Duplex Scanning

Medicare Advantage Medical Policy #MNG-030
Original Effective Date: 01/01/2025
Current Effective Date: 01/01/2025

Applies to all products administered or underwritten by the Health Plan, unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

When Services May Be Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- *Benefits are available in the member's contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

Based on review of available data, the Health Plan may consider duplex scanning to be **eligible for coverage.****

When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Health Plan considers duplex scanning to be **investigational.***

The use of duplex scanning when patient selection criteria are not met is considered to be **investigational.***

Coverage Indications, Limitations, and/or Medical Necessity

Coverage Indications

Arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs:

Coverage may be provided for duplex scanning of arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs when performed for the following indications:

- To evaluate patients presenting with signs or symptoms such as epigastric or periumbilical postprandial pains that last for 1-3 hours and/or with associated weight loss resulting from decreased oral intake which may indicate chronic intestinal ischemia.
- To evaluate patients presenting with an acute onset of crampy or steady epigastric and periumbilical abdominal pain combined with minimal or no findings on abdominal examination and a high leukocyte count to rule out acute intestinal ischemia.
- To evaluate a patient who has sustained trauma to the abdominal, pelvic and/or retroperitoneal area resulting in a possible injury to the arterial inflow and/or venous outflow of the abdominal, pelvic and/or retroperitoneal organs.

- To evaluate a suspicion of an aneurysm of the renal artery or other visceral artery based on a patient's signs and symptoms of abdominal pain or noted as an incidental finding on another radiological examination.
- To evaluate a hypertensive patient who has failed first line antihypertensive drug therapy in order to rule out renovascular disease such as renal artery stenosis, renal arteriovenous fistula, or renal aneurysm as a cause for the uncontrolled hypertension.
- To evaluate a patient with signs and symptoms of portal hypertension. These may include abdominal discomfort and distention, abdominal collaterals (caput medusae), abdominal bruit, ascites, encephalopathy, esophageal varices, splenomegaly, etc.
- To evaluate patients suspected of an embolism, thrombosis, hemorrhage or infarction of the portal vein, renal vein and/or renal artery. These patients may present with many different symptoms such as abdominal discomfort, hematuria, cardiac failure, diastolic hypertension, jaundice, fatigue, weakness, malaise, etc.
- To evaluate patients with pain or swelling of scrotal contents which may be as a result of suspected obstruction in arterial inflow or venous outflow to the testicles or related structures. The use of duplex scanning of scrotal contents should only be performed after conventional diagnostic test, such as ultrasound, have proven to be "non-definitive"
- To evaluate patients for complications of transplanted organ: kidney, liver or pancreas.
- To evaluate patients diagnosed with hypertensive and normotensive renovascular disease with impaired renal function

Aorta, inferior vena cava, iliac vasculature, or bypass grafts:

Coverage may be provided for duplex scanning of aorta, inferior vena cava, iliac vasculature, or bypass grafts when performed for the following indications:

- To confirm a suspicion of an abdominal or iliac aneurysm raised by a physical examination or noted as an incidental finding on another radiological examination. The physical examination usually reveals a palpable, pulsatile and nontender abdominal mass.
- To monitor the progression of an abdominal aortic aneurysm. It is usually expected that monitoring occurs approximately every six (6) months.
- To evaluate patients presenting with signs and symptoms of a thoracic aneurysm. The symptoms usually associated with a thoracic aneurysm are substernal chest pain, back or neck pain described as deep and aching or throbbing as well as symptoms due to pressure on the trachea (dyspnea, stridor, a brassy cough), the esophagus (dysphagia), the laryngeal nerve (hoarseness), or superior vena cava (edema in neck and arms, distended neck veins).
- To evaluate patients presenting with signs and symptoms of an abdominal aneurysm. The symptoms usually associated with an abdominal aneurysm are constant pain located in the midabdomen, lumbar region or pelvis which can be severe and may be described as having a boring quality. A leaking aneurysm is characterized by lower back pain, whereas, acute pain and hypotension usually occur with rupture.
- To evaluate a patient presenting with signs and symptoms suggestive of an aortic dissection. A patient with an aortic dissection has symptoms such as a sudden onset of severe,

continuous tearing or crushing pain in the chest that radiates to the back and is generally unaccompanied by EKG evidence of a myocardial infarction. On physical examination, the patient is agitated, has a murmur of aortic regurgitation, asymmetric diminution of arterial pulses and systolic bruits over the areas where the aortic lumen is narrowed.

- Initial evaluation of a patient presenting with signs and symptoms such as intermittent claudication in the calf muscles, thighs and/or buttocks, rest pain, weakness in legs or feeling of tiredness in the buttocks, etc. which may suggest occlusive disease of the aorta and iliac arteries. The physical examination usually reveals decreased or absent femoral pulses, a bruit over the narrowed artery, and possibly muscle atrophy. If severe occlusive disease exists, the patient will have atrophic changes of the skin, thick nails, coolness of the skin with pallor and cyanosis.
- To evaluate patients suspected of an abdominal or thoracic arterial embolism or thrombosis. These patients usually present with severe pain in one or both lower extremities, numbness, and symmetric weakness of the legs, with absent or severely reduced pulses below the embolism site.
- To evaluate patients presenting with complaints of pain in the calf or thigh, slight swelling in the involved leg, tenderness of the iliac vein, etc. which may suggest phlebitis or thrombophlebitis of the iliac vein or inferior vena cava.
- To evaluate a patient who has sustained trauma to the chest wall and/or abdomen resulting in a possible injury to the aorta, inferior vena cava and/or iliac vasculature.
- To assess the continued patency of both native venous and prosthetic arterial grafts following surgical intervention. Usually this is performed at 6 weeks, 3 months, then every six (6) months.
- To monitor the sites of various percutaneous interventions, including, but not limited to angioplasty, thrombolysis/thrombectomy, atherectomy, or stent placement. Usually this is performed at 6 weeks, 3 months, then every six (6) months.

Limitations

Duplex testing should be reserved for specific indications for which the precise anatomic information obtained by this technique is likely to be useful. Therefore, it would be rare to see duplex scanning being performed for conditions in which another diagnostic test is recommended (e.g., an aortic dissection is better diagnosed with a chest x-ray, transesophageal echocardiogram or aortography).

References

1. FCSO reference LCD number(s) – L28863, L29159, L29420.
2. American Medical Association. (2001). Principles of CPT® Coding (2nd ed).
3. Coding and Payment Guide for Radiology Services. (2003). An essential coding, billing, and reimbursement resource for the Radiologist (11th ed.). Ingenix St Anthony Publishing/Medicode.

4. Fauci, A. S., Braunwald, E., Isselbacher, K. J., Wilson, J. D., Martin, J. B., Kasper, D. L., Hauser, S. L., & Longo, D. L. (Eds.). Harrison's principles of internal medicine (14th ed.). New York: McGraw-Hill.
5. Hockerberger, R., Marx, J., & Walls, R. (Ed). (2002). Rosen's emergency medicine: concepts and clinical practice(5th ed.). St. Louis: Mosby, Inc. Used to provide appropriate indication for procedure.
6. Johansson, M., Jenson, G., Aurellm, Friberg, P., Herlitz, H., Klingenstierna, H., et al. Evaluation of duplex ultrasound and captopril renography for detection of renovascular hypertension. Kindy Int 2000; 58(2): 774-82.
7. Mohler, E.R., Gornik, H.L., Gerhard-Herman, M., et al. (2012). 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. Journal of the American College of Cardiology. 60(3):242-276.
8. Tabers cyclopedic medical dictionary (17th ed.). (1989). Philadelphia: F. A. Davis Health Plan .
9. Tierney, L. M., McPhee, S. J., & Papadakis, M. A. (Eds.). (1998). Current medical diagnosis and treatment (37th ed.). Stamford: Appleton & Lange.

Policy History

Original Effective Date: 01/01/2025
Current Effective Date: 01/01/2025
09/26/2024 Medical Policy Committee review
09/26/2024 Medical Policy Implementation Committee approval. New policy.

Coding

The five character codes included in the Health Plan Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)‡, copyright 2023 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

The responsibility for the content of the Health Plan Medical Policy Coverage Guidelines is with the Health Plan and no endorsement by the AMA is intended or should be implied. The AMA disclaims responsibility for any consequences or liability attributable or related to any use, nonuse or interpretation of information contained in the Health Plan Medical Policy Coverage Guidelines. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. Any use of CPT outside of the Health Plan Medical Policy Coverage Guidelines should refer to the most current Current Procedural Terminology which contains the complete and most current listing of CPT codes and descriptive terms. Applicable FARS/DFARS apply.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	93975, 93976, 93978, 93979
HCPCS	No codes
ICD-10 Diagnosis	All related diagnoses

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
    1. Consultation with technology evaluation center(s);
    2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
    3. Reference to federal regulations.

**Medically Necessary (or “Medical Necessity”) - Health care services, treatment, procedures, equipment, drugs, devices, items or supplies that a Provider, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury, disease or its symptoms, and that are:

A. In accordance with nationally accepted standards of medical practice;
B. Clinically appropriate, in terms of type, frequency, extent, level of care, site and duration, and considered effective for the patient's illness, injury or disease; and
C. Not primarily for the personal comfort or convenience of the patient, physician or other health care provider, and not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.

For these purposes, "nationally accepted standards of medical practice" means standards that are based on credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community, Physician Specialty Society recommendations and the views of Physicians practicing in relevant clinical areas and any other relevant factors.

‡ Indicated trademarks are the registered trademarks of their respective owners.

NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Health Plan recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

NOTICE: Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.

Medicare Advantage Members

Established coverage criteria for Medicare Advantage members can be found in Medicare coverage guidelines in statutes, regulations, National Coverage Determinations (NCD)s, and Local Coverage Determinations (LCD)s. To determine if a National or Local Coverage Determination addresses coverage for a specific service, refer to the Medicare Coverage Database at the following link: https://www.cms.gov/medicare-coverage-database/search.aspx. You may wish to review the Guide to the MCD Search here: https://www.cms.gov/medicare-coverage-database/help/mcd-bene-help.aspx.

When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, internal coverage criteria may be developed. This policy is to serve as the summary of evidence, a list of resources and an explanation of the rationale that supports the adoption of this internal coverage criteria.