



# Cardio Policy:

## Arterial Duplex

<b>POLICY NUMBER</b> UM CARDIO_1076	<b>SUBJECT</b> Arterial Duplex (upper and lower extremities)	<b>DEPT/PROGRAM</b> UM Dept	<b>PAGE 1 OF 4</b>
<b>DATES COMMITTEE REVIEWED</b> 04/01/11, 11/07/12, 03/10/14, 06/16/14, 02/19/15, 08/12/15, 11/23/16, 10/10/17, 02/13/19, 02/21/19, 04/23/19, 12/11/19, 05/13/20, 07/31/20, 03/10/21, 08/11/21, 09/08/21, 09/14/22	<b>APPROVAL DATE</b> September 14, 2022	<b>EFFECTIVE DATE</b> September 30, 2022	<b>COMMITTEE APPROVAL DATES</b> 04/01/11, 11/07/12, 03/10/14, 06/16/14, 02/19/15, 08/12/15, 11/23/16, 10/10/17, 02/13/19, 02/21/19, 04/23/19, 12/11/19, 05/13/20, 07/31/20, 03/10/21, 08/11/21, 09/08/21, 09/14/22
<b>PRIMARY BUSINESS OWNER:</b> UM		<b>COMMITTEE/BOARD APPROVAL</b> Utilization Management Committee	
<b>URAC STANDARDS</b> HUM v8: UM 1-2; UM 2-1	<b>NCQA STANDARDS</b> UM 2		<b>ADDITIONAL AREAS OF IMPACT</b>
<b>CMS REQUIREMENTS</b>	<b>STATE/FEDERAL REQUIREMENTS</b>		<b>APPLICABLE LINES OF BUSINESS</b> Commercial, Exchange, Medicaid

### I. PURPOSE

Indications for determining medical necessity for arterial duplex of the extremities.

### II. DEFINITIONS

Duplex ultrasound imaging of the major arteries in the extremities is for assessing any abnormalities in the blood flow.

An appropriate diagnostic or therapeutic procedure is one in which the expected clinical benefit exceeds the risks or negative consequences of the procedure by a sufficiently wide margin such that the procedure is generally considered acceptable or reasonable care. The ultimate objective of AUC is to improve patient care and health outcomes in a cost-effective manner but is not intended to ignore ambiguity and nuance intrinsic to clinical decision making.

Appropriate Care- Median Score 7-9

May be Appropriate Care- Median Score 4-6

Rarely Appropriate Care- Median Score 1-3

### III. POLICY

Indications for approving a request for medical necessity are:

- A. Evaluation of patient that has developed sudden pallor, numbness, and coolness of an extremity and vascular obstruction is suspected. **(AUC Score 9)<sup>1,2,3,4</sup>**
- B. Evaluation of a patient with no prior diagnosis of peripheral artery disease (PAD) presenting with leg pain, claudication, and Ankle Brachial Index (ABI)  $\geq 1.3$ . **(AUC Score 9)<sup>1,2,3,4</sup>**
- C. Evaluation of a patient with no prior diagnosis of PAD presenting with leg pain, claudication, and Ankle Brachial Index (ABI)  $\leq 0.9$  done within the last 12 months. **(AUC Score 9)<sup>1,2,3,4</sup>**
- D. Evaluation of a patient with no prior diagnosis of PAD, with and or without Diabetes Mellitus, presenting with leg pain, claudication and decreased infra-popliteal pulses and no prior ABI within the last 12 months. **(AUC Score 9)<sup>1,2,3,4</sup>**
- E. Evaluation of a patient with leg pain, with clinical presentation suggestive of critical limb ischemia i.e., absent, or markedly diminished infra-popliteal pulses and no prior arterial duplex done within the last 6 months. **(AUC Score 9)<sup>1,2,3,4</sup>**
- F. Evaluation of asymptomatic patient with PAD risk factors- age  $\geq 65$  years or Age 50-64 years with one or more risk factors for atherosclerosis (diabetes mellitus, history of smoking, hyperlipidemia, hypertension, family history of PAD) or with known atherosclerotic disease in another vascular bed (coronary, carotid, subclavian, renal, mesenteric artery stenosis, or AAA) and with no prior diagnosis of lower extremity PAD and with abnormal quantified volume plethysmography (QuantaFlo) result ( $<0.6$ ). No prior arterial duplex done within last 6 months. **(AUC Score 6)<sup>2,3</sup>**
- G. Evaluation of symptomatic patient with PAD risk factors- age  $\geq 65$  years or Age 50-64 years with one or more risk factors for atherosclerosis (diabetes mellitus, history of smoking, hyperlipidemia, hypertension, family history of PAD) or with known atherosclerotic disease in another vascular bed (coronary, carotid, subclavian, renal, mesenteric artery stenosis, or AAA), with no prior diagnosis of lower extremity PAD and abnormal quantified volume plethysmography (QuantaFlo) result ( $<0.6$ ). No prior arterial duplex done within last 6 months. **(AUC Score 6)<sup>2,3</sup>**
- H. Evaluation of a patient with no prior diagnosis of PAD presenting with foot or toe ulcer or gangrene or with infection of leg/foot without palpable pulses and no prior arterial duplex done within the last 3 months. **(AUC Score 9)<sup>1,2,3,4</sup>**
- I. Evaluation of a patient who has undergone lower extremity Percutaneous or Surgical Intervention, presenting with new or worsening lifestyle-limiting claudication or with non-healing ulceration despite being on pharmacological therapy. **(AUC Score 9)<sup>1,2,3,4</sup>**
- J. Evaluation of a patient with PAD and has not undergone lower extremity Percutaneous or Surgical Intervention, presenting with new or worsening lifestyle-limiting claudication or with non-healing ulceration despite being on pharmacological therapy. **(AUC Score 8)<sup>1,2,3,4</sup>**
- K. Surveillance duplex in asymptomatic patients after lower extremity Percutaneous or Surgical intervention can be done within 6 weeks after intervention, as a baseline. **(AUC Score 8)<sup>1,2,3,4</sup>**
- L. Surveillance duplex in asymptomatic patients after lower extremity Surgical Intervention can be done at 6 months after baseline study. **(AUC Score 8)<sup>1,2,3,4</sup>**
- M. Surveillance duplex in asymptomatic patients after lower extremity Percutaneous or Surgical Intervention is appropriate annually for 3 years, provided there is no change in clinical status, after the baseline study. **(AUC Score 7)<sup>1,2,3,4</sup>**
- N. Evaluation of a patient that has an aneurysm or arteriovenous malformation of a lower extremity with no prior arterial duplex within the last 12 months. **(AUC Score 7)<sup>1,2,3,4</sup>**

- O. Evaluation of a patient after femoral access procedure who has developed or is suspected to have developed groin complications e.g. a pseudo aneurysm or arteriovenous malformation of a lower extremity with no prior duplex since the procedure. **(AUC Score 8)<sup>1,2,3,4</sup>**
- P. Evaluation of a patient that has sustained lower extremity trauma with possible vascular injury with no prior duplex since the injury. **(AUC Score 9)<sup>1,2,3,4</sup>**
- Q. Evaluation of upper extremity with duplex is appropriate in presence of claudication, ulcer, suspected thoracic outlet syndrome, trauma, re-op radial artery harvest for CABG, presence of pulsatile mass or evidence of ischemia or bruit after vascular access with no prior arterial duplex within the last 3 months. **(AUC Score 8)<sup>1,2,3,4</sup>**
- R. Evaluation of a patient who has undergone upper extremity Percutaneous or Surgical Intervention, presenting with new or worsening lifestyle-limiting claudication despite being on pharmacological therapy. **(AUC Score 8)<sup>1,2,3,4</sup>**
- S. Surveillance of upper extremity PAD after revascularization is appropriate if done within one month of procedure as baseline. **(AUC Score 8)<sup>1,2,3,4</sup>**
- T. Surveillance duplex in asymptomatic patients after upper extremity surgical intervention can be done at 6 months following baseline study post intervention. **(AUC Score 7)<sup>1,2,3,4</sup>**
- U. Surveillance duplex in asymptomatic patients after upper extremity Percutaneous or Surgical intervention can be done annually for 3 years, provided there is no change in clinical status after baseline study post intervention. **(AUC Score 7)<sup>1,2,3,4</sup>**

#### **Limitations:**

- A. The use of non-invasive physiologic and imaging studies for post catheter-based or surgical intervention surveillance as per #11-13 and #19-21 above is limited to one modality i.e., either ABI or PVR or duplex ultrasound. Utilization of that chosen modality must be consistent throughout the surveillance period. Additional modalities may be utilized only if clinical or symptomatic changes are documented.
- B. Requests for services that are part of a surveillance protocol for patients who are involved in a clinical trial are considered out of scope (OOS) for New Century Health and cannot be reviewed.

## **IV. PROCEDURE**

- A. In order to review a request for medical necessity, the following items must be submitted for review:
  - 1. Progress note that prompted request,
  - 2. All previous vascular studies performed,
  - 3. Progress note from Vascular Surgeon (if seen previously by a surgeon)
- B. Primary codes appropriate for this service: 93925, 93926, 93930, 93931

## **V. APPROVAL AUTHORITY**

- A. Review – Utilization Management Department
- B. Final Approval – Utilization Management Committee

## **VI. ATTACHMENTS**

A. None

## VII. REFERENCES

1. Centers for Medicare and Medicaid Services. Local Coverage Determination (LCD) (L33667). Duplex Scan Of Lower Extremity Arteries. Retrieved from <https://www.cms.gov> April 23rd, 2019.
2. Marie D. Gerhard-Herman, 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:e686–e725. DOI: 10.1161
3. Schaefer ME, Long JB, Pollick C, et al. Non-invasive detection of vascular disease in the arteries of the lower extremity: Clinical evaluation of PVS compared to doppler and definitive imaging. Vasc Dis Management March 2016 supplement
4. Emile R. Mohler, III, MD, FACC, et. al. ACCF/ACR/AIUM/ASE/ASN/ICAVL/SCAI/SCCT/SIR/SVM/SVS 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, and Society for Vascular Surgery. Journal of the American College of Cardiology. July 2012, Volume 60, Issue 3, Pages 242-276.
5. Hendel RC, et. al. Appropriate use of cardiovascular technology: 2013 ACCF appropriate use criteria methodology update: a report of the American College of Cardiology Foundation appropriate use criteria task force. Journal of the American College of Cardiology. March 2013, Volume 61, Issue 12, Pages 1305-1317.
6. NCQA UM 2022 Standards and Elements.