Magnetic Resonance Angiography (MRA)

FIRST COAST SERVICE OPTIONS
MAC - PART A/B
LOCAL COVERAGE DETERMINATION

LCD Database ID Number
L34372

Contractor Name
First Coast Service Options, Inc.

Contractor Number
09101 - Florida
09201 – Puerto Rico/Virgin Islands
09102 – Florida
09202 – Puerto Rico
09302 – Virgin Islands

Contractor Type
MAC – Part A and B

LCD Title
Magnetic Resonance Angiography (MRA)

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CMS National Coverage Policy

Language quoted from CMS National Coverage Determinations (NCDs) and coverage provisions in interpretive manuals are italicized throughout the Local Coverage Determination (LCD). NCDs and coverage provisions in interpretive manuals are not subject to the LCD Review Process (42 CFR 405.860[b] and 42 CFR 426 [Subpart D]). In addition, an administrative law judge may not review an NCD. See §1869(f)(1)(A)(i) of the Social Security Act.

Unless otherwise specified, italicized text represents quotation from one or more of the following CMS sources:

CMS Manual System, Pub. 100-03, Medicare National Coverage, Chapter 1, Section 220.3
Program Memorandum A-02-076 (Change Request 2298)
Program Memorandum, Transmittal 38, 170, 803, 1795, 1883 (Change Request 2673)
Change Request 7040, Transmittals 123 and 1998, dated July 9, 2010
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Change Request 7147, Transmittal 2045, dated September 10, 2010
Change Request 7112, Transmittal 2051, dated September 17, 2010
Change Request 7271, Transmittal 2141, dated January 24, 2011

Primary Geographic Jurisdiction

Florida
Puerto Rico/Virgin Islands

Oversight Region

Region I

Original Determination Effective Date

10/01/2015

Original Determination Ending Date

N/A

Revision Effective Date

N/A

Revision Ending Date

N/A

Indications and Limitations of Coverage and/or Medical Necessity

Magnetic Resonance Angiography (MRA) is an application of magnetic resonance (MR) imaging that provides visualization of blood flow, as well as images of normal and diseased blood vessels. Since MRA contrast agents are not nephrotoxic and are rarely associated with allergic type reactions, MRA without or with gadolinium-based contrast enhancement is an imaging alternative for patients who cannot tolerate iodine-based contrast media.

Although MRA appears to be a rapidly developing technology, the clinical safety and effectiveness of this procedure for all anatomical regions has not been proven. As a result coverage will be provided on a limited basis. Below are the indications for coverage allowed for MRA. All other uses of MRA will not be covered.

Indications

Head and Neck (Procedure codes 70544-70549)

All of the following criteria must apply in order for Medicare to provide coverage for MRA of the head and neck:

a. to evaluate the carotid arteries, the circle of Willis, the anterior, middle or posterior cerebral arteries, the vertebral or basilar arteries or the venous sinuses;
b. to verify the need for anticipated surgery for conditions that include, but are not limited to, tumor, aneurysms, vascular malformations, vascular occlusion, or thrombosis. Within this broad category of disorders, medical necessity is the underlying
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determinant of the need for an MRA. Because MRA and CA perform the same diagnostic function, the medical records should clearly justify and demonstrate the existence of medical necessity; and

c. MRA and contrast angiography (CA) are not expected to be performed on the same patient for diagnostic purposes prior to the application of anticipated therapy. Only one of these tests will be covered routinely unless the physician can demonstrate the medical need to perform both tests.

Chest (procedure codes 71555, C8909, C8910, C8911)

a. Diagnosis of Pulmonary Embolism

Patients who are allergic to iodinated contrast material face a high risk of developing complications if they undergo pulmonary angiography or computed tomography angiography. Therefore, Medicare will cover MRA of the chest for diagnosing a suspected pulmonary embolism only when it is contraindicated for the patient to receive intravascular iodinated contrast material.

b. Evaluation of Thoracic Aortic Dissection and Aneurysm

Medicare will provide coverage only for MRA or for CA when used as a diagnostic test. However, if both MRA and CA of the chest are used, the physician must demonstrate the medical need for performing these tests. While the intent of this policy is to provide reimbursement for either MRA or CA, CMS is also allowing flexibility for physicians to make appropriate decisions concerning the use of these tests based on the needs of individual patients.

Peripheral Arteries of Lower Extremities (procedure codes 73725, C8912, C8913, C8914)

Studies have proven that MRA of peripheral arteries is useful in determining the presence and extent of peripheral vascular disease in lower extremities. This procedure is non-invasive and has been shown to find occult vessels in some patients for which those vessels were not apparent when CA was performed. Medicare will cover either MRA or CA to evaluate peripheral arteries of the lower extremities. However, both MRA and CA may be useful in some cases, such as:

a. A patient has had CA and this test was unable to identify a viable run-off vessel for bypass. When exploratory surgery is not believed to be a reasonable medical course of action for this patient, MRA may be performed to identify the viable runoff vessel; or

b. A patient has had MRA, but the results are inconclusive.

Abdomen (procedure codes 74185, C8900, C8901, C8902) and Pelvis (procedure codes 72198, C8918, C8919, C8920)

a. Pre-operative Evaluation of Patients Undergoing Elective Abdominal Aortic Aneurysm (AAA) Repair (Effective July 1, 1999)

The MRA is covered for pre-operative evaluation of patients undergoing elective AAA repair if the scientific evidence reveals MRA is considered comparable to CA in determining the extent of AAA, as well as in evaluating aortoiliac occlusion disease and renal artery pathology that may be necessary in the surgical planning of AAA repair. These studies also reveal that MRA could provide a net benefit to the patient. If preoperative CA is avoided, then patients are not exposed to the risks associated with invasive procedures, contrast media, end-organ damage, or arterial injury.

b. Imaging the Renal Arteries and the Aortoiliac Arteries in the Absence of AAA or Aortic Dissection (Effective July 1, 2003)

The MRA coverage is expanded to include imaging the renal arteries and the aortoiliac arteries in the absence of AAA or aortic dissection. MRA should be obtained in those circumstances in which using MRA is expected to avoid obtaining CA, when physician history, physical examination, and standard assessment tools provide insufficient information for patient management, and obtaining an MRA has a high probability of positively affecting patient management. However, CA may be ordered after obtaining the results of an MRA in those rare instances where medical necessity is demonstrated.

Studies show that diagnostic evaluation of several upper abdominal malignancies may require an evaluation for vascular invasion by the tumor in deciding if the patient is a candidate for surgical resection of the tumor. One example is with pancreatic carcinoma. Pancreatic head carcinomas can grow in close proximity to the superior mesenteric vein.
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Evidence suggests that MRA provides reliable, noninvasive evaluation of the portal and hepatic veins. MRA can provide focused evaluation of particular areas of interest as well as a broad overview anatomic display that is helpful to surgeons and interventionalists planning procedures.

Limitations

The following MRA services are NOT considered medically reasonable and necessary:

MRA of the spinal canal and contents
MRA of the upper extremities

Type of Bill Code

Hospital - 12x, 13x, 14x
Skilled Nursing Facility - 22x, 23x
Rural Health Clinic – 71x
Federally Qualified Health Center – 77x
Critical Access Hospital – 85x

Revenue Codes

32x Radiology Diagnostic
520 Free-standing clinic – General Classification
521 Free-standing Clinic – Rural Health Clinic
615 Magnetic Resonance Angiography, Head and Neck
616 Magnetic Resonance Angiography, Lower Extremities
618 Magnetic Resonance Angiography, Other

CPT/HCPCS Codes

CPT/HCPCS Codes that Support Medical Necessity:

70544 Magnetic resonance angiography, head; without contrast material(s)
70545 with contrast material(s)
70546 without contrast material(s), followed by contrast material(s) and further sequences
70547 Magnetic resonance angiography, neck; without contrast material(s)
70548 with contrast material(s)
70549 without contrast material(s), followed by contrast material(s) and further sequences
71555 Magnetic resonance angiography, chest, (excluding myocardium), with or without contrast material(s)
72198 Magnetic resonance angiography, pelvis, with or without contrast material(s)
73725 Magnetic resonance angiography, lower extremity, with or without contrast material(s)
74185 Magnetic resonance angiography, abdomen, with or without contrast material(s)
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For hospital OPPS and Ambulatory Surgical Centers (ASCs) only:

For procedure code 71555 Magnetic resonance angiography, chest, (excluding myocardium), with or without contrast material(s) use codes:

- C8909 Magnetic resonance angiography with contrast, chest (excluding myocardium)
- C8910 Magnetic resonance angiography without contrast, chest (excluding myocardium)
- C8911 Magnetic resonance angiography without contrast followed by with contrast, chest (excluding myocardium)

For procedure code 72198 Magnetic resonance angiography, pelvis, with or without contrast material(s) use codes:

- C8918 Magnetic resonance angiography with contrast, pelvis
- C8919 Magnetic resonance angiography without contrast, pelvis
- C8920 Magnetic resonance angiography without contrast followed by with contrast, pelvis

For procedure code 73725 Magnetic resonance angiography, lower extremity, with or without contrast material(s) use codes:

- C8912 Magnetic resonance angiography with contrast, lower extremity
- C8913 Magnetic resonance angiography without contrast, lower extremity
- C8914 Magnetic resonance angiography without contrast followed by with contrast, lower extremity

For procedure code 74185 Magnetic resonance angiography, abdomen, with or without contrast material(s) use codes:

- C8900 Magnetic resonance angiography with contrast, abdomen
- C8901 Magnetic resonance angiography without contrast, abdomen
- C8902 Magnetic resonance angiography without contrast followed by with contrast, abdomen

HCPCS Codes that DO NOT Support Medical Necessity:

Part A

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>C8931</td>
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<tr>
<td>C8932</td>
<td>Magnetic resonance angiography without contrast, spinal canal and contents</td>
</tr>
<tr>
<td>C8933</td>
<td>Magnetic resonance angiography without contrast followed by with contrast, spinal canal and contents</td>
</tr>
<tr>
<td>C8934</td>
<td>Magnetic resonance angiography with contrast, upper extremity</td>
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<tr>
<td>C8935</td>
<td>Magnetic resonance angiography without contrast, upper extremity</td>
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<tr>
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<td>Magnetic resonance angiography without contrast followed by with contrast, upper extremity</td>
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Part B

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<tr>
<td>CPT code 72159</td>
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<tr>
<td>CPT code 73225</td>
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ICD–10 Codes that Support Medical Necessity

N/A

Diagnoses that Support Medical Necessity

N/A

ICD-10 Codes that DO NOT Support Medical Necessity

N/A

Diagnoses that DO NOT Support Medical Necessity

N/A

Associated Information

Documentation Requirements

Documentation maintained in the patient’s file must indicate the medical necessity of this procedure. All coverage criteria listed in the “Indications and Limitations of Coverage and/or Medical Necessity” section must be documented in the patient’s medical record, as well as a hard copy of the procedure results and made available upon request. This information can generally be found in the office/progress notes, history and physical, and/or operative notes.

If the provider of the magnetic resonance angiography study is other than the ordering/referring physician, the provider of the service must maintain hard copy documentation of test results and interpretation, along with copies of the ordering/referring physician’s order for the studies. The physician must state the reason for the MRA in his order for the test.

MRA and contrast angiography (CA) are not expected to be performed on the same patient for diagnostic purposes prior to the application of anticipated therapy. Only one of these tests will be covered routinely unless the physician can demonstrate the medical need to perform both tests. The medical record must clearly document the medical necessity of performing both tests.

Examples of indications that support medical necessity of contrast angiography (CA) performed as an adjunct to MRA are given below:

- Clarify conditions where test results or clinical information are contradictory (e.g., MRA and duplex Doppler ultrasound are discordant with the clinical differential diagnosis and conventional angiography, with its ability to directly measure pressure gradients across stenosis of questionable hemodynamic significance, can provide more definitive information).
- Verify the site of clinically important vascular stenosis and help map out the surgical/endovascular approach (e.g., to determine which lesions should have an angioplasty and/or stent vs. which lesions require surgical bypass graft or no treatment at all).
- Identify situations where MRA is nonconclusive or degraded by metallic artifact.

Utilization Guidelines

It is expected that these services would be performed as indicated by current medical literature and/or standards of practice. When services are performed in excess of established parameters, they may be subject to review for medical necessity.

Sources of Information and Basis for Decision

FCSO reference LCD number(s) – L28925, L29218, L29447
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**Start Date of Comment Period**
N/A

**End Date of Comment Period**
N/A

**Start Date of Notice Period**
04/01/2014

**Revision Number:** Original

This LCD replaces all previous LCD versions (refer to “Sources of Information and Basis for Decision” section of the LCD) and publications on this subject to comply with ICD-10-CM based on Change Request 8112. The effective date of this LCD is based on date of service.

**Related Documents**
N/A

**LCD Attachments**
N/A

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