Cohere Medicare Advantage Policy - Magnetic Resonance Angiography (MRA), Abdomen/Pelvis

Clinical Policy for Medical Necessity Review

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Important Notices

Notices & Disclaimers:

GUIDELINES ARE SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION-MAKING OF END USERS.

Cohere Health, Inc. ("**Cohere**") has published these clinical guidelines to determine the medical necessity of services (the "**Guidelines**") for informational purposes only, and solely for use by Cohere's authorized "**End Users**". These Guidelines (and any attachments or linked third-party content) are not intended to be a substitute for medical advice, diagnosis, or treatment directed by an appropriately licensed healthcare professional. These Guidelines are not in any way intended to support clinical decision-making of any kind; their sole purpose and intended use is to summarize certain criteria Cohere may use when reviewing the medical necessity of any service requests submitted to Cohere by End Users. Always seek the advice of a qualified healthcare professional regarding any medical questions, treatment decisions, or other clinical guidance. The Guidelines, including any attachments or linked content, are subject to change at any time without notice. This policy may be superseded by existing and applicable Centers for Medicare & Medicaid Services (CMS) statutes.

Other Notices:

Policy Information:

Specialty Area: Diagnostic Imaging
Policy Name: Cohere Medicare Advantage Policy - Magnetic Resonance Angiography (MRA), Abdomen/Pelvis
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

Table of Contents

Medical Necessity Criteria

***Service*: Magnetic Resonance Angiography (MRA), Abdomen/Pelvis**

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.[1-9]

- National Coverage Determination (NCD). Magnetic resonance imaging (MRI)(220.2)
- Local Coverage Determination (LCD) Magnetic resonance angiography (MRA) (L33633)
  - Billing and Coding: Magnetic resonance angiography (MRA) (A56747)
- Local Coverage Determination (LCD) Magnetic resonance angiography (MRA) (L34865)
  - Billing and Coding: Magnetic resonance angiography (MRA) (A56805)
- Local Coverage Determination (LCD) Magnetic resonance angiography (MRA) (L34424)
  - Billing and Coding: Magnetic resonance angiography (MRA) (A56775)
- Local Coverage Determination (LCD) Magnetic resonance angiography (MRA) (L34372)
  - Billing and Coding: Magnetic resonance angiography (MRA) (A57779)

Description

Magnetic resonance angiography (MRA) visualizes the blood vessels in the abdomen and pelvis. It aids in diagnosing and evaluating vascular conditions such as aneurysms, stenosis, occlusions, and vascular malformations. Unlike CT angiography, MRA does not use ionizing radiation, yet provides detailed images of blood vessels and surrounding tissues. Magnetic resonance venography (MRV) of the abdomen and pelvis is a noninvasive imaging technique that uses magnetic resonance imaging (MRI) to visualize the veins in these regions. This method is particularly useful for evaluating venous disorders without exposing patients to ionizing radiation. MRA and MRV are less invasive than conventional radiographic digital subtraction angiography.[10]

Medical Necessity Criteria

Indications

Magnetic resonance angiography (MRA), abdomen/pelvis is considered appropriate if **ALL** of the following are **TRUE**[10,11]:

- **ANY** of the following:
  - Conventional (catheter) angiography has not been performed; **OR**
  - Conventional (catheter) angiography has been performed, and there is documentation that demonstrates medical need to perform both tests (e.g., inconclusive, requires further evaluation)[5]; **AND**
- **ANY** of the following:
  - Evaluation of possible renal artery stenosis with evidence of renovascular hypertension, including but not limited to **ANY** of the following[2]:
    - Early-onset hypertension (age less than 35, diastolic greater than 110 mmHg); **OR**
    - Late-onset hypertension (age greater than 50); **OR**
    - Hypertension refractory to medication; **OR**
    - Worsening renal function; **OR**
    - Renal artery bruit; **OR**
    - Abnormal diagnostic laboratory tests (elevated serum renins, increasing creatinine); **OR**
    - Other radiologic tests (ultrasound, captopril scintigraphy, or other imaging showing small kidney or unequal kidney sizes); **OR**
  - **ALL** of the following:
    - Ultrasound is incomplete, inconclusive, or abnormal; **AND**
    - **ANY** of the following:
      - Thromboembolic disease[10]; **OR**
      - Unrepaired abdominal aortic aneurysm, initial evaluation; **OR**
      - Unrepaired aortic aneurysm, follow-up evaluation frequency based on aneurysm size, when **ANY** of the following is **TRUE**[12]:
        - 3-3.9 cm, every 3 years; **OR**
        - 4-4.9 cm for male patients or 4-4.4 cm in female patients, annually; **OR**
        - Greater than 5 cm in male patients or greater than 4.5 cm in female patients, every 6 months; **OR**
  - **ALL** of the following:

- Computed tomography angiography (CTA) is inconclusive or cannot be performed due to allergy; **AND**
- **ANY** of the following:
  - Suspected mesenteric ischemia or ischemic enteritis/colitis with **ANY** of the following[13,14]:
    - High suspicion for ischemic enteritis/colitis or mesenteric/bowel infarct by another imaging study; **OR**
    - Anion-gap metabolic acidosis and/or high lactate in the setting of severe abdominal pain or abdominal pain that is out of proportion to the physical exam; **OR**
    - Peripheral artery disease (PAD) with **ANY** of the following:
      - Severe abdominal pain; **OR**
      - Abdominal pain that is out of proportion to the physical exam; **OR**
    - Known vascular risk factors (e.g., age over 60 years of age) or known vascular disease (e.g., known coronary artery disease) with postprandial pain that affects daily life (e.g., fear of food, weight loss)[15]; **OR**
    - High clinical suspicion of mesenteric ischemia with **ANY** of the following:
      - Nausea; **OR**
      - Vomiting; **OR**
      - Diarrhea; **OR**
      - Hematachezia; **OR**
  - Vasculitis, initial evaluation, with **ANY** of the following:[12,16-19]
    - Biopsy-proven vasculitis; **OR**
    - Rheumatologic panel work-up including, but not limited to erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP), that are suggestive of vasculitis; **OR**
    - The requesting clinician specializes in rheumatology and the outcome of the imaging is expected to change the management and/or treatment plan; **OR**
  - Preoperative, postoperative, or pretreatment evaluation for **ANY** of the following:
    - Surveillance imaging following endovascular aortic repair (EVAR) with **ANY** of the following:
      - At one month postprocedure; **OR**

        - If a Type II endoleak is detected on first postprocedure screening, then repeat imaging at 6 months; **OR**
        - If a Type II endoleak is associated with a stable or shrinking aneurysm sac, then repeat imaging every 6 months for 2 years; **OR**
        - Annual imaging is recommended if no endoleak or aneurysm sac enlargement; **OR**
    - Following open aortic aneurysm surgical repair (OSR), cross-sectional CT (or MR) imaging surveillance should be performed once every 5 years; **OR**
    - Planning for vascular surgery, interventional procedure; **OR**
    - Other procedures involving arteries (e.g., inferior epigastric arteries for breast reconstruction, ureteropelvic junction obstruction, solid organ transplant); **OR**
- Known or suspected syndromes with increased risk of vascular anomalies, including **ANY** of the following[12]:
    - As a one-time screening for syndromes with a vascular component (e.g., fibromuscular dysplasia, neurofibromatosis, Williams syndrome, tuberous sclerosis); **OR**
    - Vascular Ehlers-Danlos syndrome (vEDS) (biannually; surveillance as indicated depending on abnormalities found)[20,21]; **OR**
    - Marfan syndrome (initial MRA at time of diagnosis, then every 3 years depending on abnormalities found)[22]; **OR**
    - Loeys-Dietz syndrome (every 2 years for screening; surveillance as indicated depending on abnormalities found); **OR**
    - Other syndromes not otherwise specified, follow-up as clinical documentation supports.

Magnetic resonance venography (MRV), abdomen/pelvis is considered appropriate if **ALL** of the following are **TRUE:**

- Ultrasound is incomplete, inconclusive, or abnormal; **AND**
- **ANY** of the following:
    - Vascular conditions, known or suspected, including **ANY** of the following:
        - Diffuse unexplained lower extremity edema with negative or inconclusive ultrasound; **OR**

        - Large vein thrombosis of the major abdominal or pelvic veins, including inferior vena cava (IVC), iliac, renal, portal, hepatic, and mesenteric veins, when Doppler ultrasound is inconclusive or needs additional evaluation; **OR**
        - Vascular invasion or displacement by tumor; **OR**
        - Pelvic venous disease with **ANY** of the following[23]:
            - Unexplained chronic pelvic pain; **OR**
            - Symptomatic perineal or pelvic varicosities; **OR**
            - Left flank or abdominal pain with hematuria; **OR**
            - Venous claudication; **OR**
            - Suspected May-Thurner syndrome (iliac vein compression[24]); **OR**
    - Vascular mapping for organ donation; **OR**
    - Initial diagnostic, one-time pre- or one-time post-treatment evaluation for treatment planning or evidence of clinical concern for **ANY** of the following:
        - Anastomotic integrity or stent patency; **OR**
        - Portal venous system (hepatic portal system) after Doppler ultrasound has been performed; **OR**
        - Vascular malformation; **OR**
        - Vascular mapping for organ donation or before procedure/surgery for planning purposes (including transjugular intrahepatic portosystemic shunt [TIPS]).

Repeat imaging (defined as a repeat request following recent imaging of the same anatomic region with the same or similar modality) will be considered reasonable and necessary if **ALL** of the following are **TRUE**:

- There are no established guidelines; **AND**
- **ANY** of the following:
    - There are new or worsening symptoms not addressed in the guidelines, such that repeat imaging would influence treatment; **OR**
    - There is need for a one-time clarifying follow-up of a prior indeterminate finding; **OR**
    - In the absence of change in symptoms, there is an established need for monitoring which would influence management.

Non-Indications

Magnetic resonance angiography (MRA) or magnetic resonance venography (MRV), abdomen/pelvis is not considered appropriate if **ANY** of the following is **TRUE**:

- The patient has undergone advanced imaging of the same body part within 3 months without undergoing treatment or developing new or worsening symptoms[25].

*NOTE: MRI in patients with claustrophobia should be requested at the discretion of the ordering provider.
**NOTE: MRI in pregnant patients should be requested at the discretion of the ordering provider and obstetric care provider.

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
72198	Magnetic resonance angiography (MRA) of pelvis, with contrast material
74185	Magnetic resonance angiography (MRA) of abdomen, with contrast material
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
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

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Evaluation of Clinical Harms and Benefits

Clinical determinations for Medicare Advantage beneficiaries are made in accordance with 42 CFR 422.101 guidance outlining CMS's required approach to decision hierarchy in the setting of NCDs/LCDs identified as being "not fully established". When clinical coverage criteria are "not fully established" Medicare Advantage organizations are instructed to create publicly accessible clinical coverage criteria based on widely-accepted clinical guidelines and/or scientific studies backed by a robust clinical evidence base. Clinical coverage criteria provided by Cohere Health in this manner include coverage rationale and risk/benefit analysis.

The potential clinical harms of using these criteria for abdomen/pelvis MRA may include:

- There is a risk of malfunction of implanted medical devices (e.g., implanted pacemakers, cochlear implants).
- A potential exists for allergic reactions to contrast material, if used in the study. The MRI department staff will monitor the patient for an allergic reaction and treat as recommended by a physician.[26-28]
- Use of gadolinium-based contrast is not recommended during pregnancy or in patients with acute or chronic kidney injury or disease.[26-28]
- If sedation is used for the study (for anxiety or claustrophobia), there is a risk of over-sedation. The patient will be monitored during the procedure to reduce this risk.
- There is uncertain risk for MR imaging in pregnant patients. The decision to image in a pregnant patient should be made on an individual basis in consultation with the patient's obstetric provider.[29]
- There is a risk of increased healthcare costs and complications from the inappropriate use of additional interventions.[30]

The clinical benefits of using these criteria for abdomen/pelvis MRA include:

- As MR imaging techniques evolve, the scan time of MR angiography of the pelvis and abdomen have significantly shortened, leading to an overall better patient experience.[31]

- MRA produces images with high spatial resolution and wide fields of view, resulting in improved visualization of hard-to-image structures, such as the abdominal vasculature.
- Radiation avoidance: MRA images approach the quality of CTA images while sparing the patient from radiation.[3] Patients avoid risks associated with CTA, including risks of contrast media, end-organ damage, or arterial injury.[1]
- Enhanced overall patient satisfaction and healthcare experience.

Medical Evidence

Roditi et al. (2022) performed a review on abdominal and pelvic magnetic resonance angiography (MRA). The topics discussed include MRA for assessing renal vasculature in potential kidney donors and hypertensive patients, hepatic and mesenteric MRA for evaluating liver donors, individuals with portal hypertension, and those with chronic mesenteric ischemia. Pelvic MRA is also mentioned for pre-treatment planning in uterine fibroid embolization and patients with pelvic congestion syndrome. Abdominal wall MRA is also highlighted for planning breast reconstructive surgery.[32]

Chaikof et al. (2018) discussed updates to practice guidelines published by the Society for Vascular Surgery on the care of patients with an abdominal aortic aneurysm. Recommendations included surveillance imaging at 12-month intervals for AAA between 4.0 to 4.9 cm in diameter and utilizing the Vascular Quality Initiative mortality risk score for decision-making in aneurysm repair. Endovascular repair was also preferred for ruptured aneurysms. Color duplex ultrasound for postoperative surveillance after endovascular repair without complications was also recommended. Overall, the focus was to enhance decision-making and perioperative outcomes.[33]

Zucker et al. (2016) reviewed noninvasive diagnostic imaging for assessing venous compression syndromes, including magnetic resonance venography (MRV). While the exam typically takes longer than CT scans, MRV offers the advantage of reducing ionizing radiation risks. Optimal timing is more easily achieved for venous contrast. Additionally, MRI enables non-contrast exams, which are safer for patients with renal insufficiency, who face a higher risk of nephrogenic systemic fibrosis with gadolinium contrast.[34]

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Policy Revision History/Information

Original Date: October 24, 2024		
Review History		
Version 1.1	04/21/2025	Updated policy per CMS revisions for 03/27/2025 Updated effective date Updated links and bookmarks
Version 2	10/16/2025	Annual review Expanded criteria for ischemia; vasculitis; preoperative, postoperative, or pretreatment evaluation; and vascular anomalies Updated content layout to align with revised template, including repeat imaging criteria Removed relative contraindications (contrast allergy, metallic clips, incompatible implantable devices, metallic foreign body)