



BlueCross BlueShield
of Alabama

Effective for dates of service on or after April 1, 2013, refer to:

<https://www.bcbsal.org/providers/policies/careCore.cfm>

Name of Policy:

Magnetic Resonance Angiography (MRA) of the Chest (excluding the heart)

Policy #: 291

Category: Radiology

Latest Review Date: February 2013

Policy Grade: A

Background/Definitions:

As a general rule, benefits are payable under Blue Cross and Blue Shield of Alabama health plans only in cases of medical necessity and only if services or supplies are not investigational, provided the customer group contracts have such coverage.

The following Association Technology Evaluation Criteria must be met for a service/supply to be considered for coverage:

- 1. The technology must have final approval from the appropriate government regulatory bodies;*
- 2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes;*
- 3. The technology must improve the net health outcome;*
- 4. The technology must be as beneficial as any established alternatives;*
- 5. The improvement must be attainable outside the investigational setting.*

Medical Necessity means that health care services (e.g., procedures, treatments, supplies, devices, equipment, facilities or drugs) that a physician, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury or disease or its symptoms, and that are:

- 1. In accordance with generally accepted standards of medical practice; and*
- 2. Clinically appropriate in terms of type, frequency, extent, site and duration and considered effective for the patient's illness, injury or disease; and*
- 3. Not primarily for the convenience of the patient, physician or other health care provider; and*
- 4. 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.*

Description of Procedure or Service:

Magnetic resonance angiography (MRA) is the general term used to describe magnetic resonance imaging of vascular structures, but when MR is used to image a vein instead of an artery, the term “magnetic resonance venography” (MRV) may be used. The technical capabilities of current MRA make it most suitable for evaluation of large- and medium-sized vessels such as the thoracic aorta and major aortic branch vessels or the larger caliber central veins. MRA of the chest has the potential to replace angiography for some indications, thus eliminating its associated risk. In addition, MRA offers the unique ability to provide cross-sectional and projectional images of the vasculature in predictable orientations and easy-to-understand display formats without the use of contrast materials. This capability can facilitate planning of complex surgical procedures by simultaneously demonstrating the vascular anatomy of interest and displaying the anatomic interrelationships of these structures in three dimensions.

MRA applications in the thorax can be subdivided into the following categories:

- Acquired disease of the thoracic aorta;
- Developmental anomaly of the thoracic vasculature;
- Systemic venous thrombosis or occlusion;
- Pulmonary embolism.

In the workup of a pulmonary embolism, an MRA is not routinely the first imaging test done. MRA is typically preceded by a ventilation perfusion scan. The necessity for a subsequent angiogram (or MRA in those who have contraindications for an angiogram) is based on both the results of the ventilation perfusion scan and the clinical suspicion of pulmonary embolus.

Policy:

Effective for dates of service on or after April 1, 2013, refer to:

<https://www.bcbsal.org/providers/policies/careCore.cfm>

Effective for dates of service ~~on or after~~ October 1, 2006 through March 31, 2013:

MRA of the chest meets Blue Cross and Blue Shield of Alabama’s medical criteria for coverage in patients with the following indications **when medically necessary and supported by clinical and laboratory findings:**

- Acquired disease of the thoracic aorta (i.e., aortic dissection, aneurysm occlusive disease, and aortitis);
- Developmental anomaly of the thoracic vasculature; or
- Systemic venous thrombosis or occlusion.

In addition to the above indications, effective for dates of service March 1, 2007 through March 31, 2013:

MRA of the chest meets Blue Cross and Blue Shield of Alabama’s medical criteria for coverage for the following condition **when medically necessary and supported by clinical and laboratory findings:**

- Assess thoracic venous structures

MRA of the chest meets Blue Cross and Blue Shield of Alabama's medical criteria for coverage when used as an **alternative to angiography for evaluation of pulmonary embolus in patients who have a contraindication to the use of IV iodinated contrast material** (e.g., a history of severe contrast media allergy, such as anaphylactic shock or a cardiac arrest; or high risk of contrast-induced renal failure such as in diabetic patients with moderate renal insufficiency).

MRA of the chest does not meet Blue Cross and Blue Shield of Alabama's medical criteria for coverage and is considered **investigational** including, but are not limited to, the following:

- Evaluation of pulmonary emboli in patients without contraindications to the use of IV iodinated contrast agents.

Individual case consideration will be given to patients with conditions not described above. Clinical notes will be required for review.

Blue Cross and Blue Shield of Alabama does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Cross and Blue Shield of Alabama administers benefits based on the members' contract and corporate medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

Key Points:

The above policy is based on a series of 1997 TEC Assessments, which concluded that, compared to angiography; MRA provides a reliable diagnostic assessment of acquired thoracic aortic diseases, vascular anomalies involving the great thoracic arteries and veins, and evaluation of the thoracic, systemic, and central veins for the diagnosis of thrombo-occlusive disease. However, the evaluation also concluded that diagnostic performance is not sufficiently accurate to allow replacement of pulmonary angiography in the diagnosis of pulmonary embolism (PE) in patients who have no contraindications to receiving IV iodinated contrast material. In this setting, MRA may be an acceptable alternative to angiography in patients who are allergic to or who have other contraindications (e.g., renal insufficiency) for iodinated contrast media. It should be noted that in all applications, MRA is considered an alternative to angiography. A 2003 review did not identify any published articles that addressed the limitations noted in the series of TEC Assessments; therefore, the policy statement is unchanged. Specifically, the appropriateness criteria of the American College of Cardiology (ACC) are consistent with the conclusions of the TEC Assessment. For example, the ACC appropriateness criteria offer the following statement regarding MRA in a patient with suspected pulmonary embolism. "MRA is not indicated in the routine evaluation of patients with suspected pulmonary embolism...currently it is mainly used in certain centers with particular interest and expertise, and in patients in whom contrast administered for helical CT scans or even for pulmonary angiography is thought to be contraindicated..."

The literature was searched for the period of 2003 through November 2004, with a particular focus on MRA of the chest to detect pulmonary emboli. No published studies were identified that would prompt reconsideration of the policy statement, which remains unchanged. Published studies do suggest that spiral CT scanning using multidetector CT has emerged as a noninvasive alternative to diagnostic pulmonary. Spiral CT scanning is widely available, and therefore, as noted in the policy statement, MRA would only be indicated in the subset of patients that have a contraindication to contrast media.

Key Words:

Magnetic resonance angiography, MRA, MRA of chest

Approved by Governing Bodies:

In 2006, the Food and Drug Administration (FDA) issued a Public Health Advisory to healthcare professionals regarding Nephrogenic Systemic Fibrosis or Nephrogenic Fibrosing Dermopathy (NSF/NFD) which may occur in patients with moderate to end-stage kidney disease after they have a MRI or Magnetic resonance angiography (MRA) with a gadolinium-based contrast agent.

First identified in 1997, NSF/NFD is almost exclusively found in patients with renal failure and acidosis. Patients with this condition develop fibrosis of the skin and connective tissues throughout the body. The skin thickening may inhibit flexion and extension of joints, resulting in contractures. In addition, patients may develop widespread fibrosis in other organs. A skin biopsy is necessary to make a definitive diagnosis. The disease is progressive and may be fatal. Its cause is unknown.

Patients who receive gadolinium-containing contrast agents should be aware of the following possible signs and symptoms of NSF/NFD and advised to seek medical attention if these occur: swelling and tightening of the skin; difficulty extending the joints of arms, hands, legs, and feet; weakness, reddened or darkened areas on the skin; burning or itching of the skin; and deep bone pain in the hips and ribs.

Physicians should be cautious regarding the use of gadolinium-containing contrast imaging agents, especially at high doses, in patients with moderate to end-stage renal failure.

Benefit Application:

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

ITS: Home Policy provisions apply

BellSouth/AT&T contracts: No special consideration

FEP contracts: FEP does not consider investigational if FDA approved. Will be reviewed for medical necessity. Special benefit consideration may apply. Refer to member's benefit plan.

Wal-Mart: Special benefit consideration may apply. Refer to member's benefit plan.

Pre-certification requirements: Effective for dates of service on or after November 1, 2007, required when ordered by a provider in a Blue Cross and Blue Shield of Alabama's Preferred or Participating Network for a patient covered by Blue Cross and Blue Shield of Alabama who will receive outpatient imaging services(s) from a Preferred Medical Doctor (PMD) or Preferred Radiology Participating (PRP) provider.

Exceptions to the Alabama PMD and PRP pre-certification requirement: NASCO, Wal-Mart, Blue Advantage, Flowers Foods, Inc., FEP.

In addition to the above Blue Cross and Blue Shield of Alabama PMD/PRP Network requirement, **some self-insured national account groups** may require pre-certification for all MRIs **effective for dates of service on or after January 1, 2009**. Please confirm during your benefit verification process if a pre-certification is required.

Reviews to verify accuracy of pre-certification information will be conducted.

Pre-determination requirements: Not required. May be done as a courtesy to physicians and members not included in the circumstances described in the above Pre-certification requirements.

Coding:

CPT Codes:

71555 Magnetic resonance angiography, chest (excluding myocardium), with or without contrast material(s)

It should be noted that the policy below indicates that MRA of the chest (CPT code 71555) is considered medically necessary only as an alternative to an angiography. Therefore, MRA should rarely precede or be followed by an angiography/venography as described by the following CPT codes:

75600–75606	thoracic, aortography
75741–75746	pulmonary angiography
75756	internal mammary, angiography
75827	superior vena cava venography

References:

1. FDA Information for Healthcare Professionals. Gadolinium-Based Contrast Agents for Magnetic Resonance Imaging Scans.
www.fda.gov/cder/drug/InfoSheets/HCP/gccaHCP.htm. Accessed January 2007
2. 1997 TEC Assessment ; Tab 8, MRA of the Chest-part I: Acquired Disease of the Thoracic Aorta.
3. 1997 TEC Assessment; Tab 9, MRA of the Chest-part II: Developmental Anomalies of the Thoracic Vasculature.
4. 1997 TEC Assessment; Tab 10, MRA of the Chest-part III: Systemic Venous Thrombosis of Occlusion.

5. 1997 TEC Assessment; Tab 11, MRA of the Chest-part IV: Pulmonary Embolism.
6. www.acr.org/dyna/?doc=departments/appropriateness_criteria/toc.html.

Policy History:

Medical Policy Group, August 2006 (2)

Medical Policy Administration Committee, August 2006

Available for comment August 15-September 28, 2006

Medical Policy Group, December 2006 (2)

Medical Policy Administration Committee, January 2007

Available for comment January 12-February 25, 2007

Medical Policy Group, December 2008 (2)

Medical Policy Group, February 2013 (2): Updated policy with link to CareCore National[®] medical policies effective April 1, 2013

Medical Policy Administration Committee, March 2013

Available for comment February 15 through March 31, 2013

Medical Policy Group, November 2013 (2): Updated link to CareCore National[®]

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member's plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plan contracts.