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2025 Computed Tomography (CT) Lumbar Spine

Diagnostic Imaging

CT-LSpine-HH

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Computed Tomography (CT) Lumbar Spine

NCD 220.1
See also, **NCD 220.1**: Computed Tomography at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

CT General Contraindications

Computed tomography (CT) is contraindicated (relative) for **ANY** of the following:

1. Allergy/idiosyncratic reaction to contrast material (if intravascular contrast material is used)
2. Pregnancy
3. Renal impairment (glomerular filtration rate [GFR] is less than 30 ml/min/1.73 m^2.)
   References: [2]

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.

CT Lumbar Spine Guideline

Computerized tomography (CT) of the lumbar spine is considered medically appropriate when the documentation demonstrates **ANY** of the following conditions:

1. Lumbar radiculopathy is demonstrated on nerve conduction study **OR** electromyography (EMG) and magnetic resonance imaging (MRI) is **contraindicated or unavailable**.
   (*__NOTE:__ *An EMG is **NOT** recommended to determine the cause of axial lumbar, cervical or thoracic spine pain*.)
   References: [4] [11]
2. Pain, back area, for evaluation, when MRI is **contraindicated or unavailable** and **ANY** of the following:
   a. Back pain is isolated, in a pediatric individual, and **ANY** of the following red flags:
   (*__NOTE__: *Conservative care is not required if red flags are present*.)
      i. Age is 5 years or younger.
      ii. Fever, malaise or weight loss (eg, 5% in 1 months or 10% in 6 months)

iii. Neurologic examination is abnormal.

iv. Pain at night disrupts or prevents sleep

v. Pain is constant.

vi. Pain lasts more than 4 weeks

vii. Postural changes (eg, kyphosis or scoliosis)

viii. Radicular pain

ix. Stiffness/gelling in early morning

b. Conservative management (eg, chiropractic treatments, physical therapy) and **EITHER** of the following:

i. Attempted within the last 6 months, for at least 6 weeks **AND** symptoms persist or worsen.

ii. Symptoms progress or worsen during course of conservative management

References: [11] [4] [6] [15]

3. Arnold Chiari syndrome is known and MRI is **contraindicated or unavailable**.
References: [17]

4. Cancer, tumor, recurrence or metastasis evaluation for **ANY** of the following:

a. Prior imaging for bone metastasis is abnormal, non-diagnostic or indeterminate.

b. Spinal tumor is known **AND** symptoms are new or progressing (eg, non-traumatic pain is new or increasing).

c. Surveillance following the **National Comprehensive Cancer Network (NCCN) Guideline's** surveillance recommendations (*see **Surveillance** section*).

References: [5] [13]

5. Cauda Equina syndrome is suspected or known, symptomatic with severe back pain/ sciatica, neurological symptoms (eg, bowel/bladder dysfunction, leg and foot numbness, saddle anesthesia) are present **AND** MRI is **contraindicated or unavailable**.
References: [9]

6. Cerebrospinal fluid (CSF) leak is suspected (eg, cerebrospinal-venous fistula, orthostatic headache, otorrhea, post lumbar puncture headache, post spinal surgery headache, rhinorrhea, spontaneous idiopathic intracranial hypotension [SIH]) **AND** MRI is **contraindicated or unavailable**. (***NOTE**: *for cerebrospinal-venous fistula, CT Myelogram is preferred.*)
References: [10]

7. Compression fracture(s) evaluation and **ANY** of the following:
    a. **ALL** of the following:
        i. Back pain is worsening.
        ii. Demonstrated on X-ray
        iii. New
        iv. **NO** known malignancy
    b. Compression fractures are known and treated **AND** back pain is new.

    References: [13]

8. Infection (eg, abscess, discitis, osteomyelitis) is suspected or known, MRI is **contraindicated or unavailable** and **ANY** of the following:
    a. Active treatment, to assess response
    b. Immune system suppression-related (eg, cancer, diabetes, dialysis, human immunodeficiency virus [HIV], intravenous drug use) spinal infection is suspected, from signs (eg, abnormal white blood cell count, erythrocyte sedimentation rate [ESR], back pain).
    c. Signs/symptoms are present (eg, chills, complete blood count [CBC], c-reactive protein [CRP], ESR, fever, pain)

    References: [16] [11]

9. Inflammation is suspected or known and MRI is **contraindicated or unavailable** and **ANY** of the following:
    a. Neuroinflammatory conditions (Behcet's syndrome, sarcoidosis) are suspected.
    b. Rheumatoid arthritis with abnormal neurologic physical exam (eg, abnormal gait or reflexes, bowel/bladder dysfunction, extremity weakness) **OR** X-ray demonstrates subluxation. (*__NOTE__: *Initial imaging should be a lateral X-ray in flexion and neutral. MRI is indicated with negative X-rays when neurological deficit is present or symptoms suggest cervical instability.*)
    c. Spondyloarthropathies are suspected or known and X-ray(s) are non-diagnostic or indeterminate.

    References: [4] [8]

10. Neurological deficits/symptoms (eg, abnormal reflexes, loss of sensation, numbness/ tingling) are known based on completed neurological exams (eg, saddle anesthesia, straight leg raise test) and MRI is **contraindicated or unavailable**.

11. Post-surgical assessments for evaluation of complications or disease recurrence.
12. Sacral dimple is suspicious (eg, deep, larger than 0.5 cm, located within the superior portion of the gluteal crease or above the gluteal crease, multiple dimples or associated with cutaneous markers) **AND** MRI is **contraindicated or unavailable**. (*__NOTE__: *Ultrasound is ordered if age is less than 3 months*.)
13. Scoliosis evaluation, MRI is **contraindicated or unavailable** and **ANY** of the following:
    a. Atypical curve (eg, Kyphosis more than 30 degrees, left thoracic curve, short segment)
    b. Congenital scoliosis or juvenile idiopathic scoliosis and age is less than 10, for initial assessment.
    c. Neurological deficit is new or unexplained.
    d. Pre-operative planning
    e. Spinal deformity is progressive.
    f. Treatment planning depends on imaging

    References: [12]
14. Spondylolysis or spondylolisthesis (Pars defect) and extension/flexion X-rays show instability in adults. (*__NOTE__: *Initial imaging bone scan with single photon emission computed tomography [SPECT] is superior to MRI and CT in the detection of pars intrarticularis pathology including spondylolysis*.)
    References: [7] [14]
15. Spondylolysis or spondylolisthesis (Pars defect) is clinically suspected in pediatric individual (age is less than 18 years old) and **ALL** of the following: *__NOTE__: *(Flexion extension instability not required.)*
    a. Imaging will change treatment.
    b. MRI is **contraindicated, unavailable or surgeon preference**.
    c. X-rays are normal.
16. Tethered cord or spinal dysraphism is suspected or known, based on preliminary imaging, neurological exam or predisposition, **AND** MRI is **contraindicated or unavailable**.
17. Toe walking, with signs/symptoms of myelopathy (eg, numbness, pain, tingling) localized to the lumbar spine.
18. Trauma or acute injury evaluation with **ANY** of the following:
    a. Nerve root injury is suspected.

b. Spinal abnormalities (eg, ankylosing spondylitis, diffuse idiopathic skeletal hyperostosis) are known. (*__NOTE__: *Both a MRI and CT are appropriate.*)

c. Unexaminable condition (eg, distracting injury, Glasgow coma scale is less than 15).

References: [3]

CT Myelogram Guideline

Computed tomography (CT) myelogram is considered medically appropriate when the documentation demonstrates a **MRI is contraindicated or unavailable OR** it is the surgeon's preference, and **ANY** of the following:

1. Brachial plexus (if appropriate) **OR** nerve root injury is suspected in the neonate.
2. Cerebral spinal fluid (CSF) leak is known (eg, from symptoms of headache after lumbar puncture, post spinal surgery, spontaneous intracranial hypertension [SIH]), to demonstrate location of leak.
3. Magnetic resonance imaging (MRI) findings are incongruent with symptoms.
4. Pre-procedural planning (eg, nerve roots or dural sac evaluation)
   References: [2021 Spontaneous Spinal Cerebrospinal Fluid Leak: Review and Management Algorithm] [2019 ACR-ASNR-SPR Practice Parameter for the Performance of Myelography and Cisternography]

Combination CT and MRI for Metastases Evaluation Guideline

Combination CT/MRI studies (5 or less concurrent studies, with a CT or MRI appropriate for cancer location: abdomen, brain, cervical spine, chest, lumbar spine, neck, pelvis and/or thoracic spine) for **ANY** of the following situations:

1. Staging evaluation, for baseline pre-therapy
2. Surveillance following the National Comprehensive Cancer Network (NCCN) Guidelines recommended schedule (*See **Surveillance** section*)

Combination CT Lumbar Spine and MRI Lumbar Spine Guideline

Computed tomography (CT) lumbar spine combined with magnetic resonance imaging (MRI) lumbar spine is considered medically appropriate when the documentation demonstrates **ANY** of the following:

1. Bony and soft tissue abnormality is known **AND** imaging may change the treatment plan.

2. Fractures are complex or pathologic.
3. Malignant process of spine evaluation with both bony and soft tissue involvement

LCD 35391
See also, **LCD 35391**: Multiple Imaging in Oncology at https://www.cms.gov/medicare-coverage-database/search.aspx *if applicable to individual's healthplan membership*.

Blood/Bone Marrow Cancers Surveillance section

Acute Lymphoblastic Leukemia Surveillance

Acute lymphoblastic leukemia: No imaging surveillance suggested.
References: [2024 Acute Lymphoblastic Leukemia Version 3.2024]

Acute Myeloid Leukemia Surveillance reuse

Blastic plasmacytoid dendritic cell neoplasm surveillance includes a repeat PET/CT for individuals with prior evidence of extramedullary disease.
References: [2025 Acute Myeloid Leukemia (Age ≥18) Version 2.2025]

Chronic Lymphocytic Leukemia/Small Cell Lymphocytic Lymphoma Surveillance

Chronic lymphocytic leukemia/small cell lymphocytic lymphoma: No imaging surveillance suggested.
References: [2025 Chronic Lymphocytic Leukemia/Small Lymphocytic Leukemia Version 1.2025]

Chronic Myeloid Leukemia Surveillance

Chronic Myeloid Leukemia: No imaging surveillance suggested.
References: [2025 Chronic Myeloid Leukemia Version 3.2024]

Hairy Cell Leukemia Surveillance

Hairy cell leukemia: No imaging surveillance suggested.
References: [2025 Hairy Cell Leukemia Version 1.2025]

Multiple Myeloma Surveillance

Multiple myeloma surveillance includes **ANY** of the following:

1. Multiple myeloma, surveillance imaging when recurrence is suspected with **ANY** of the following:
    a. CT scan, low dose
    b. FDG PET/CT
    c. MRI (- contrast material), whole-body
2. Smoldering myeloma, surveillance imaging annually (or more often when recurrence is suspected) with **ANY** of the following:
    a. CT scan, low dose
    b. FDG PET/CT
    c. MRI (- contrast material), whole-body

References: [2025 Multple Myeloma Version 2.2025]

Spine Surveillance section

Bone Cancer Surveillance

Bone cancer surveillance includes **ANY** of the following:

1. Chondrosarcoma surveillance for **ANY** of the following:
    a. Atypical cartilaginous tumor surveillance with cross-sectional imaging (CT + contrast, MRI ± contrast) every 6 to 12 months for 2 years, then annually as clinically indicated
    b. Low-grade, extracompartmental appendicular tumor, grade I axial tumors or high-grade (grade II or III, clear cell or extracompartmental) tumors surveillance with **ALL** of the following:
        i. Chest CT at least every 6 months for 5 years, then annually for at least 10 years, then if symptoms are new or progressing.
        ii. MRI (± contrast) or CT (+ contrast) if symptoms are new or progressing.
2. Chordoma surveillance with **ALL** of the following:
    a. Chest CT imaging every 6 months, annually for 5 years, then annually thereafter, then if symptoms are new or worsening.
    b. Imaging of primary site, timing and modality (eg, MRI ± CT [both + contrast]) if symptoms are new or progressing, up to 10 years
3. Ewing Sarcoma after primary treatment completed surveillance with **ALL** of the following:

a. Chest CT: every 3 months

b. Primary site imaging with MRI ± CT (both + contrast), increase intervals after 24 months and after 5 years, annually, then if symptoms are new or progressing (indefinitely) (*__NOTE__: *PET/CT [head-to-toe] is appropriate*)

4. Giant cell tumor of the bone surveillance with **ALL** of the following:

a. Chest CT or MRI imaging every 6 to 12 months for 4 years, then annually thereafter, then if symptoms are new or progressing

b. Surgical site imaging if symptoms are new or progressing (eg, CT and/or MRI, both with contrast)

5. Osteosarcoma surveillance with primary site and chest imaging (using same imaging that was done for initial work-up) for **ANY** of the following: (*__NOTE__: *PET/CT [head-to-toe] is appropriate*.)

a. Image every 3 months for years 1 and 2

b. Image every 4 months for year 3

c. Image every 6 months for years 4 and 5

d. Image annually for year 6 and thereafter, then if symptoms are new or progressing

References: [2025 Bone Cancer Version 2.2025]

Central Nervous System (CNS) Cancer Surveillance

Central nervous system (CNS) cancer surveillance includes **ANY** of the following:

1. Glioblastoma, *IDH* wild-type, magnetic resonance imaging with (MRI) of the brain and **ANY** of the following:

a. Pre-operative and post-operative; within 48 hours

b. Pre-radiation planning; every 3 to 5 weeks, post-operatively

c. Post-radiation; 3 to 6 weeks post-radiation, then every 2 to 3 months for 3 years, then every 2 to 4 months indefinitively

2. Glioma, imaging with MRI of the brain and **ANY** of the following:

a. Astrocytoma, *IDH* mutated and **ANY** of the following:

i. Grade 2 and **ANY** of the following:

A. After radiation therapy (RT) **AND** chemotherapy: every 6 months until tumor progression

B. After RT **OR** chemotherapy: every 3 to 4 months for the 1st 5 years, then every 3 to 4 months until tumor progression

C. After surgery: every 3 to 4 months until tumor progression

ii. Grade 3 and **ANY** of the following;

A. After RT **AND** chemotherapy: every 6 months until tumor progression

B. After RT **OR** chemotherapy: every 3 to 4 months for the 1st 5 years, then every 3 to 4 months until tumor progression

iii. Grade 2 or 3, recurrent; image every 2 to 3 months

b. Oligodendroglioma, *IDH* mutated, 1p/19q co-deleted and **ANY** of the following:

i. Grade 2 and **ANY** of the following:

A. After radiation therapy (RT) **AND** chemotherapy: every 6 to 9 months until tumor progression

B. After RT **OR** chemotherapy: every 3 to 4 months for the 1st 5 years, then every 3 to 4 months until tumor progression

C. After surgery: every 3 to 4 months until tumor progression (*__NOTE__: *For individuals who underwent gross total resection, every 6 to 9 months for 5 years post-surgery until tumor progression*)

ii. Grade 3 and **ANY** of the following:

A. After radiation therapy (RT) **AND** chemotherapy: every 6 to 9 months until tumor progression

B. After RT **OR** chemotherapy: every 3 to 4 months for the 1st 5 years, then every 3 to 4 months until tumor progression

iii. Grade 2 or 3, recurrent, image every 3 to 4 months

3. Leptomeningeal metastases imaging with MRI of the brain and/or total spine every 2 to 3 months for the 1st 2 years, every 6 months until year 5, then annually indefinitively
4. Medulloblastoma, imaging with MRI of the brain every 2 to 3 months for 2 years
5. Primary CNS lymphoma, image every 2 to 3 months for 2 years

References: [2025 Central Nervous System Cancers Version 1.2025]

Neuroendocrine and Adrenal Tumors Surveillance

Neuroendocrine and adrenal cancer surveillance includes **ANY** of the following:[1]

[1]**NO** surveillance is indicated for appendiceal tumors 2 cm or smaller **WITHOUT** aggressive features (eg, high-grade cytologic atypia, infiltrative invasion lymphatic and hematogenous metastases).

1. Adrenal gland tumors surveillance imaging includes **ANY** of the following:
    a. Localized disease: chest computed tomography (CT) (± contrast) and abdominal CT or magnetic resonance imaging (MRI) (+ contrast) every 3 to 12 months up to 5 years, then if symptoms are new or progressing.
    b. Locoregional unresectable or metastatic disease; chest CT (± contrast) and CT or MRI abdomen and pelvis (+ contrast) or FDG positron emission tomography (PET)/CT every 3 to 12 months up to 5 years, then if symptoms are new or progressing.
2. Carcinoid syndrome surveillance imaging includes **BOTH** of the following:
    a. Abdominal/pelvic multiphasic CT or MRI every 3 to 12 months and chest CT (± contrast) if symptoms are new or progressing.
    b. Echocardiogram (ECHO) every 1 to 3 years or as clinically indicated **WITHOUT** known carcinoid heart disease (CHD) and at least annually for individuals with established CHD.
3. Gastrointestinal tract (well-differentiated grade 1/2), lung and thymus imaging and **ANY** of the following:
    a. Lung nodules, multiple or tumorlets, image with chest CT (- contrast) every 12 to 24 months if symptoms are new or progressing.
    b. Rectal tumor is 1 cm to 2 cm or less: image with rectal MRI at 6 and 12 months if symptoms are new or progressing.
4. Gastrointestinal (GI) tract (jejunum/ileum/colon, duodenum, rectum), lung and/or thymus neuroendocrine tumor (NET) surveillance includes imaging post-resection with **ANY** of the following:
    a. Jejunum/ilium/colon, duodenum, rectum and thymus, surveillance imaging with abdominal ± pelvic multiphasic CT or MRI according to **ONE** of the following levels of frequency[2]:
        i. Within 3 months to 12 months post-operatively
        ii. After 12 months, image every 12 to 24 months for 10 years
        iii. After 10 years if symptoms are new or progressing.
    b. Lung/thymus tumors surveillance chest CT (± contrast) for primary tumors, (as clinically indicated for primary GI tumors) according to **ONE** of the following levels of frequency:

[2]High-grade tumors are appropriate for more frequent monitoring.

i. Within 12 weeks to 12 months post-operatively

ii. After 12 months, image every 12 to 24 months for 10 years

iii. After 10 years if symptoms are new or progressing.

5. Grade 3, well-differentiated neuroendocrine surveillance includes chest CT (± contrast) as clinically indicated for **ANY** of the following:

   a. Locally advanced/metastatic disease with favorable biology (low Ki-67 [eg, less than 55%], positive somastatin receptor [SSTR] based PET imaging) includes abdominal/pelvic MRI (+ contrast) or abdominal/pelvic multiphasic CT for surveillance with **ANY** of the following:

      i. Resectable disease surveillance every 3 to 6 months for 2 years, then every 6 to 12 months for up to 10 years **AND** chest CT if symptoms are new or progressing.

      ii. Unresectable disease surveillance every 12 weeks to 24 weeks (depending on tumor biology) **AND** chest CT (± contrast), SSTR-PET/CT, SSTR-PET/MRI or FDG-PET/CT; if symptoms are new or progressing.

   b. Locally advanced/metastatic disease with unfavorable biology (high Ki-67 [eg 55% or higher], rapid growth rate, FDG avid tumors, negative SSTR-based PET imaging), includes surveillance imaging, every 8 weeks to 12 weeks (depending on tumor biology) with **ALL** of the following:

      i. Abdominal/pelvic MRI (+ contrast) or abdominal/pelvic multiphasic CT and FDG PET/CT as clinically indicated

      ii. Chest CT (± contrast) if symptoms are new or progressing.

      iii. FDG-PET/CT, if symptoms are new or progressing.

   c. Locoregional disease (resectable) abdominal/pelvic MRI (+ contrast) or abdominal/pelvic multiphasic CT with frequency of **ONE** of the following:

      i. Every 3 to 6 months for 2 years (depending on tumor biology, Ki-67) and chest CT as clinically indicated

      ii. Every 6 months to 12 months for up to 10 years (depending on tumor biology, Ki-67) and chest CT as clinically indicated

   d. Multiple endocrine neoplasia, type 1 (MEN1) screening surveillance for **ANY** of the following tumor types: (*__NOTE__: *For prolonged surveillance, use imaging studies without radiation.*)

      i. Lung/thymic NETs: chest CT or MRI (+ contrast) every 1 to 3 years

ii. PanNET: abdominalpelvic CT or MRI (+ contrast) every 1 to 3 years

iii. Parathyroid: if calcium rises, re-image with single-photon emission computed tomography (SPECT) scan (SPECT-CT preferred) or 4D-CT

iv. Pituitary: pituitary or sella MRI (+ contrast) of the pituitary every 3 to 5 years

e. Poorly differentiated large or small cell carcinoma and/or mixed neuroendocrine/ non-neuroendocrine neoplasm or unknown primary, imaging surveillance includes **ALL** of the following:

i. Locoregional unresectable or metastatic disease surveillance imaging includes **EITHER** chest CT (± contrast) with abdominal/pelvic MRI (+ contrast) **OR** chest/abdominal/pelvic multiphasic CT; every 6 weeks to 16 weeks

ii. Resectable surveillance imaging includes **EITHER** chest CT (± contrast) with abdominal/pelvic MRI (+ contrast) **OR** chest, abdomenl and pelvis multiphasic CT; every 12 weeks for the 1st year, and every 6 months thereafter

f. Post-operative from potentially curative surgery surveillance for at least 10 years (longer if high-risk)

6. Pancreatic neuroendocrine tumor surveillance imaging, post-resection, includes chest CT (± contrast) as clinically indicated and abdominal multiphasic CT or MRI with imaging frequency of **ONE** of the following[3]:

a. Within 3 to 12 months post-operatively

b. After 12 months, image every 6 to 12 months for 10 years

c. After 10 years if symptoms are new or progressing.

7. Pheochromocytoma/paranganglioma surveillance imaging and **ANY** of the following:

a. Locally unresectable disease or distant metastases, imaging every 12 weeks for 12 months, includes **ANY** of the following:

i. Chest, abdomen and pelvis CT with contrast

ii. Chest CT (± contrast) and abdominal/pelvic MRI (- contrast) (if risk for hypertensive episode)

iii. FDG-PET/CT for bone dominant disease

[3]High-grade tumors are appropriate for more frequent monitoring.

iv. SSTR-PET/CT or SSTR-PET/MRI (if previous SSTR-positive or concern for disease progression) prior to radionuclide therapy

b. Resectable disease, post-resection includes chest CT (± contrast) and abdominal/ pelvic CT or MRI (+ contrast), if clinically indicated with imaging frequency of **ONE** of the following:

i. 12 weeks to 12 months after resection

ii. Every 6 to 12 months for the 1st 3 years

iii. Annually from year 4 to 10.

iv. More than 10 years, then as clinically indicated

TIP

NCCN recommends following the surveillance protocols from designated guidelines for the following hereditary endocrine neoplasia syndromes :

- Thyroid cancer guideline, use for: Multiple endocrine neoplasia, type 2 (MEN2) with genetic evaluation of inherited syndromes
- Kidney cancer, use for:
  - Hereditary paraganglioma/pheochromocytoma syndrome
  - Tuberous sclerosis complex (TSC1 and TSC2)
  - von Hippel Lindau syndrome (VHL)
- Genetic/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic, use for:
  - Neurofibromatosis type 1 (NF1)
  - Li-Fraumeni syndrome (TP53)
  - Lynch syndrome (MLH1, EPCAM/MSH2, MSH6, PMS2)
- Genetic/Familial High-Risk Assessment: Colorectal, use for:
  - Lynch syndrome (MLH1, EPCAM/MSH2, MSH6, PMS2)
  - Familial adenomatous polyposis (APC)

References: [2025 Neuroendocrine and Adrenal Tumors Version 2.2025]

Occult Primary Cancer Surveillance

Occult primary cancer surveillance imaging for long-term surveillance includes diagnostic tests based on symptomatology.
References: [2025 Occult Primary Version 2.2025]

CT Lumbar Spine Summary of Changes

CT Lumbar Spine guideline had the following version changes from 2024 to 2025:

- Added "Glomerular filtration rate" to "Renal impairment" under Contraindications
- Change in wording for "Peri-procedural" indication
- Citations updated per the evidence
- Removed the following as current evidence no longer supports the indication:
  - "Anorectal malformations" indication as it is no longer supported by current evidence
  - Combination studies as they are redundant
  - "Limp in a young child (age is 5 years or younger)" as it is redundant with "Age is 5 years or younger" under "Pain in the lumbar area" under "Back pain is isolated'
- 6/26/2025 Mid-cycle update
  - Added examples to the following:
    - "Inflammation is suspected or known"
    - "Nerve root injury" in main guideline and in CT Myelogram
    - "Spondylolysis or spondylolsthesis and extension/flexion X-rays"
    - "Spondylolysis or spondylolsthesis is clinically suspected in a pediatric individual"
  - Added parameters (underlined below) for clarity to the following;
    - "Arnold chiari is known, based on prior imaging"
    - "Spinal tumor is known, based on prior imaging"
    - "Compression fractures are known, based on prior imaging"
  - Established parameters for "Active treatment" under "Infection"

CT Lumbar Spine Procedure Codes

Table 1. CT Lumbar Spine Associated Procedure Codes

CODE	DESCRIPTION
72131	Computed tomography, lumbar spine; without contrast material
72132	Computed tomography, lumbar spine; with contrast material
72133	Computed tomography, lumbar spine; without contrast material, followed by contrast material(s) and further sections

CT Lumbar Spine Definitions

Abscess is a swollen area within body tissue, containing an accumulation of pus.
Ankylosing spondylosis (spondylitis) is a chronic inflammatory disease that affects the spine, sacroiliac joints and often other joints (such as the shoulder), and is marked by pain and stiffness.
Babinski reflex, also known as the Babinski reflex, is a neuro-pathological response in the foot that occurs when the sole of the foot is firmly stroked and the big toe moves upward or toward the top of the foot. The other toes may also fan out.
Behcet's disease is a chronic, relapsing systemic vasculitis characterized by recurrent oral and genital ulcers, uveitis, and various other systemic manifestations.
Bone scan is a nuclear imaging procedure that examines the bones in the skeleton. It can help diagnose and track bone diseases, and can also be used to monitor the progress of certain treatments.
Cauda equina syndrome is a neurologic emergency caused by compression of the nerve roots in the lumbar spine, leading to symptoms such as bowel and bladder dysfunction, saddle anesthesia, and varying degrees of motor and sensory loss in the lower extremities.
Cerebrospinal fluid (CSF) is a colorless liquid that is comparable to serum, is secreted from the blood into the lateral ventricles of the brain, and serves chiefly to maintain uniform pressure within the brain and spinal cord.
Cerebrospinal fluid (CSF) leak is a leak of cerebrospinal fluid that results from a hole or tear in the dura (the outermost layer of the meninges).
Cerebrospinal fluid (CSF) rhinorrhea is a condition where the fluid that surrounds the brain leaks into the nose and sinuses.
Chaddock reflex is a diagnostic reflex similar to the Babinski reflex. Chaddock's sign is present when stroking of the lateral malleolus causes extension of the great toe, indicating damage to the corticospinal tract.
Chiari malformation (Arnold-Chiari syndrome) is a congenital abnormality in which the lower surface of the cerebellum and the lower brain stem protrude into the spinal canal through the foramen magnum.
Compression is reducing in size, quantity or volume, as if by squeezing.

Compression fracture is a break in the vertebrae and can cause the vertebrae to collapse, making them shorter.

Computed tomography (CT) is an imaging test that uses X-rays to computer analysis to generate cross sectional images of the internal structures of the body that can be displayed in multiple planes.

Conservative management is an approach to treating pain utilizing non-surgical treatment options such as physical therapy, medication and injections, for a designated time, usually 4 to 6 weeks.

C-reactive protein (CRP) is a pentameric protein synthesized by the liver, whose level rises in response to inflammation.

Delayed union fracture a fracture that has not healed within the expected timeframe for a specific fracture location, typically taking longer than 3 to 4 months to show adequate radiographic signs of healing.

Diplegia is a type of paralysis that affects similar body parts on both sides of the body, such as both arms or both legs. It's the most common cause of paralysis in children, but can affect people of any age. Unlike other forms of paralysis, diplegia is unpredictable and may improve, worsen or change over time.

Discitis is an uncommon primary infection of the vertebral disc, specifically the nucleus pulposus, often involving the cartilaginous end plate and vertebral body, and is most commonly caused by Staphylococcus aureus.

Discogram is a radiograph of an intervertebral disk made after injection of a radiopaque substance.

Drop metastases are intradural extramedullary spinal metastases that arises from intracranial lesions.

Electromyogram (EMG) is a diagnostic test that measures the electrical activity of muscles at rest and during contraction using a needle electrode inserted into the muscle.

Erythrocyte sedimentation rate (ESR) is a blood test that measures the rate at which red blood cells settle at the bottom of a test tube over one hour, indicating the presence of inflammation in the body.

Fistula is an abnormal connection between two epithelialized surfaces, often involving organs such as the gut, bladder, vagina, or skin, and can result from various causes including surgery, trauma, Crohn's disease, diverticular disease, or malignancy.

Foot drop is a condition characterized by weakness or paralysis of the muscles involved in ankle dorsiflexion, leading to difficulty in lifting the front part of the foot.

Glasgow Coma Scale (GCS) is a clinical tool used to assess a patient's level of consciousness, particularly after traumatic brain injury (TBI). The GCS evaluates three aspects of responsiveness: eye opening, verbal response, and motor response. Scores range from 3 to 15, with higher scores indicating better neurological function.

Hemiparesis is muscular weakness or partial paralysis restricted to one side of the body.

Hoffmann's sign, also known as Hoffmann's reflex, is a neurological exam that involves flicking a patient's middle fingernail to see if their thumb or index finger flexes involuntarily. A positive result, also known as hyperreflexia, indicates that the nervous system is overreacting to the flick and upper motor neuron lesion or corticospinal pathway dysfunction may be present.
Human Immunodeficiency Virus (HIV) is a retrovirus that primarily infects CD4+ T lymphocytes, leading to progressive immunodeficiency and potentially resulting in AIDS.
Hyperostosis is the abnormal thickening and widening of cortical bone, often involving periosteal and endosteal new bone formation, which can affect various bones and is associated with several conditions.
Immunosuppression is the deliberate reduction or inhibition of the immune system's ability to respond to antigens, typically achieved through medications or therapies, to prevent organ rejection or treat autoimmune diseases, but it increases the risk of infections and malignancies.
Indeterminate findings are inconclusive or insufficient for treatment planning.
Kyphosis is the exaggerated outward curvature of the thoracic region of the spine resulting in a rounded upper back.
Leptomeningeal carcinomatosis is a severe complication of late-stage cancer characterized by the spread of malignant cells to the leptomeninges, including the pia mater, arachnoid, and subarachnoid space, leading to rapid mortality despite treatment.
Lhermitte's sign is an electric-like pain or tingling down the spine or limbs triggered by neck flexion or extension.
Lymphoma is a type of blood cancer that affects the immune system. Lymphoma occurs when abnormal white blood cells, called lymphocytes, grow in the lymphatic system.
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.
Metastases is the spread of a disease-producing agency (such as cancer cells) from the initial or primary site of disease to another part of the body.
Myelogram is a radiographic visualization of the spinal cord after injection of a contrast medium into the spinal subarachnoid space.
Myelopathy is a disease or disorder of the spinal cord or bone marrow.
Nerve conduction study (NCS) is a test that measures how fast an electrical impulse moves through the nerve and can identify nerve damage.
Neurocutaneous disorders are disorders that affect the brain, spinal cord, organs, skin and bones. The diseases are lifelong conditions that can cause tumors to grow in these areas.
Non-diagnostic is a result that does not lead to a confirmed diagnosis.
Non-union fracture is demonstrated by no healing between two sets of x-rays. Incomplete healing by 6 to 8 months is non-union.
Orthostatic headache is a headache while upright, that is relieved by lying down.

Osteomyelitis is an infectious, inflammatory disease of bone. It is often painful, bacterial in origin and may result in the death of bone tissue.
Otorrhea is drainage of liquid from the ear.
Pars defect, also known as spondylolysis, is a stress fracture or defect in the pars interarticularis of the vertebra, commonly affecting the lower lumbar spine.
Pars interarticularis is a segment of bone located between the superior and inferior articular processes of the vertebrae, most commonly in the lumbar spine.
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.

Pes cavus, also known as cavus foot, is an orthopedic condition that causes the foot's arch to be abnormally high and unable to flatten.
Radiculopathy is an irritation of or injury to a spinal nerve root (as from being compressed) that typically causes pain, numbness or muscle weakness in the part of the body which is supplied with nerves from that root.
Recurrence is a new occurrence of something that happened or appeared before.
Rheumatoid arthritis (RA) is an autoimmune disease (usually chronic) that is characterized by pain, stiffness, inflammation, swelling and sometimes destruction of the joints.
Rhinorrhea is excessive mucous drainage from the nose.
Sarcoidosis is a chronic disease of unknown cause, that is characterized by the formation of nodules, especially in the lymph nodes, lungs, bones and skin.
Sciatica is pain along the course of a sciatic nerve, especially in the back of the thigh, lower back, buttocks, hips or adjacent parts.
Scoliosis is a lateral curvature of the spine of at least 10° with vertebral rotation, presenting as a three-dimensional spinal deformity.
Short segment is a curve in the spinal column that is less than 6 segments.
Single-photon emission computed tomography (SPECT) is a nuclear imaging test that uses a radioactive substance and a special camera to create 3D images of the body's organs, tissue and bones. The images show how blood flows to tissues and organs.

Spinal dysraphism is a congenital abnormality that results in an abnormal structure in the spine, including the bony structure, the spinal cord and the nerve roots.
Spondylarthropathy is an inflammatory arthritis affecting the spine.
Spondylolisthesis is the forward displacement of a vertebra on the one below it and especially of the fifth lumbar vertebra on the sacrum producing pain by compression of nerve roots.
Spondylolysis is a stress fracture of the bones of the lower spine due to overuse.
Spontaneous intracranial hypotension (SIH) is a condition characterized by cerebrospinal fluid (CSF) hypovolemia due to a noniatrogenic spinal CSF leak, often presenting with orthostatic headache.
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.
Tethered spinal cord syndrome (TSCS) is a disorder of the nervous system caused by tissue that attaches itself to the spinal cord and limits the movement of the spinal cord.

CT Lumbar Spine References

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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 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 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