

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).

MRI can be contraindicated in any of the following circumstances: there is a metallic body in the eye; the individual has a magnetically activated implanted devices (e.g., pacemakers, defibrillators, insulin pumps, neurostimulators, some types of metal), and aneurysm clipping. The imaging facility should always be consulted with any compatibility questions as the types of metal used and development of MRI compatible devices is continually changing. A whole-body MRI uses powerful magnets and radio waves to create pictures of the body's bony and soft tissue structures. An MRI does not use ionizing radiation (x-rays).

COVERAGE POLICY

Whole Body MRI **may be considered medically necessary** when **ANY** of the following criteria are met:

1. **Bony Metastases.** Whole Body MRI is reported to have a higher accuracy for metastases than other whole-body imaging techniques, including bone scintigraphy and PET/CT as it is sensitive for both initial diagnosis and response to treatment.
2. **Multiple Myeloma.** The medical literature considers Whole Body MRI to be the gold standard.
3. **Lymphoma.** The medical literature supports Whole Body MRI, especially for patients with low FDG avidity.
4. **Leukemia.**
5. **Staging Solid Pediatric Malignancies** (e.g., neuroblastoma, Ewing sarcoma, and rhabdomyosarcoma).
6. **Identifying Complications of Cancer Therapy** (e.g., osteonecrosis [steroid induced]).
7. **Screening Surveillance in Cancer Predisposition Syndromes**
 - a. Neurofibromatosis (both NF1 and NF2)
 - b. Li-Fraumeni Syndrome
 - c. Hereditary Paraganglioma Pheochromocytoma Syndrome
 - d. Hereditary Retinoblastoma

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- 8. Rheumatologic Disease.** Global assessment of active and chronic disease of joints and tendons in both axial and appendicular skeleton. Detects pre-structural inflammatory change in joints, discs, synovium, bone marrow and soft tissues. Whole body MRI is indicated for the following:
 - a. Rheumatoid Arthritis (RA)
 - b. Psoriatic Arthritis
 - c. Ankylosing Spondylitis
 - d. Systemic Sclerosis (Scleroderma)
 - e. Juvenile Spondyloarthropathies
- 9. Multifocal Inflammatory Myopathies.** To assess total disease burden, target sites of active disease for biopsy of the following:
 - a. Polymyositis
 - b. Muscular Dystrophies
- 10. Multifocal Osteonecrosis** including the following:
 - a. Sickle Cell (to distinguish osteomyelitis from osteonecrosis)
 - b. Alcohol Misuse
 - c. Coagulopathies
 - d. Systemic Lupus Erythematosus (SLE)
 - e. Renal Failure
- 11. Multifocal Bone Lesions and Marrow Replacement Processes**
 - a. Multiple Exostoses (for detection of malignant transformation)
 - b. Langerhans Cell Histiocytosis
 - c. Gaucher Disease
- 12. Vascular Malformation Syndromes** that may affect multiple organs, bones and soft tissues such as:
 - a. Sturge-Weber Syndrome
 - b. von Hippel-Lindau Syndrome
 - c. Osler-Weber-Rendu (or Hereditary Hemorrhagic Telangiectasia)
 - d. Angiomatosis
 - e. Gorham's Disease
 - f. Maffucci's Syndrome
 - g. Klippel-Trénaunay-Weber Syndrome
- 13. Workup of Fever of Unknown Origin (FUO)**
- 14. Radiation Therapy Planning**

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)** (2022) also 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.

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

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.

CODING & BILLING INFORMATION

CPT Code

CPT	Description
76498	Unlisted magnetic resonance procedure (whole body MRI)

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

2/8/2023	Policy reviewed, no changes to criteria; added to Overview, Summary of Medical Evidence and Reference sections.
2/9/2022	New policy.

REFERENCES

Government Agency

- Centers for Medicare and Medicaid Services (CMS). Medicare coverage database (no National Coverage Determination identified). Available from [CMS](#). Accessed January 18, 2023.

Peer Reviewed Publications

- Albano D, Bruno A, Patti C, Micci G, Midiri M, Tarella C, Galia M. Whole-body magnetic resonance imaging (WB-MRI) in lymphoma: State of the art. *Hematol Oncol*. 2020 Feb;38(1):12-21. doi: 10.1002/hon.2676. PMID: 31486520.
- Banaste N, Caurier B, Bratan F, Bergerot J-F, Thomson V, Millet I. Whole-body CT in patients with multiple traumas: Factors leading to missed injury. *Radiology*. 2018 Nov;289(2):374-383. doi: 10.1148/radiol.2018180492. PMID: 30084754.
- Chen J, Li C, Tian Y, Xiao Q, Deng M, Hu H, et al. Comparison of whole-body DWI and 18 F-FDG PET/CT for detecting intramedullary and extramedullary lesions in multiple myeloma. *AJR Am J Roentgenol*. 2019 Sep;213(3):514-523. doi: 10.2214/AJR.18.20989. PMID: 31166755.
- Gottumukkala RV, Gee MS, Hampilos PJ, Greer M-LC. Current and emerging roles of whole-body MRI in evaluation of pediatric cancer patients. *Radiographics*. Mar-Apr 2019;39(2):516-534. doi: 10.1148/rg.2019180130. PMID: 30681900.
- Greer MLC. Whole-body magnetic resonance imaging: Techniques and non-oncologic indications. *Pediatr Radiol*. 2018 Aug;48(9):1348-1363. doi: 10.1007/s00247-018-4141-9. PMID: 30078041.

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- Guimarães MD, Noschang J, Teixeira SR, Koenigkam Santos M, Lederman HM, Tostes V, et al. Whole-body MRI in pediatric patients with cancer. *Cancer Imaging*. 2017 Feb 10;17(1):6. doi: 10.1186/s40644-017-0107-7. PMID: 28187778. PMCID: PMC5303228.
- Khanna G. Invited commentary on “current and emerging roles of whole-body MRI in evaluation of pediatric cancer patients.” *Radiographics*. Mar-Apr 2019;39(2):535-537. doi: 10.1148/rg.2019180219. PMID: 30844355.
- Messiou C, Hillengass J, Delorme S, Lecouvet FE, Mouloupoulos LA, Collins DJ, et al. Guidelines for acquisition, interpretation, and reporting of whole-body MRI in myeloma: Myeloma Response Assessment and Diagnosis System (MY-RADS). *Radiology*. 2019 Apr;291(1):5-13. doi: 10.1148/radiol.2019181949. PMID: 30806604.
- Pawlyn C, Fowkes L, Otero S, Jones JR, Boyd KD, Davies FE, et al. Whole-body diffusion-weighted MRI: A new gold standard for assessing disease burden in patients with multiple myeloma? *Leukemia*. 2016 Jun;30(6):1446-8. doi: 10.1038/leu.2015.338. PMID: 26648535. PMCID: PMC4895156.
- Punwani S, Taylor SA, Bainbridge A, Prakash V, Bandula S, De Vita E, et al. Pediatric and adolescent lymphoma: Comparison of whole-body STIR half-Fourier RARE MR imaging with an enhanced PET/CT reference for initial staging. *Radiology*. 2010 Apr;255(1):182-90. doi: 10.1148/radiol.09091105. PMID: 20308456.
- Schooler GR, Davis JT, Daldrop-Link HE, Frush DP. Current utilization and procedural practices in pediatric whole-body MRI. *Pediatr Radiol*. 2018 Aug;48(8):1101-1107. doi: 10.1007/s00247-018-4145-5. PMID: 29721598.
- Shyu JY, Askari R, Khurana B. R-SCAN: Whole-body blunt trauma CT imaging. *J Am Coll Radiol*. 2017 Apr;14(4):531-533. doi: 10.1016/j.jacr.2016.11.010. PMID: 28126536.
- Vilanova JC, García-Figueiras R, Luna A, Baleato-González S, Tomás X, Narváez JA. Update on whole-body MRI in musculoskeletal applications. *Semin Musculoskelet Radiol*. 2019 Jun;23(3):312-323. doi: 10.1055/s-0039-1685540. PMID: 31163505.
- Zugni F, Padhani AR, Koh D-M, Summers PE, Bellomi M, Petralia G. Whole-body magnetic resonance imaging (WB-MRI) for cancer screening in asymptomatic subjects of the general population: Review and recommendations. *Cancer Imaging*. 2020 May 11;20(1):34. doi: 10.1186/s40644-020-00315-0. PMID: 32393345. PMCID: PMC7216394.

National and Specialty Organizations

- American College of Obstetricians and Gynecologists (ACOG). Committee opinion no. 723: Guidelines for diagnostic imaging during pregnancy and lactation. Available from [ACOG](#). Updated October 2017. Accessed January 18, 2023.
- American College of Radiology (ACR). ACR appropriateness criteria – procedures (search: “whole body MRI”). Available from [ACR](#). Accessed January 18, 2023.
- American College of Radiology (ACR). ACR practice parameter for performing and interpreting magnetic resonance imaging (MRI). Available from [ACR](#). Updated 2022. Accessed January 18, 2023.