanced imaging study results will potentially change management
  - ~~After initial evaluation with ultrasound if:~~
  - ~~Results will change management~~
  - ~~Results are inconclusive on ultrasound~~
  - ~~If a known or suspected high flow lesion~~
- A concurrent CT is also approvable for initial evaluation and / or preoperative planning with any ONE of the following:
  - if MRI is **contraindicated** or cannot be performed
  - ~~of S~~ surgeon preference.

## Traumatic Injuries

- Clinical findings ~~(such as bruit, hemorrhage, hematoma, pulselessness) and / or prior imaging suggestive of lower extremity vascular injury~~ suggestive of lower extremity vascular arterial injury<sup>(17)</sup>

## Evaluation of Tumor

- When needed for clarification of vascular ~~invasion~~ involvement from tumor after prior imaging (may be approved in combination with CT or MRI of tumor)

## **PRE-OPERATIVE OR POSTOPERATIVE ASSESSMENT** **/PROCEDURE EVALUATION**

When not otherwise specified in the guideline:

Preoperative Evaluation:

- Imaging of the area requested is needed to develop ~~Pre-operative evaluation for a planned surgical plan ery or procedure~~

## **Post-operative/Procedure Evaluation**

Postoperative Evaluation:

- Known or suspected complications
- A clinical reason is provided how imaging may change management ~~follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention, or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested~~

NOTE: This section applies only within the first few months following surgery

## **FURTHER EVALUATION OF INDETERMINATE FINDINGS ON PRIOR IMAGING**

Unless follow-up is otherwise specified within the guideline:

- For initial evaluation of an inconclusive finding on a prior imaging report (i.e., x-ray, ultrasound or CT) that requires further clarification.
- One follow-up exam of a prior indeterminate MR/CT finding to ensure no suspicious interval change has occurred. (No further surveillance unless specified as highly suspicious or change was found on last follow-up exam).

## **IMAGING IN KNOWN GENETIC CONDITIONS SYNDROMES AND RARE DISEASES**

- ~~Known vascular EDS (vEDS) with acute extremity pain and concern for dissection/rupture (18,19)~~

- Vascular Ehlers-Danlos Syndrome (vEDS) ~~surveillance imaging~~: With inconclusive ultrasound or ultrasound suggestive of vascular pathology OR acute extremity pain and concern for dissection/rupture <sup>(18,19)</sup>
- ~~Known~~ Williams Syndrome: ~~when there is concern for vascular disease based on~~ Abnormal vascular exam or imaging findings (such as diminished pulses, bruits or signs of diffuse thoracic aortic stenosis) <sup>(20)</sup>
- For other syndromes and rare diseases not otherwise addressed in the guideline, coverage is based on a case-by-case basis using societal guidance
- For known predisposing conditions (such as Buerger disease, cystic adventitial disease, arterial endofibrosis, fibromuscular dysplasia, segmental arterial mediolysis and/or genetic conditions such as Marfan syndrome, Loeys-Dietz syndrome, or vascular Ehler-Danlos Syndrome) and any ONE of the following <sup>(7)</sup>:
  - Prior imaging suggestive of non-atherosclerotic peripheral vascular disease of the lower extremity
  - Signs or symptoms of lower extremity vascular disease (such as claudication, weak pulses)

## CODING AND STANDARDS

### Coding

CPT Codes

73706

### Applicable Lines of Business

☒	CHIP (Children’s Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

## BACKGROUND

### Screening

#### ***CTA and Screening: Peripheral Vascular Disease***

The USPSTF (U.S. Preventive Services Task Force) does not recommend routine screening for peripheral vascular disease in asymptomatic patients<sup>(20)</sup>. High risk patients (e.g., diabetics) may be screened with ABI (ankle brachial index) and duplex ultrasound.

The ankle-brachial index (ABI) is the ratio of systolic blood pressure at the ankle divided by the systolic pressure of the upper arm. The normal range lies between 0.9-1.4. An ABI<sup>(21)</sup> of less than 0.9 is a reliable indicator of the presence of lower extremity PAD, indicating atherosclerotic arterial disease. The upper limit of normal ABI should not exceed 1.40. An ABI >1.40 is suggestive of arterial stiffening (i.e., medial arterial calcification) and is also associated with a higher risk of cardiovascular events and is seen in elderly patients, typically in those with diabetes or chronic kidney disease (CKD).

#### **Contraindications and Preferred Studies**

- Contraindications and reasons why a CT/CTA cannot be performed may include: impaired renal function, significant allergy to IV contrast, pregnancy (depending on trimester).
- Contraindications and reasons why an MRI/MRA cannot be performed may include: impaired renal function, claustrophobia, non-MRI compatible devices (such as non-compatible defibrillator or pacemaker), metallic fragments in a high-risk location, patient exceeds weight limit/dimensions of MRI machine.

## **SUMMARY OF EVIDENCE**

### **ACR Appropriateness Criteria Nonatherosclerotic Peripheral Arterial Disease**<sup>(7)</sup>

**Study Design:** This study provides evidence-based guidelines for the diagnosis and treatment of nonatherosclerotic peripheral arterial diseases. The guidelines were developed by the American College of Radiology (ACR) and reviewed annually by a multidisciplinary expert panel.

**Target Population:** The guidelines are intended for radiologists, radiation oncologists, and referring physicians dealing with patients suspected of having nonatherosclerotic peripheral arterial diseases.

**Key Factors:** The study discusses various nonatherosclerotic diseases affecting peripheral arteries, including popliteal entrapment syndrome, external iliac artery endofibrosis, lower-extremity inflammatory vasculitides, and vascular trauma. It emphasizes the importance of accurate vascular imaging and provides recommendations for appropriate initial diagnostic imaging studies based on clinical presentation and suspicion of disease

## 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VES Guideline for the Management of Lower Extremity Peripheral Artery Disease <sup>(9)</sup>

**Study Design:** This guideline provides recommendations for the management of lower extremity peripheral artery disease (PAD) and was developed by the American College of Cardiology (ACC) and the American Heart Association (AHA).

**Target Population:** The guidelines are aimed at clinicians treating patients with lower extremity PAD across various clinical presentation subsets, including asymptomatic, chronic symptomatic, chronic limb-threatening ischemia, and acute limb ischemia.

**Key Factors:** The study includes a comprehensive literature review, covering studies, reviews, and other evidence conducted on human subjects. It provides updated recommendations for the diagnosis, medical therapy, exercise therapy, and revascularization for PAD. The guidelines also address special considerations such as risk amplifiers, health disparities, and management of PAD in older patients.

## 2024 ESC Guidelines for the management of peripheral arterial and aortic diseases <sup>(1)</sup>

**Study Design:** This guideline was developed by the European Society of Cardiology (ESC) and provides recommendations for the management of peripheral arterial and aortic diseases.

**Target Population:** The guidelines are intended for healthcare professionals managing patients with peripheral arterial and aortic diseases, including those with atherosclerotic and non-atherosclerotic conditions.

**Key Factors:** The study covers a wide range of topics, including epidemiology, risk factors, clinical assessment, diagnostic tests, medical therapy, and interventional treatment. It emphasizes a comprehensive approach to managing the entirety of the arterial circulation and highlights the importance of a multidisciplinary approach in expert and high-volume centers.

## ANALYSIS OF EVIDENCE

### Shared Findings <sup>(1,7,9)</sup>:

- Importance of Imaging Modalities: All three articles emphasize the significance of imaging modalities in diagnosing and managing peripheral arterial diseases. They highlight the use of techniques such as Duplex Ultrasound (DUS), Computed Tomography Angiography (CTA), and Magnetic Resonance Angiography (MRA) for accurate visualization of vascular abnormalities and guiding treatment decisions.
- Role of Non-invasive Imaging: The articles agree on the value of non-invasive imaging techniques like DUS and MRA for initial assessment and follow-up of patients with peripheral arterial diseases. These methods are preferred due to their ability to provide detailed information without the risks associated with invasive procedures.
- Use of CTA: CTA is recognized across the articles for its high spatial resolution and ability to visualize calcifications, making it a valuable tool for assessing the severity of arterial stenosis and planning revascularization.

**Conclusion** <sup>(1,7,9)</sup>:

The evidence across these articles reiterates the critical role of imaging in diagnosing and managing peripheral arterial diseases. Non-invasive imaging techniques like DUS and MRA are preferred for initial assessment and follow-up due to their safety and detailed visualization capabilities. CTA is valuable for its high spatial resolution and ability to visualize calcifications, making it essential for planning revascularization.

While the articles share common conclusions on the importance of imaging modalities, they differ in their specific recommendations, target populations, and key factors. Francois et al 2019 provides detailed appropriateness criteria for various imaging modalities based on specific clinical scenarios, while Gornik et al 2024 focuses on comprehensive management of lower extremity PAD and Mazzolai et al 2024 offers a holistic approach to peripheral arterial and aortic diseases, including genetic conditions.

Overall, the shared and differing conclusions highlight the multifaceted nature of extremity imaging and the need for tailored approaches based on the patient's specific condition and clinical scenario.

## POLICY HISTORY

Date	Summary
<p><u>June 2025</u></p>	<ul style="list-style-type: none"> <li>● <u>Guideline number changed from 061-1 to 2033</u></li> <li>● <u>Guideline name changed from Lower Extremity CTA/CTV to Lower Extremity Computed Tomography Angiography (CTA)</u></li> <li>● <u>Added in general information statement regarding guideline criteria development by reputable sources, standard of care, and best practices</u></li> <li>● <u>Added non-invasive studies and non-atherosclerotic PVD to Peripheral Vascular Disease section</u></li> <li>● <u>Broke down clinical suspicion of vascular disease section for clarity</u></li> <li>● <u>Added non-atherosclerotic PVD to Genetics Syndromes and Rare Diseases section</u></li> <li>● <u>Standardized preoperative and postoperative assessment and Imaging in Known Genetic Conditions sections</u></li> <li>● <u>Reduced Background section</u></li> <li>● <u>Edited text for clarity and consistency</u></li> <li>● <u>Updated reference</u></li> <li>● <u>Added a Summary of Evidence and Analysis of Evidence</u></li> </ul>

Date	Summary
April 2024	<ul style="list-style-type: none"> <li>• Updated references</li> <li>• Added Genetics Syndromes and Rare Diseases, Evaluation of Tumor, and Contraindications and Preferred Studies sections</li> </ul>
<del>April 2023</del>	<del>Updated references</del> <del>Modified background section</del> <del>Added vascular malformations</del> <del>Added indeterminate prior imaging findings</del> <del>General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline</del>

## LEGAL AND COMPLIANCE

### Guideline Approval

#### Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

#### Disclaimer

*Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. Evolent clinical guidelines contain guidance that requires prior authorization and service limitations. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.*

*Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.*



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