Cohere Medical Policy -
Magnetic Resonance Imaging (MRI), Chest

Clinical Policy for Medical Necessity Review

Version: 4
Cohere Health UMC Approval Date: August 28, 2025
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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 Imaging (MRI), Chest
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Magnetic Resonance Imaging (MRI), Chest

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 imaging (MRI) of the chest is a noninvasive diagnostic tool that provides detailed images of the soft tissues and hard structures within the chest cavity. Example uses include the diagnosis and surveillance of cardiovascular disease, mediastinal lesions, chest wall abnormalities, and masses. MRI can be performed with or without contrast and does not require the use of radiation.

Medical Necessity Criteria

Indications

Magnetic resonance imaging (MRI), chest is considered appropriate if **ANY** of the following is **TRUE**:

- Magnetic resonance (MR)-preferred indications, including **ANY** of the following:
  - Brachial plexus pathology, suspected due to anatomic (e.g., cervical rib) or clinical symptoms (e.g., positive electromyography results, symptoms related to scalene muscles, symptoms that worsen with arm overhead), including but not limited to trauma, neurogenic thoracic outlet syndrome, neuropathies affecting brachial plexus (e.g., chronic inflammatory demyelinating polyneuropathy [CIDP]), or suspected or known mass; **OR**
  - Evaluation of nonbony congenital musculoskeletal abnormalities[1]; **OR**
  - Inflammatory myopathies (e.g., polymyositis); **OR**
  - Suspected or known pectoralis tendon tear; **OR**
  - Fetal lung or chest wall anomaly, where MRI is needed to determine further management; **OR**
- Computed tomography (CT) is contraindicated or inconclusive, chest radiographs were inadequate for diagnosis or determination of management, and **ANY** of the following is **TRUE**:
  - Chest wall abnormalities, including **ANY** of the following:
    - Anatomic abnormalities, congenital or acquired, such as pectus excavatum or rib abnormalities; **OR**
    - Palpable chest wall mass with nondiagnostic or indeterminate radiograph or ultrasound; **OR**
    - Chest wall mass identified on prior imaging when further information is needed to determine the need for biopsy or surgery; **OR**
    - Suspected or known chest wall abscess and further evaluation is needed; **OR**
  - Congenital pulmonary malformations such as pulmonary sequestration, when magnetic resonance angiography (MRA) or computed tomography angiography (CTA) is contraindicated or cannot be done; **OR**
  - Persistent mediastinal lymphadenopathy for evaluation with **ALL** of the following:

        - Patient has no known malignancy; **AND**
        - Largest node is greater than or equal to 1.5cm in shortest axis; **AND**
        - CT or positron emission tomography (PET)/CT are contraindicated; **OR**
    - Neoplastic conditions, initial staging, treatment planning, response assessment, and surveillance[2-4]; **OR**
    - Screening for thymoma in myasthenia gravis; **OR**
    - Herniation into thorax of abdominal contents, including diaphragmatic hernias; **OR**
    - Hoarseness, dysphonia, and vocal cord weakness/paralysis after laryngoscopy with **ANY** of the following:
        - Findings suggestive of recurrent laryngeal nerve dysfunction; **OR**
        - Identification of suspicious lesion that needs further evaluation; **OR**
        - Symptoms persisting longer than 1 month which are unexplained by laryngoscopy; **OR**
    - Preoperative, postoperative, and pretreatment evaluation for procedure, surgery, radiation, or chemotherapy; **OR**
- 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 imaging (MRI), chest may not be 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[5].

*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

Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
71550	Magnetic resonance imaging (MRI) (e.g., proton), chest; without contrast material(s)
71551	Magnetic resonance imaging (MRI) (e.g., proton), chest; with contrast material(s)
71552	Magnetic resonance imaging (MRI) (e.g., proton), chest (e.g., for evaluation of hilar and mediastinal lymphadenopathy); with contrast material(s), followed by contrast material(s) and further sequences
C9791	Magnetic resonance imaging with inhaled hyperpolarized xenon-129 contrast agent, chest, including preparation and administration of agent

Medical Evidence

Archer et al. (2023) reviewed the utilization of cross-sectional imaging techniques such as computed tomography (CT) or magnetic resonance imaging (MRI) for assessing mediastinal pathologies. Precisely localizing lesions within specific compartments and analyzing their morphology, density/intensity, enhancement patterns, and any mass effect on adjacent structures can significantly aid in narrowing down diagnostic possibilities. While CT is readily available and fast, MRI does not use radiation and can delineate soft tissue contrasts. Precise imaging allows for identifying masses across tissue planes (e.g., chest wall, diaphragm) and the involvement of neurovascular structures. MRI also provides dynamic sequences that enable the assessment of mass motion relative to neighboring structures during free-breathing or cinematic cardiac gating. Finally, MRI can distinguish between cystic and solid lesions and detect fat, which aids in differentiating thymic hyperplasia from thymic malignancy.[6]

Cavanna et al. (2022) conducted a literature review on thoracic outlet syndrome (TOS). Plain chest and cervical region radiographs often exclude anatomical anomalies and structural irregularities (e.g., cervical ribs, clavicular fracture malunion, elongated transverse processes, or thoracic cavity tumors). Conditions such as compressive effects on the brachial plexus need imaging beyond ultrasound, which may overlook regional pathologies (e.g., Pancoast tumor, cervical spondylopathy). Non-contrast MRI may help diagnose neurogenic TOS (nTOS). However, MR or CT angiography is preferred for confirming venous or arterial TOS.[7]

Bueno et al. (2018) reviewed MR imaging of primary chest wall neoplasms, representing a rare and diverse array of lesions. MR imaging allows detailed insights into tissue composition, disease extent, and the integrity of surrounding structures. Utilization of this modality has increased due to its superior contrast resolution versus CT scans, which are free of radiation. MR imaging allows clinicians to distinguish tumors, identify infectious and inflammatory conditions, and visualize internal components (e.g., fat, fluid, soft tissue, vascularity after intravenous contrast administration).[8]

References

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6. Archer JM, Ahuja J, Strange CD, et al. Multimodality imaging of mediastinal masses and mimics. *Mediastinum*. 2023 May 8:7:27. doi:10.21037/med-22-53
7. Cavanna AC, Giovanis A, Daley A, et al. Thoracic outlet syndrome: A review for the primary care provider. *J Osteopath Med*. 2022;122(11):587-599. doi:10.1515/jom-2021-0276
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Policy Revision History/Information

Original Date: April 8, 2022		
Review History		
Version 2	08/20/2024	Annual review and policy restructure.
Version 3	10/30/2024	Edited repeat imaging criteria language.
Version 4	08/28/2025	Annual review Updated content layout to align with revised template, including repeat imaging criteria