

2025 Magnetic Resonance Imaging (MRI) Bone Marrow

Diagnostic Imaging

MRI-BoneMarrow-HH

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Magnetic Resonance Imaging (MRI) Bone Marrow

**NCD 220.2**

See also, **NCD 220.2**: Magnetic Resonance Imaging at <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to individual's healthplan membership.

MRI General Contraindications

MRI is contraindicated for **ANY** of the following:

- Safety, related to clinical status (body mass index exceeds MRI capability, intravascular stents within recent 6 weeks)
- Safety, related to implanted devices (aneurysm clips, cochlear implant, implantable cardio-defibrillators, insulin pump, permanent pace maker, spinal cord stimulator)¹

References: [7] [2] [4]

Preamble: Pediatric Diagnostic Imaging

HealthHelp's clinical guidelines for the Diagnostic Imaging program, are intended to apply to both adults and pediatrics (21 years of age or younger), unless otherwise specified within the criteria.

MRI Bone Marrow Guideline

Magnetic resonance imaging (MRI) of the bone marrow is considered medically appropriate when the documentation demonstrates **ANY** of the following: (***NOTE:** *Entire body is imaged.*)

1. Marrow disorders, diffuse or multifocal (eg, chronic recurrent multifocal osteomyelitis, Gaucher's disease, Waldenström macroglobulinaemia) are suspected or known and **ALL** of the following:
 - a. **ANY** of the following:
 - i. Laboratory exam is abnormal.
 - ii. Physical exam findings are new and abnormal.
 - iii. Symptoms are new or progressing.

¹Some implanted devices that were once absolute contraindications to a MRI may now be accepted, including if the specific MRI is able to accommodate the device or the device itself is deemed safe for MRI.

- b. Ordered by hematologist/oncologist

References: [1]

2. Multiple myeloma (MM) and hematological malignancies (eg, leukemia) are suspected or known.

References: [9] [8] [6]

3. Smoldering multiple myeloma (SMM) is known when progression to MM or high risk SMM is suspected.

References: [5] [3]

MRI Bone Marrow Summary of Changes

MRI Bone Marrow guideline had the following version changes from 2024 to 2025:

- Added criteria under "Marrow disorders" to clarify indication based on EBM
- Citations updated per evidence

MRI Bone Marrow Procedure Codes

Table 1. MRI Bone Marrow Associated Procedure Codes

CODE	DESCRIPTION
77084	Magnetic resonance (eg, proton) imaging, bone marrow blood supply

MRI Bone Marrow Definitions

Gaucher's disease is a rare hereditary disorder of lipid metabolism caused by an enzyme deficiency and characterized by enlargement of the spleen and liver, bone lesions and sometimes neurological impairment.

Leukemia is a type of cancer that affects the blood and bone marrow. It's caused by the rapid production of abnormal white blood cells. These abnormal white blood cells can't fight infection and make it harder for the bone marrow to produce red blood cells and platelets.

Magnetic resonance imaging (MRI) is a non-invasive diagnostic technique that produces computerized images of internal body tissues and is based on nuclear magnetic resonance of atoms within the body induced by the application of radio waves.

Multiple myeloma is a blood cancer that develops in plasma cells in the bone marrow. Plasma cells are white blood cells that produce antibodies to protect the body from infection. In multiple myeloma, the plasma cells grow too much, crowding out normal bone marrow cells.

Osteomyelitis is an infectious, inflammatory disease of bone. It is often painful, bacterial in origin and may result in the death of bone tissue.

Pediatric approximate ages are defined by the US Department of Health (USDH), the Food and Drug Administration (FDA), and the American Academy of Pediatrics (AAP) as the following:

- Infancy, between birth and 2 years of age
- Childhood, from 2 to 12 years of age
- Adolescence, from 12 to 21 years of age, further defined by the AAP into:
 1. Early (ages 11–14 years)
 2. Middle (ages 15–17 years),
 3. Late (ages 18–21 years)
 4. Older ages may be appropriate for children with special healthcare needs.

Recurrence is a new occurrence of something that happened or appeared before.

Smoldering multiple myeloma is a precancerous condition that alters certain proteins in blood and/or increases plasma cells in bone marrow, but it does not cause symptoms of disease. About half of those diagnosed with the condition, however, will develop multiple myeloma within 5 years.

Staging in cancer is the process of determining how much cancer is within the body (tumor size) and if it has metastasized (spread).

Surveillance in cancer is the ongoing, timely and systematic collection and analysis of information on new cancer cases, extent of disease, screening tests, treatment, survival and cancer deaths.

Waldenstrom macroglobulinemia is a rare, slow-growing type of non-Hodgkin lymphoma. It's a blood cell cancer that starts in malignant B-cells.

MRI Bone Marrow References

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- [3] (2024). Clinical Overview Multiple myeloma. *Clinical Key*. Retrieved: March 2025. https://www.clinicalkey.com/#!/content/clinical_overview/67-s2.0-ee606121-7959-403b-a55c-99476e59a20e#differential-diagnosis-heading-32
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- [5] Hill, E., Tuckey, E., . . . Kazandjian, D. (2020). Evaluation of Whole-Body MRI (WB-MRI) in Smoldering Multiple Myeloma (SMM). *Blood*, 136(Supplement 1), 19-20.
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Disclaimer section

Purpose

The purpose of the HealthHelp's clinical guidelines is to assist healthcare professionals in selecting the medical service that may be appropriate and supported by evidence to safely improve outcomes. Medical information is constantly evolving, and HealthHelp reserves the right to review and update these clinical guidelines periodically. HealthHelp reserves the right to include in these guidelines the clinical indications as appropriate for the organization's program objectives. Therefore the guidelines are not a list of all the clinical indications for a stated procedure, and associated Procedure Code Tables may not represent all codes available for that state procedure or that are managed by a specific client-organization.

Clinician Review

These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. Healthcare professionals using these clinical guidelines are responsible for all clinical decisions based on their assessment. All Clinical Reviewers are instructed to apply clinical indications based on individual patient assessment and documentation, within the scope of their clinical license.

Payment

The use of these clinical guidelines does not provide authorization, certification, explanation of benefits, or guarantee of payment; nor do the guidelines substitute for, or constitute, medical advice. Federal and State law, as well as member benefit contract language (including definitions and specific contract provisions/exclusions) take precedence over clinical guidelines and must be considered first when determining eligibility for coverage. All final determinations on coverage and



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payment are the responsibility of the health plan. Nothing contained within this document can be interpreted to mean otherwise.

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National and Local Coverage Determination (NCD and LCD)



NOTICE

To ensure appropriate review occurs to the most current NCD and/or LCD, always defer to <https://www.cms.gov/medicare-coverage-database/search.aspx>.

Background

National Coverage Determinations (NCD) and Local Coverage Determinations (LCD) are payment policy documents outlined by the Centers for Medicare and Medicaid Services (CMS) and the government's delegated Medicare Audit Contractors (MACs) that operate regionally in jurisdictions.

CMS introduced variation between different jurisdictions/Medicare Audit Contractors (MACs) and their associated covered code lists with the transition to ICD 10. The variation resulted in jurisdictions independently defining how codes are applied for exclusions, limitations, groupings, ranges, etc. for the medical necessity indications outlined in the NCD and LCD. Due to this variation, there is an inconsistent use/application of codes and coverage determinations across the United States between the different MACs.

In addition, **WITHOUT** notice, CMS can change the codes that indicate medical necessity and the format of the coverage determinations/associated documents (eg, Articles). This is an additional challenge for organizations to keep up with ongoing, unplanned changes in covered codes and medical necessity indications.

Medical Necessity Codes

Due to the variation in code application between jurisdictions/MACs and that updates can happen without notification, HealthHelp is not able to guarantee full accuracy of the codes listed for any Coverage Determination, and advises that prior to use, the associated Coverage Determination



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Articles are reviewed to ensure applicability to HealthHelp's programs and any associated NCDs and LCDs.

For Internal Use Only:

11248 11249 11253 11282 11325 11328 11333 11349 11350 11351 11352 11354 11355 11356
11358 11359 11360 11361 11362 11365 11366 11367 11368 11369 11370 11374 11375 11394
11395 11396 11565