04-70540-23

Original Effective Date: 12/15/13

Reviewed: 09/25/25

Revised: 10/15/25

Subject: Magnetic Resonance Angiography (MRA) Spinal Canal

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

DESCRIPTION:

Magnetic resonance angiography (MRA) is a noninvasive imaging technology. Application of spinal magnetic resonance angiography (MRA) allows for more effective and noninvasive screening for vascular lesions than magnetic resonance imaging (MRI) alone. It may improve characterization of normal and abnormal intradural vessels while maintaining good spatial resolution. Spinal MRA is used for the evaluation of spinal arteriovenous malformations, cervical spine fractures and vertebral artery injuries. A contrast agent (gadolinium) may be used with MRA for better visualization and may be used in individuals who have a history of contrast allergy and who are at high risk of kidney failure.

Summary and Analysis of Evidence: Magnetic resonance angiography (MRA) has important attributes that make it valuable in assessing vascular disease. Compared with radiographic catheter-based invasive angiography, it is considerably less invasive with no significant risk of vascular injury. MRA has also shown promising results for atherosclerotic plaque characterization, notably for detection of high-risk features (e.g., intraplaque hemorrhage, lipid-rich necrotic core, or fibrous cap thinning/rupture) of carotid atherosclerotic plaque. MRA is also useful in diagnosing vascular disease in children and is more advantageous for this patient population given the lack of radiation exposure and ability to include time-resolved scans. Indications for MRA include, but not limited to the following: vascular stenosis or occlusion due to atherosclerosis, vasculitis, or thromboembolism, thoracic, abdominal, or pelvic hemorrhage, mapping vascular anatomy for preprocedural planning and postprocedural surveillance of treatment, aneurysms and vascular malformations, venous malformations, presence, nature, and extent of injury to vessels, including dissection, venous disease, including occlusion, thrombosis, and tumor invasion, and congenital abnormalities (ACR–NASCI–SPR, 2020).

POSITION STATEMENT:

Documentation Requirements

Documentation containing the medical necessity of the magnetic resonance angiography (MRA) of the spinal canal and imaging results (e.g., images, clinical reports) should be maintained in the member's medical record. Documentation may be requested as part of the review process.

Magnetic resonance angiography (MRA) of the spinal canal **meets the definition of medical necessity** for the following indications:

- Evaluation of spinal arteriovenous malformation (AVM)
- Evaluation of a known cervical spine fracture, disc herniation, infection or venous thrombosis where there is concern for vascular pathology (compression thrombosis) compromising spinal cord blood flow or venous drainage
- Evaluation of a known or suspected vertebral artery injury when there is also concern for vascular compromise to the spinal canal and its contents
- Preoperative evaluation (e.g., localization of the spinal arteries prior to complex spinal surgery, aortic aneurysm repair, characterization of suspected vascular lesion of the spinal canal and its contents)
- Myelopathy when the suspected etiology is compromise of blood flow or drainage to the spinal cord.
- A follow-up study may be needed to help evaluate a member's progress after treatment, procedure, intervention or surgery. Documentation required.

BILLING/CODING INFORMATION:

CPT Coding:

72159	Magnetic resonance angiography, spinal canal and contents, with or without contrast material(s)

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

Re-imaging or additional imaging due to poor contrast enhanced exam or technically limited exam is the responsibility of the imaging provider.

LOINC Codes:

The following information may be required documentation to support medical necessity: physician history and physical, physician progress notes, plan of treatment and reason for magnetic resonance angiography (MRA) of the spinal canal.

Documentation Table	LOINC Codes	LOINC Time Frame Modifier Code	LOINC Time Frame Modifier Codes Narrative

Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Attending physician progress note	18741-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Plan of treatment	18776-5	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology reason for study	18785-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology comparison study-date and time	18779-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology comparison study observation	18834-2	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology-study observation	18782-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology-impression	19005-8	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology study-recommendation (narrative)	18783-1	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim

PROGRAM EXCEPTIONS:

Federal Employee Plan (FEP): Follow FEP guidelines.

Medicare Advantage products

The following Local Coverage Determination (LCD) was reviewed: Magnetic Resonance Angiography (MRA), (L34372) located at fcso.com.

The following National Coverage Determination (NCD) was reviewed: Magnetic Resonance Imaging (MRI), (220.2) located at cms.gov.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at Coverage Protocol Exemption Request.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

Magnetic Resonance Angiography (MRA) Abdomen and Pelvis, 04-70540-21

Magnetic Resonance Angiography (MRA) Brain (Head), 04-70540-18

Magnetic Resonance Angiography (MRA) Chest, 04-70540-20

Magnetic Resonance Angiography (MRA) Extremity (Upper and Lower, 04-70540-22

Magnetic Resonance Angiography (MRA) Neck, 04-70540-19

OTHER:

None applicable.

REFERENCES:

1. Amarouche M, Hart JL, Siddiqui A et al. Time-resolved contrast-enhanced MR angiography of spinal vascular malformations. AJNR Am J Neuroradiol. 2015 Feb;36(2):417-422.
2. American College of Radiology ACR Appropriateness Criteria®: Suspected Spine Trauma, Revised 2018.
3. ACR-NASCI-SPR Practice Guideline for the Performance of Body Magnetic Resonance Angiography (MRA), 2020.
4. Expert Panel on Neurological Imaging, Agarwal V, Shah LM, Parsons MS, et al. ACR Appropriateness Criteria® Myelopathy: 2021 Update. J Am Coll Radiol. 2021 May;18(5S):S73-S82.
5. National Institute of Neurological Disorders and Stroke (NINDS) Arteriovenous Malformations and Other Vascular Lesions of the Central Nervous System Fact Sheet, NIH Publication No. 15-4854, Sept 2015; last date modified 2021-11-15.
6. Pattany PM, Saraf-Lavi E, Bowen BC. MR angiography of the spine and spinal cord. Top Magn Reson Imaging. 2003 Dec;14(6):444-60.
7. Rohany M, Shaibani A, Arafat O, et al. Spinal arteriovenous malformations associated with Klippel-Trenaunay-Weber syndrome: A literature search and report of two cases. American Journal of Neuroradiology 2007; (3):28, 584-589.

8. Saraf-Lavi E, Bowen BC, Quencer RM, et al. Detection of spinal dural arteriovenous fistulae with MR imaging and contrast-enhanced MR angiography: sensitivity, specificity, and prediction of vertebral level. American Journal of Neuroradiology 2002; 23(5); 858-867.
9. Shin JH, Choi Y, Park B, et al. Diagnostic accuracy and efficiency of combined acquisition of low-dose time-resolved and single-phase high-resolution contrast-enhanced magnetic resonance angiography in a single session for pre-angiographic evaluation of spinal vascular disease. PLoS One. 2019 Mar 28;14(3):e0214289.
10. Wójtowicz K, Przepiorka L, Maj E, et al. Usefulness of time-resolved MR angiography in spinal dural arteriovenous fistula (SDAVF)-a systematic review and meta-analysis. Neurosurg Rev. 2023 Dec 11;47(1):9.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 09/25/25.

GUIDELINE UPDATE INFORMATION:

12/15/13	New Medical Coverage Guideline.
04/15/15	Annual review. No change to position statement. Revised description and updated references.
08/15/18	Revision; revised position statement. Updated references.
03/15/20	Review/revision. Expand criteria for spinal canal MRA. Updated references.
05/15/22	Review/revision. Revised criteria. Updated references.
07/01/22	Revision to Program Exceptions section.
09/30/23	Review: position statement and references updated.
10/15/24	Review; update position statement. Updated references.
10/15/25	Review; no change to position statement.