

DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

Magnetic resonance imaging (MRI) involves multiplanar imaging based on an interaction between radiofrequency electromagnetic fields and certain nuclei in the body (typically hydrogen nuclei) once a body has been placed in a strong magnetic field. MRI distinguishes between normal and abnormal tissues to give providers a sensitive examination to identify disease. The sensitivity is correlated with the high degree of inherent contrast due to variations in the magnetic relaxation properties of different tissues (normal and diseased), and the necessity of the MRI signal on tissue properties. (ACR, 2022).

COVERAGE POLICY

Ultrasound has been shown to have similar diagnostic accuracy when compared to MRI and can be considered in lieu of MRI imaging for evaluation of rotator cuff tears, labral injuries, and bicep tendon tears. It is recommended that the ultrasound be completed at a facility competent in performing and interpreting musculoskeletal ultrasound studies. Ultrasound has the benefit of being portable, does not expose the patient to ionizing radiation, and has dynamic imaging capabilities. In children and adolescents, joint imaging is not necessarily subject to a failed course of conservative therapy. Early intervention may be appropriate.

Upper Extremity MRI **may be considered medically necessary** when the following criteria are met:

1. Known Tumor or Mass

- Initial evaluation of a recently diagnosed cancer.
- Follow up of a known tumor or mass after completion of treatment or with new signs/symptoms.
- Surveillance of a known tumor or mass according to accepted clinical standards.

OR

2. Suspected Tumor or Mass Not Confirmed as Cancer

- Evaluation of an abnormality seen on x-ray or other imaging.
- Evaluation of an abnormality on physical examination and initial evaluation with x-ray or ultrasound has been completed.

OR

3. Suspected tumor or mass not confirmed as cancer

- Evaluation of an abnormality seen on x-ray or other imaging
- Evaluation of an abnormality on physical examination and initial evaluation with x-ray or ultrasound has been completed.

OR

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4. Evaluation of known or suspected infection

- a. Suspected osteomyelitis and initial x-ray has been completed

OR

5. Evaluation of known or suspected fractures

- a. Suspected fracture and x-ray is non-diagnostic
- b. Evaluation of fracture involving the joint space

OR

6. Wrist Pain

- a. Initial x-ray has been performed and there has been at least 4 weeks of conservative therapy *
- b. Hemarthrosis – blood in the joint
- c. Suspected ligament tear with instability on examination or with joint space widening on stress view x-rays
- d. Locked wrist
- e. For suspected TFCC (triangular fibrocartilage complex) tear
- f. MRI arthrogram

*Conservative therapy consists of a combination of passive modalities such as rest, ice, activity modification, splinting or bracing, and active modalities such as physical therapy, a supervised home exercise program, and/or failed injections.

OR

7. Shoulder Pain

- a. Initial x-ray has been performed and there has been at least 4 weeks of conservative therapy *
- b. Hemarthrosis – blood in the joint
- c. Exam findings suggestive of a rotator cuff tear (Neer, Hawkins, Apley Scratch test, drop arm test, empty can sign)
- d. MRI Arthrogram for evaluation of a labral injury (SLAP, Bankart lesion)
- e. First episode of dislocation in any patient under the age of 30.

*Conservative therapy consists of a combination of passive modalities such as rest, ice, activity modification, splinting or bracing, and active modalities such as physical therapy, a supervised home exercise program, and/or failed injections.

OR

8. Elbow Pain

- a. Initial x-ray has been performed and there has been at least 4 weeks of conservative therapy *
- b. Hemarthrosis – blood in the joint
- c. Exam findings of instability to varus or valgus stress
- d. Locked elbow
- e. Evaluation of distal biceps tendon tear
- f. MRI arthrogram

*Conservative therapy consists of a combination of passive modalities such as rest, ice, activity modification, splinting or bracing, and active modalities such as physical therapy, a supervised home exercise program, and/or failed injections.

9. Other

- a. Evaluation of suspected avascular necrosis (AVN) when initial x-ray is non-diagnostic.
- b. Evaluation of known or suspected autoimmune disease and x-rays are non-diagnostic and there is consideration to change the treatment regimen. Imaging should be limited to the most symptomatic joint.
- c. Evaluation of osteochondral defects or osteochondritis dissecans.
- d. Evaluation of an abnormality seen on other imaging and the diagnosis remains uncertain.
- e. For evaluation of the brachial plexus

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Pre / Post-Procedural

- Pre-operative evaluation.
- Post-operative for routine recommended follow up or for potential post-operative complications.
- A repeat study may be needed to help evaluate a Member's progress after treatment procedure intervention surgery. The reason for the repeat study and that it will affect care must be clear.
- Preoperative planning for robotic surgery.

Additional Critical Information

The above medical necessity recommendations are used to determine the best diagnostic study based on a Member's specific clinical circumstances. The recommendations were developed using evidence-based studies and current accepted clinical practices. Medical necessity will be determined using a combination of these recommendations as well as the Member's individual clinical or social circumstances.

- Tests that will not change treatment plans should not be recommended.
- Same or similar tests recently completed need a specific reason for repeat imaging.

DOCUMENTATION REQUIREMENTS. Molina Healthcare reserves the right to require that additional documentation be made available as part of its coverage determination; quality improvement; and fraud; waste and abuse prevention processes. Documentation required may include, but is not limited to, patient records, test results and credentials of the provider ordering or performing a drug or service. Molina Healthcare may deny reimbursement or take additional appropriate action if the documentation provided does not support the initial determination that the drugs or services were medically necessary, not investigational or experimental, and otherwise within the scope of benefits afforded to the member, and/or the documentation demonstrates a pattern of billing or other practice that is inappropriate or excessive.

SUMMARY OF MEDICAL EVIDENCE

For peer-reviewed studies used in the development and update of this policy, please see the *Reference* section.

National and Specialty Organizations

The **American College of Radiology (ACR)** (¹ 2022) published the *ACR Practice Parameter for Performing and Interpreting Magnetic Resonance Imaging (MRI)*. Guidance is provided on indications and contraindications for MRI, provider qualifications to perform MRI, specifications of the examination, proper documentation, equipment specifications, and safety guidelines. A section regarding quality control and improvement is also included with information on safety, infection control, and patient education.

The ACR in collaboration with the **Society of Advanced Body Imaging (SABI)**, the **Society for Pediatric Radiology (SPR)**, and the **Society of Skeletal Radiology (SSR)** published the *Practice Parameter for the Performance of Magnetic Resonance Imaging (MRI) of the Wrist* (² ACR, 2022).

The ACR (2020) also published the *Practice Parameter for the Performance and Interpretation of Magnetic Resonance Imaging (MRI) of the Shoulder* in collaboration with the **Society of Pediatric Radiology (SPR)** and the **Society of Skeletal Radiology (SSR)**.

The ACR (³⁻⁵ 2022, 2021, 2018, 2017) published the following appropriateness criteria for upper extremity MRI:

- Acute Hand and Wrist Trauma
- Chronic Elbow Pain
- Chronic Shoulder Pain
- Imaging After Shoulder Arthroplasty
- Shoulder Pain – Traumatic
- Soft Tissue Mass

Available *ACR Appropriateness Criteria and Procedures* can be found at [ACR](#) – search for “MRI upper extremity”.

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The **American College of Obstetricians and Gynecologists (ACOG)** (2017) published *Committee Opinion No. 723: Guidelines for Diagnostic Imaging During Pregnancy and Lactation*. The guidance provides an overview of the safety, necessity, and clinical usefulness of imaging studies for acute and chronic conditions during pregnancy. Ultrasound and MRI are the preferred choice of imaging for pregnant patients however these modalities should only be utilized when medically necessary. The risk of radiation exposure to the fetus is low as radiography, CT and nuclear medicine use lower doses of radiation. Further, patients do not need to stop breastfeeding if imaging studies are necessary.

SUPPLEMENTAL INFORMATION

None.

CODING & BILLING INFORMATION

CPT Codes

CPT	Description
73221	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; without contrast material(s)
73222	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; with contrast material(s)
73223	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; without contrast material(s), followed by contrast material(s) and further sequences
73218	Magnetic resonance (e.g., proton) imaging, upper extremity, other than joint; without contrast material(s)
73219	Magnetic resonance (e.g., proton) imaging, upper extremity, other than joint; with contrast material(s)
73220	Magnetic resonance (e.g., proton) imaging, upper extremity, other than joint; without contrast material(s), followed by contrast material(s) and further sequences

CODING DISCLAIMER. Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

2/14/2024

2/8/2023

12/8/2021

12/9/2020, 12/10/2019, 12/19/2018

12/13/2017

Retired. Will defer to MCG.

Policy reinstated.

Policy retired.

Policy reviewed.

New policy.

REFERENCES

Government Agency

- Centers for Medicare and Medicaid Services (CMS). Medicare coverage database. Available from [CMS](https://www.cms.gov). Accessed January 18, 2023.

Peer Reviewed Publications

- Anderson MW, Greenspan A. Stress fractures. *Radiology*. 1996 Apr;199(1):1-12. doi: 10.1148/radiology.199.1.8633129. PMID: 8633129.
- Boutry N, Morel M, Flipo R-M, Demonidion X, Cotton A. Early rheumatoid arthritis: A review of MRI and sonographic findings. *AJR Am J Roentgenol*. 2007;189(6):1502-1509. doi: 10.2214/AJR.07.2548.
- Chumbley EM, O'Connor FG, Nirschl RP. Evaluation of overuse elbow injuries. *Am Fam Physician*. 2000 Feb 1;61(3):691-700. PMID: 10695582.
- DeConinck T, Ngai SS, Tafur M, Chung CB. Imaging the glenoid labrum and labral tears. *Radiographics*. 2016 Oct;36(6):1628-1647. doi: 10.1148/rg.2016160020. PMID: 27726737.
- George E, Tsipis S, Wozniak G, Rubin DA, Seidenwurm DJ, Raghavan K. MRI of the Knee and Shoulder Performed before Radiography. *J Am Coll Radiol*. 2014 Nov;11(11):1053-8. doi: 10.1016/j.jacr.2014.05.014. PMID: 25086957.
- Haims AH, Moore AE, Schweitzer ME, Morrison WB, Deely D, Culp RW, Forman, HP. MRI in the diagnosis of cartilage injury in the wrist.

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AJR Am J Roentgenol. 2004 May;182(5):1267-70. doi: 10.2214/ajr.182.5.1821267. PMID: 15100130.

RETIRED

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7. Hayter CL, Gold SL, Potter HG. Magnetic resonance imaging of the wrist: Bone and cartilage injury. J Magn Reson Imaging. 2013 May;37(5):1005-19. doi: 10.1002/jmri.23845. PMID: 23606139.
8. Itoi E. Rotator cuff tear: Physical examination and conservative treatment. J Orthop Sci. 2013 Mar;18(2):197-204. doi: 10.1007/s00776-012-0345-2. PMID: 23306597. PMCID: PMC3607722.
9. Johnson GW, Cadwallader K, Scheffel SB, Epperly TD. Treatment of lateral epicondylitis. Am Fam Physician. 2007 Sep 15;76(6):843-8. PMID: 17910298.
10. Karchevsky M, Schweitzer ME, Morrison WB, Parellada JA. MRI findings of septic arthritis and associated osteomyelitis in adults. AJR Am J Roentgenol. 2004 Jan;182(1):119-22. doi: 10.2214/ajr.182.1.1820119. PMID: 14684523.
11. Langer P, Fadale P, Hulstyn M. Evolution of the treatment options of ulnar collateral ligament injuries of the elbow. Br J Sports Med. 2006 Jun;40(6):499-506. doi: 10.1136/bjsm.2005.025072. PMID: 16488902. PMCID: PMC2465120.
12. Magee T. Usefulness of unenhanced MRI and MR arthrography of shoulder in detection of unstable labral tears. AJR Am J Roentgenol. 2015 Nov;205(5):1056-60. doi: 10.2214/AJR.14.14262. PMID: 26496553.
13. Ng AW, Chu CM, Lo WN, Lai YM, Kam CK. Assessment of capsular laxity in patients with recurrent anterior shoulder dislocation using MRI. AJR Am J Roentgenol. 2009 Jun;192(6):1690-5. doi: 10.2214/AJR.08.1544. PMID: 19457836.
14. Pedowitz RA, Yamaguchi K, Ahmad CS, Burks RT, Flatow EL, American Academy of Orthopaedic Surgeons, et al. Optimizing the management of rotator cuff problems. J Am Acad Orthop Surg. 2011 Jun;19(6):368-79. doi: 10.5435/00124635-201106000-00007. PMID: 21628648.
15. Pierce JL, Nacey NC, Jones S, Rierison D, Etier B, Brockmeier S, Anderson MW. Postoperative shoulder imaging: Rotator cuff, labrum, and biceps tendon. Radiographics. 2016 Oct;36(6):1648-1671. doi: 10.1148/rg.2016160023. PMID: 27726742.
16. Roy EA, Cheyne I, Andrews GT, Forster BB. Beyond the cuff: MR imaging of labroligamentous injuries in the athletic shoulder. Radiology. 2016 Feb;278(2):316-32. doi: 10.1148/radiol.2015150364. PMID: 26789600.
17. Taneja AK, Kattapuram SV, Chang CY, Simone FJ, Bredella MA, Torriani M. MRI findings of rotator cuff musculotendinous junction injury. AJR Am J Roentgenol. 2014 Aug;203(2):406-11. doi: 10.2214/AJR.13.11474. PMID: 25055277.
18. Termaat MF, Raijmakers PGHM, Scholten HJ, Bakker FC, Patka P, Haarman HJTM. The accuracy of diagnostic imaging for the assessment of chronic osteomyelitis: A systematic review and meta-analysis. J Bone Joint Surg Am. 2005 Nov;87(11):2464-71. doi: 10.2106/JBJS.D.02691. PMID: 16264122.
19. Tuite M, Small KM. Imaging evaluation of nonacute shoulder pain. AJR Am J Roentgenol. 2017 Sep;209(3):525-533. doi: 10.2214/AJR.17.18085. PMID: 28537759.

National and Specialty Organizations

1. American College of Radiology (ACR). ACR appropriateness criteria – procedures (search: "MRI upper extremity"). Available from [ACR](#). Accessed January 13, 2023.
2. ¹ American College of Radiology (ACR). ACR practice parameter for performing and interpreting magnetic resonance imaging (MRI). Available from [ACR](#). Updated 2022. Accessed January 13, 2023.
3. ² American College of Radiology (ACR). ACR–SABI–SPR–SSR practice parameter for the performance of magnetic resonance imaging (MRI) of the wrist. Available from [ACR](#). Updated 2022. Accessed January 13, 2023.
4. ³ American College of Radiology (ACR). ACR appropriateness criteria: Chronic elbow pain. Available from [ACR](#). Updated 2022. Accessed January 13, 2023.
5. ⁴ American College of Radiology (ACR). ACR appropriateness criteria: Chronic shoulder pain. Available from [ACR](#). Updated 2022. Accessed January 13, 2023.
6. ⁵ American College of Radiology (ACR). ACR appropriateness criteria: Soft tissue mass. Available from [ACR](#). Updated 2022. Accessed January 13, 2023.
7. American College of Radiology (ACR). ACR appropriateness criteria: Imaging after shoulder arthroplasty. Available from [ACR](#). Updated 2021. Accessed January 13, 2023.
8. American College of Radiology (ACR). ACR–SPR–SSR practice parameter for the performance and interpretation of magnetic resonance imaging (MRI) of the shoulder. Available from [ACR](#). Updated 2020. Accessed January 13, 2023.
9. American College of Radiology (ACR). ACR appropriateness criteria: Acute hand and wrist trauma. Available from [ACR](#). Updated 2018. Accessed January 13, 2023.
10. American College of Radiology (ACR). ACR appropriateness criteria: Shoulder pain – traumatic. Available from [ACR](#). Updated 2017. Accessed January 13, 2023.

APPENDIX

Reserved for State specific information. Information includes, but is not limited to, State contract language, Medicaid criteria and other mandated criteria.