

# MRI Lumbar Spine

Medicare Advantage Medical Policy No.: MNG-018

The Health Plan reserves the right to amend this policy and procedure at any time. Exceptions to this policy and procedure will be made on a case-by-case basis at the total discretion of the Health Plan.

**Original Effective Date: May 28, 2024**

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## Instructions for use

This policy serves to provide guidance in determining coverage based on medical necessity. It also gives a list of resources used to create these guidelines. Medical necessity determinations will be made in accordance with generally accepted standards of medical practice, taking into account credible scientific evidence published in peer reviewed medical literature generally recognized by the relevant medical community, physician specialty society recommendations, and the views of the physicians practicing in relevant clinical areas, and other relevant factors, as they relate to the member's clinical circumstances.

## Medicare Advantage Members

Coverage criteria for Medicare Advantage members can be found in Medicare coverage guidelines in statutes, regulations, National Coverage Determinations (NCD)s, and Local Coverage Determinations (LCD)s. To determine if a National or Local Coverage Determination addresses coverage for a specific service, refer to the Medicare Coverage Database at the following link: [www.cms.gov/medicare-coverage-database/search.aspx](http://www.cms.gov/medicare-coverage-database/search.aspx). You may wish to review the Guide to the MCD Search here: [www.cms.gov/medicare-coverage-database/help/mcd-bene-help.aspx](http://www.cms.gov/medicare-coverage-database/help/mcd-bene-help.aspx).

When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, internal coverage criteria will be developed. This policy is to serve as the summary of evidence, a list of resources and an explanation of the rationale that supports the adoption of the coverage criteria and is to be used by all plans and lines of business unless Federal or State law, contract language, including member or provider contracts, take precedence over the policy.

## Basic Requirements for Clinical Appropriateness:

1. Before diagnostic or therapeutic intervention, a clinician must confirm the diagnosis or establish the likelihood based on a history and physical exam and, when appropriate, a review of laboratory studies, previous diagnostic testing and response to any prior interventions, specifically relevant to the clinical situation.
2. An alternative treatment or other appropriate intervention should not offer any greater benefit based on standards of medical practice and/or current literature.
3. The potential benefit to the patient should outweigh the risk of the diagnostic or therapeutic intervention.
4. A reasonable likelihood of the intervention changing management and/or leading to an improved outcome for the patient must exist, based on the clinical evaluation, current literature and standards of medical practice.

If these requirements are not apparent in the request for authorization, including the clinical documentation provided, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would supersede the requirements set forth above. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account.

Simultaneous ordering of multiple diagnostic or therapeutic interventions and/or repeated diagnostic or therapeutic interventions in the same anatomic area may be denied, unless individual circumstances support the medical necessity of performing interventions simultaneously or repeatedly. This should be apparent in the clinical documentation or in peer-to-peer conversations.

## **MRI Lumbar Spine**

### **When Services May Be Eligible for Coverage**

*Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:*

- *Benefits are available in the member's contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

**Based on review of available data, the Health Plan may consider MRI of the lumbar spine to be eligible for coverage.\*\* MRI has proven useful in diagnosing cerebral infarctions, tumors, abscesses, edema, hemorrhage, nerve fiber demyelination (as in multiple sclerosis), and other disorders that increase fluid content of the affected tissues.**

### **Coverage Criteria**

Magnetic resonance imaging (MRI) is a noninvasive method of imaging body structures based on the distribution of fixed water and other hydrogen-rich molecules in the human body. MRI uses a powerful magnet to align hydrogen atoms within the patient's soft tissues. MRI produces cross sectional and 3-D images of soft tissues. Because bone contains little water, bone is relatively invisible to MRI. Blood is also relatively invisible.

MRI contrast agents can improve the sensitivity and/or specificity of an image, by altering inherent tissue response to magnetic fields. The contrast agent most commonly used is gadolinium.

MRI of the spinal canal has the advantage of noninvasive visualization of the spinal cord.

MRI can:

- Differentiate solid from cystic tumors;
- Diagnose and localize spinal cord compression;
- Diagnose syringomyelia (progressive, chronic sensory disturbance, atrophy and spasticity of the spinal cord), disc disease, and any altered relationship between vertebral bodies, discs, spinal cord and nerve roots;
- Provide early detection of osteomyelitis; and
- Detect spinal cord abnormalities associated with osteomyelitis.

Coverage is limited to MRI units that have received FDA pre-market approval. Such units must be operated within the parameters specified by the approval.

Contrast is indicated for studying the central nervous system for metastatic disease, inflammatory disease, recurrent tumor versus scar, differentiation of microvascular from macrovascular infarction, and selected cases of complex vascular disease. Within the study of the spine, contrast also is indicated to differentiate recurrent disc versus scar or granulation tissue, spinal cord neoplasm, any case of myelopathy, and inflammatory cord disease.

History and clinical findings are critical factors to determine when a lumbar MRI is needed in order to efficiently manage low back pain and related disorders.

Lumbar MRI may be indicated for a patient with a "red-flag" condition, such as a suspected tumor, infection, herniated intervertebral disc with nerve compression, or a major neurological problem. The MRI test result may be needed to evaluate these conditions to determine the need for surgery or other aggressive therapy, such as a work-up for metastatic cancer.

"Red flags" are identified through an appropriate history plus a physical examination that typically includes evaluating muscle strength, limb circumference, reflexes, sensation, straight leg raise, and sitting knee extension tests.

"Red flags" include:

- Major trauma
- Minor trauma in a potentially osteoporotic patient
- History of cancer
- Fever
- Chills
- Unexplained weight loss
- Recent bacterial infection
- IV drug abuse
- Immune suppression
- Pain that worsens when supine or at night
- Saddle anesthesia
- Recent onset of bladder dysfunction
- Clinically significant or progressive neurologic deficit in the lower extremity
- Unexpected laxity of the anal sphincter
- Perianal or perineal sensory loss,
- Clinically significant motor weakness, or
- Other nerve root compromise

Eighty (80) to ninety (90) percent of patients with low back pain improve one month after symptom onset even without treatment. Therefore, spinal imaging tests are not generally necessary during the first month of symptoms except when a "red flag" (suggesting a medically emergent condition) is noted on the medical history and physical examination. For a "non-red flag" condition, the MRI may be appropriate after 1 month of symptoms and failure of conservative treatment such as home exercise program, physical therapy and oral medications such as anti-inflammatory treatment.

If a patient's limitations due to low back symptoms do not improve within four weeks, findings on reassessment may reveal an indication for an MRI. However, since MRI changes are common in asymptomatic patients, MRI abnormalities alone do not retrospectively validate the need for the test without other supporting clinical rationale.

A lumbar MRI used to evaluate uncomplicated degenerative disc disease or herniated nucleus pulposus is not considered medically necessary when a surgical intervention or other aggressive treatment (e.g., intervertebral joint injection) is not under consideration.

When a lumbar MRI is ordered, Medicare expects that the information gained from the test will be used for medical decision-making. When the findings will not affect the treatment choices, the test is not reasonable or necessary.

Certain uses of lumbar MRI are considered investigational and are therefore not covered by Medicare. These include the measurement of blood flow, spectroscopy, imaging of cortical bone and calcifications, and for procedures involving spatial resolution of bone or calcifications.

A lumbar MRI that is a duplication of other imaging studies (such as a spinal CT scan) may be unreasonable or unnecessary. A lumbar MRI, however, could be complementary to a lumbar CT if there are inconclusive findings on a CT scan. Conversely, a lumbar CT may be warranted following an MRI study if the MRI study is found to be inconclusive. Documentation should support the medical necessity for the need for both studies.

Medicare Denies Coverage of MRI for:

1. Imaging of cortical bone and calcification.
2. Procedures involving spatial resolution of bone or calcification.
3. MRI is not covered for patients with metallic clips on vascular aneurysms.

#### References:

1. American Academy of Neurology Quality Standards Subcommittees: Practice Parameters: Magnetic Resonance Imaging in the Evaluation of Low Back Syndrome (Summary Statement), *Neurology*. April 1994;44(4):767-70.
2. Chou R, Qaseem A, Snow V, Casey D, Cross JT, Shekelle P, et al. Diagnosis and Treatment of Low Back Pain: A Joint Clinical Practice Guideline from the American College of Physicians and the American Pain Society. *Ann Intern Med*. Oct 2007;147:492-504.
3. Lee, Hwan-Mo, M.D., et. al. Reliability of Magnetic Resonance Imaging in Detecting Posterior Ligament Complex Injury in Thoracolumbar Spinal Fractures. *Spine*. Vol 25;No.16;pp 2079-2084.
4. Patel, Alpesh A., M.D., Vaccaro, Alexander R., M.D., Ph.D., Throacolumbar Spine Trauma Classification. *Journal of the American Academy of Orthopedic Surgery*. Feb 2010;Vol 18;No.2;pp 63-71.

5. Bussieres AE, Taylor JA, Peterson C. Diagnostic imaging practice guidelines for musculoskeletal complaints in adults-an evidence-based approach-part 3: spinal disorders. J Manipulative Physiol Ther. 2008;31(1):33-88.
6. Institute for Clinical Systems Improvement (ICSI), Healthcare guideline: adult acute and subacute low back pain, (2018) Bloomington, MN, ICSI, 49 pgs.
7. Pengel LH, Herbert RD, Maher CG, et al. Acute low back pain: systematic review of its prognosis. Bmj. 2003;327(7410):323.

**Policy History**

Original Effective Date: 05/28/2024

Utilization Management Committee review and approval: 05/28/2024.

**When Services Are Considered Investigational**

*Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.*

**Based on review of available data, the Health Plan may consider MRI of the lumbar spine when the coverage criteria are not met and for all other indications to be investigational\*.**

**Coding**

The five-character codes included in this medical policy are obtained from Current Procedural Terminology (CPT®)‡, copyright 2024 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

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Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	72148, 72149, 72158
HCPCS	No codes
ICD-10 Diagnosis	All related diagnoses

\*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
- B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
  - 1. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
  - 2. Reference to federal regulations.

\*\*Medically Necessary (or “Medical Necessity”) - Healthcare services, treatment, procedures, equipment, drugs, devices, items or supplies that a Provider, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury, disease or its symptoms, and that are:

- A. In accordance with nationally accepted standards of medical practice;
- B. Clinically appropriate, in terms of type, frequency, extent, level of care, site and duration, and considered effective for the patient's illness, injury or disease; and
- C. Not primarily for the personal comfort or convenience of the patient, physician or other healthcare provider, and not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.

For these purposes, “nationally accepted standards of medical practice” means standards that are based on credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community, Physician Specialty Society recommendations and the views of Physicians practicing in relevant clinical areas and any other relevant factors.

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**NOTICE:** If the Patient’s health insurance contract contains language that differs from the Health Plan Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

**NOTICE:** Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Health Plan recommends,

advocates, requires, encourages, or discourages any particular treatment, procedure or service, or any particular course of treatment, procedure, or service.

**NOTICE:** Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.