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

Clinical Policy for Medical Necessity Review

Version: 4
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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.

Other Notices:

Policy Information:

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

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Medical Necessity Criteria

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

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a clinical evaluation by the treating provider, which may include a referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- Repeat diagnostic testing due to technical issues—such as patient motion, incomplete exams, or incorrect imaging sequences—may not be considered medically necessary, as it is the responsibility of the imaging center to deliver appropriate, high-quality studies as originally authorized. Similarly, repeat imaging requested at a different facility based solely on provider preference may not be approved for medical necessity.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request

    - Why prior imaging or procedures were inconclusive or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the patient's primary symptoms can be adequately assessed with a single study or procedure.
- Cohere Health evaluates imaging exams based on medical necessity, regardless of contrast use. If an initial non-contrast study is completed and the radiologist later determines that contrast is needed to clarify a finding, the original authorization number may be used—provided the contrast-enhanced exam is performed at the same imaging center and within the original request's validity period, unless otherwise directed by the health plan.

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 non-invasive 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.[1]

Medical Necessity Criteria

Indications

Abdomen/Pelvis Magnetic Resonance Angiography (MRA) with Lower Extremity MRA Runoff requires two separate authorization requests: one for Abdomen MRA (CPT 74185) and one for Lower Extremity MRA (CPT 73725). A separate request for Pelvic MRA is not necessary, as this combination provides imaging of the abdomen, pelvis, and both legs.

Magnetic resonance angiography (MRA), abdomen/pelvis is considered appropriate if **ANY** of the following is **TRUE**[1,2]:

- **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:
      - Suspected renal artery stenosis when any surgical intervention is planned, including **ANY** of the following[3-5]:
        - Previous imaging (including ultrasound, captopril scintigraphy) indicates small kidney or unequal kidney sizes[6]; **OR**
        - Early-onset hypertension (age less than 35, diastolic greater than 110 mmHg)[6]; **OR**
        - Late-onset hypertension (age greater than 50)[6]; **OR**
        - Renal artery bruit[6]; **OR**
        - Renal function impairment due to angiotensin-converting enzyme (ACE) inhibitor use[6]; **OR**
        - Malignant or accelerated hypertension[7]; **OR**
        - Sudden development or worsening of hypertension[7]; **OR**
        - Generalized arteriosclerotic occlusive disease with hypertension[7]; **OR**
        - Hypertension that is resistant to medication, and the patient must be currently taking **ALL** of the following at maximally-tolerated doses[7,8]:
          - Long-acting calcium channel blocker; **AND**
          - Long-acting ACE inhibitor or angiotensin receptor blocker (ARB); **AND**
          - Diuretic (e.g., loop or thiazide); **OR**

        - Thromboembolic disease[1]; **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**[9]:
            - 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 are **TRUE:**
    - 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 when **ANY** of the following is **TRUE**[10,11]:
            - 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)[12]; **OR**
            - High clinical suspicion of mesenteric ischemia with **ANY** of the following:
                - Nausea; **OR**
                - Vomiting; **OR**
                - Diarrhea; **OR**
                - Hematachezia; **OR**
        - Vasculitis, initial evaluation, when **ANY** of the following is **TRUE**:[9,13-16]
            - 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 **ALL** of the following:
    - CTA and ultrasound are inconclusive or cannot be performed; **AND**
    - **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[9]:
  - 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)[19,20]; **OR**
  - Marfan syndrome (initial MRA at time of diagnosis, then every 3 years depending on abnormalities found)[21]; **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 lower extremity ultrasound; **OR**
    - Large vein thrombosis of the major abdominal or pelvic veins, including 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[22]:
      - 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[23]); **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) abnormalities after Doppler ultrasound has been performed; **OR**
    - Vascular malformation; **OR**
    - Vascular mapping 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[24].

*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

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.[25]

Chaikof et al. (2018) discuss updates to practice guidelines published by the Society for Vascular Surgery on the care of patients with an abdominal aortic aneurysm. Recommendations include 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 is also preferred for ruptured aneurysms. Color duplex ultrasound for postoperative surveillance after endovascular repair without complications is also recommended. Overall, the focus is to enhance decision-making and perioperative outcomes.[26]

Zucker et al. (2016) review 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.[27]

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Policy Revision History/Information

Original Date: March 18, 2022		
Review History		
Version 2	08/02/2024	Annual review and policy restructure.
Version 3	10/30/2024	Edited repeat imaging criteria language.
Version 4	08/21/2025	Annual review Updated content layout to align with revised template, including repeat imaging criteria. Split out prior imaging requirements by indication. Updated reference citations so that numbers were listed in order of first appearance.