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Subject: Computed Tomography (CT) Spine (Cervical, Thoracic, Lumbar)

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DESCRIPTION:

Computed tomography (CT) is a radiologic modality that provides clinical information in the detection, differentiation and demarcation of disease. CT is a form of medical imaging that involves the exposure of members to ionizing radiation. CT should only be performed under the supervision of a physician with training in radiation protection to optimize examination safety. Radiation exposure should be taken into account when considering the use of this technology. This guideline addresses the use of CT of the spine (cervical, thoracic, lumbar) for evaluation, diagnosis and management of spine related conditions in the outpatient setting.

POSITION STATEMENT:

Computed tomography (CT) of the spine (cervical, thoracic, lumbar) **meets the definition of medical necessity** for the diagnosis and evaluation of the following:

INDICATIONS FOR CERVICAL SPINE CT

Evaluation of known fracture

- Determine the position of known fracture fragments.
- Assess union of a known fracture (physical examination, plain radiographs (x-rays), or prior imaging suggest delayed or failed healing/non-healing).

Evaluation of neurologic deficits when cervical spine MRI is contraindicated or inappropriate

- With any of the following new neurological deficits: extremity weakness, pathologic (e.g., Babinski, Hoffman's) or abnormal reflexes or abnormal sensory changes along a particular dermatome (nerve distribution) as documented on physical examination.

Evaluation of suspected myelopathy when cervical spine MRI is contraindicated

- Progressive symptoms including hand clumsiness, worsening handwriting, difficulty with grasping and holding objects, diffuse numbness in the hands, pins and needles sensation, increasing difficulty with balance and ambulation (unsteadiness, broad-based gait, increased muscle tone, weakness and wasting of the upper and lower limbs; diminished sensation to light touch, temperature, proprioception, vibration; limb hyperreflexia and pathologic reflexes bowel and bladder dysfunction in more severe cases).

Evaluation of chronic neck pain, with any of the following when cervical spine MRI is contraindicated

- New or worsening objective neurologic deficits on exam.
- Failure of conservative treatment* for at least six (6) weeks within the last six (6) months.
- With progression or worsening of symptoms during the course of conservative treatment*.
- With an abnormal electromyography (EMG) or nerve conduction study (if performed) indicating a spinal abnormality. (EMG is not recommended to determine the cause of axial lumbar, thoracic or cervical spine pain.)

Evaluation of new onset of neck pain when cervical spine MRI is contraindicated

- New or worsening objective neurologic deficits on exam.
- Failure of conservative treatment*, for at least six (6) weeks within the last six (6) months.
- With progression or worsening of symptoms during the course of conservative treatment*.
- With an abnormal electromyography (EMG) or nerve conduction study (if performed) indicating a cervical radiculopathy. (EMG is not recommended to determine the cause of axial lumbar, thoracic or cervical spine pain.)

Evaluation of trauma or acute injury

- Presents with any of the following neurological deficits: radiculopathy, muscle weakness, abnormal reflexes, and/or sensory changes along a particular dermatome (nerve distribution).
- With progression or worsening of symptoms during the course of conservative treatment*.
- When the member is clinically unevaluable or there are preliminary imaging findings (x-ray or CT) needing further evaluation
- When office notes specify the patient meets National Emergency X-Radiography Utilization Study (NEXUS) or Canadian Cervical Rules (CCR) criteria for imaging:
    - CT for initial imaging.
    - MRI when suspect spinal cord or nerve root injury or when patient is obtunded, and CT is negative.
    - CT or MRI for treatment planning of unstable spine.

(MRI and CT provide complementary information; it is appropriate to perform both when indicated.)

Evaluation of known or new compression fractures with worsening back pain

- With history of malignancy (if MRI is contraindicated).
- Wth an associated new focal neurologic deficit.
- Prior to a planned surgery/intervention or if the results of the CT will change management.

Evaluation of known tumor, cancer, or evidence of metastasis with any of the following

(MRI is usually the preferred study but CT may help characterize solitary indeterminate lesions.)

- Staging of known tumor.
- Follow-up evaluation of member undergoing active cancer treatment.
- Presents with new signs or symptoms (e.g. physical, laboratory and/or imaging findings) of new tumor or change in tumor.
- With evidence of metastasis on bone scan or previous imaging study.
- Initial imaging of new or increasing non-traumatic cervical or neck pain or radiculopathy with known active cancer and a tumor that tends to metastasize to the spine and MRI is contraindicated.

Evaluation of suspected tumor when cervical spine MRI is contraindicated or inappropriate

- Prior abnormal or indeterminate imaging that requires further clarification.

Indication for combination studies for the initial pre-therapy staging of cancer or active monitoring for recurrence as clinically indicated or evaluation of suspected metastases

- < 5 concurrent studies to include CT or MRI of any of the following areas as appropriate depending on the cancer: Neck, Abdomen, Pelvis, Chest, Brain, Cervical Spine, Thoracic Spine or Lumbar Spine.

Evaluation of known or suspected infection, abscess, or inflammatory disease when cervical spine MRI is contraindicated

- As evidenced by signs/symptoms, laboratory or prior imaging findings.

Evaluation of spine abnormalities related to immune system suppression (e.g., HIV, chemotherapy, leukemia, or lymphoma) when cervical spine MRI is contraindicated

- As evidenced by signs/symptoms, laboratory or prior imaging findings.

Part of initial post-operative/procedural evaluation

(CT best examination to assess for hardware complication, extent of fusion and MRI for cord, nerve root comprssion, disc pathology or post-op infection.)

- A follow-up study may be needed to help evaluate a member's progress after treatment, procedure, intervention or surgery in the last 6 months. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.
- Changing neurologic status post-operatively.
- Surgical infection as evidenced by signs/symptoms, laboratory or prior imaging findings.
- Residual or recurrent symptoms with any of the following neurological deficits: lower extremity weakness, objective sensory loss, or abnormal reflexes.

Other indications for a cervical spine CT

- Preoperative evaluation and cervical spine MRI is contraindicated.
- CT discogram.

- Suspected cord compression with any of the following neurologic deficits (e.g., extremity weakness, sensory deficits, abnormal gait, abnormal reflexes, spinal level; bowel or bladder incontinence) and cervical spine MRI is contraindicated.
- Tethered cord, or spinal dysraphism (known or suspected) based on preliminary imaging, neurological exam, and/or high risk cutaneous stigmata, and MRI is contraindicated.
- Known Arnold-Chiari syndrome and cervical spine MRI is contraindicated.
- Congenital abnormalities in the presence of neurologic deficit, progressive spinal deformity or for preoperative planning when MRI is contraindicated or for characterization of bony detail.
- Syrinx or syringomyelia (known or suspected) and cervical spine MRI is contraindicated:
    - With neurologic findings and/or predisposing conditions (e.g., Chiari malformation, prior trauma, neoplasm, arachnoiditis, severe spondylosis
    - To further characterize a suspicious abnormality seen on prior imaging.
    - Known syrinx with worsening symptoms.
    - CSF leak highly suspected and supported by member history and/or physical exam findings (CT myelogram).
    - For pediatric population and MRI is contraindicated.
        - Red flags that prompt imaging should include the presence of constant pain, night pain, and radicular pain lasting for 4 weeks or more.
        - Back pain associated with suspected inflammation, infection, or malignancy.
    - In rheumatoid arthritis with neurologic signs or symptoms, evidence of subluxation or positive radiograph (lateral radiograph in flexion and neutral should be the initial study) when MRI is contraindicated or for surgical treatment planning.

Combination of Studies with Cervical Spine CT

Cervical/Thoracic/Lumbar CT

- CT myelogram or discogram.
- Any combination of these (cervical, thoracic, lumbar CT) for scoliosis survey in infant/child with congenital scoliosis or under the age of 10.
- Any combination of these (cervical, thoracic, lumbar CT) for spinal survey in member with metastasis.
- Evaluation of spinal abnormalities associated with Arnold-Chiari Malformation and spine MRI is contraindicated. (Cervical, thoracic, lumbar spine due to association with tethered cord and syringomyelia).
- Tethered cord, or spinal dysraphism (known or suspected) based on preliminary imaging, neurological exam, and/or high risk cutaneous stigmata, when anesthesia required for imaging and MRI is contraindicated.
- Drop metastasis from brain or spine when MRI is contraindicated.

Cervical MRI/CT

- Unstable craniocervical junction.

Brain CT/Cervical CT

- Evaluation of Arnold-Chiari Malformation and cervical spine MRI is contraindicated**.**

Additional information related to cervical spine CT

***Conservative Therapy**

Should include a multimodality approach consisting of a combination of active and inactive components. Inactive components, such as rest, ice, heat, modified activities, medical devices, acupuncture and/or stimulators, medications, injections (epidural, facet, bursal, and/or joint, not including trigger point), and diathermy can be utilized. Active modalities may consist of physical therapy, a physician supervised home exercise program**, and/or chiropractic care.

****Home Exercise Program (HEP)**

The following two elements are required to meet guidelines for completion of conservative therapy:

- Information provided on exercise prescription/plan; **AND**
- Follow-up with member with documentation provided regarding completion of HEP (after suitable 6 week period), or inability to complete HEP due to physical reason (i.e., increased pain, inability to physically perform exercises. (Member inconvenience or noncompliance without explanation does not constitute “inability to complete” HEP).

INDICATIONS FOR THORACIC SPINE CT

Evaluation of known fracture

- Determine position of known fracture fragments.
- Assess union of a known fracture (physical examination, plain radiographs (x-rays), or prior imaging suggest delayed or failed healing/non-healing.

Evaluation of neurologic deficits when thoracic spine MRI is contraindicated or inappropriate

- With any of the following new neurological deficits: extremity weakness, abnormal reflexes, or abnormal sensory changes along a particular dermatome (nerve distribution) as documented on physical exami; evidence of Cauda Equina Syndrome; bowel or bladder dysfunction; spasticity, sensory or motor level.

CT myelogram is indicated when signs and symptoms are incongruent with MRI findings

Evaluation of suspected myelopathy when thoracic spine MRI is contraindicated

- Progressive symptoms including lower extremity weakness, numbness in the legs, increasing difficulty with balance and ambulation (Signs: unsteadiness, broad based gait, increased muscle tone, pins and needles sensation, weakness and wasting of the lower limbs, and diminished sensation to light touch, temperature, proprioception, vibration, limb hyperflexia and pathologic reflexes, bowel and bladder dysfunction in more severe cases).

Evaluation of chronic back pain, with any of the following when thoracic spine MRI is contraindicated

- New or worsening objective neurologic deficits on exam.
- Failure of conservative treatment* for at least six (6) weeks within the last six (6) months.
- With progression or worsening of symptoms during the course of conservative treatment*.
- With an abnormal electromyography (EMG) or nerve conduction study (if performed) indicating a thoracic radiculopathy. (EMG is not recommended to determine the cause of axial lumbar, thoracic, or cervical spine pain).

Evaluation of new onset of back pain when thoracic spine MRI is contraindicated

- With new or worsening objective neurologic deficits on exam.
- Failure of conservative treatment*for at least six (6) weeks within the last six (6) months.
- With progression or worsening of symptoms during the course of conservative treatment*.
- With an abnormal electromyography (EMG) or nerve conduction study (if performed) indicating a thoracic radiculopathy. EMG is not recommended to determine the cause of axial lumbar, thoracic, or cervical spine pain).

Evaluation of trauma or acute injury

- Presents with any of the following neurological deficits: muscle weakness, abnormal reflexes, and/or sensory changes along a particular dermatome (nerve distribution).
- With progression or worsening of symptoms during the course of conservative treatment*.

Pars defect (spondylolysis) or spondylisthesis

- Pars defect (spondylolysis) or spondylisthesis in adults when flexion/extension x-rays show instability.
- Pars defect (spondylolysis with spondylisthesis) on plain films in pediatric population (< 18 yr) (flexion extension instability not required) when MRI is contraindicated.

Evaluation of known or new compression fractures with worsening back pain

- With history of malignancy (if MRI is contraindicated).
- With an associated new focal neurologic deficit.
- Prior to a planned surgery/intervention or if the results of the MRI will change management.

Evaluation of known tumor, cancer, or evidence of metastasis with any of the following

(MRI is usually the preferred study but CT may help characterize solitary indeterminate lesions.)

- Staging of known tumor.
- Follow-up evaluation of member undergoing active cancer treatment.
- Presents with new signs or symptoms (e.g. physical, laboratory and/or imaging findings) of new tumor or change in tumor.
- With evidence of metastasis on bone scan or previous imaging study.
- New or increasing non-traumatic thoracic back pain or radiculopathy with known active cancer and a tumor that tends to metastasize to the spine and MRI is contraindicated.

Evaluation of suspected tumor when thoracic spine MRI is contraindicated or inappropriate

- Prior abnormal or indeterminate imaging that requires further clarification.

Indication for combination studies for the initial pre-therapy staging of cancer or active monitoring for recurrence as clinically indicated or evaluation of suspected metastases

- < 5 concurrent studies to include CT or MRI of any of the following areas as appropriate depending on the cancer: Neck, Abdomen, Pelvis, Chest, Brain, Cervical Spine, Thoracic Spine or Lumbar Spine.

Evaluation of known or suspected infection, abscess, or inflammatory disease when thoracic spine MRI is contraindicated

- As evidenced by signs/symptoms, laboratory or prior imaging findings.

Evaluation of spine abnormalities related to immune system suppression, e.g., HIV, chemotherapy, leukemia, or lymphoma when thoracic MRI is contraindicated

- As evidenced by signs/symptoms, laboratory or prior imaging findings.

As part of initial post-operative / procedural evaluation

Note: CT best examination to assess for hardware complication, extent of fusion.

- A follow-up study may be needed to help evaluate a member's progress after treatment, procedure, intervention, or surgery in the last 6 months. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.
- Changing neurologic status post-operatively.
- Surgical infection as evidenced by signs/symptoms, laboratory, or prior imaging findings.
- Residual or recurrent symptoms with any of the following neurological deficits: Lower extremity weakness, objective sensory loss, or abnormal reflexes.

Other indications for a thoracic spine CT

- Preoperative evaluation.
- Prior to spinal cord stimulator to exclude canal stenosis if no prior imaging of the thoracic spine has been done recently and MRI is contraindicated.
- CT discogram.
- Suspected cord compression with any of the following neurologic deficits (e.g., extremity weakness, sensory deficits, abnormal gait; abnormal reflexes; spinal level; bowel or bladder incontinence and thoracic spine MRI is contraindicated).
- Tethered cord, or spinal dysraphism (known or suspected) based on preliminary imaging, neurological exam, and/or high risk cutaneous stigmata when Thoracic Spine MRI is contraindicated.
- Ankylosing spondylitis/spondyloarthropathies with non-diagnostic or indeterminate x-ray and rheumatology workup.
- Known Arnold-Chiari syndrome and thoracic spine MRI is contraindicated.
- Congenital abnormalities when thoracic spine MRI is contraindicated or for characterization of boney detail:
    - In the presence of neurologic deficit, progressive spinal deformity, or for preoperative planning.
    - Back pain and vertebral anomalies (hemivertebrae, hypoplasia, agenesis, butterfly, segmentation defect, bars or congenital wedging) in a child on preliminary imaging.
    - Scoliosis with any of the following:
    - Progressive spinal deformity;
    - Neurologic deficit or pre-operative planning;
    - Early onset;

    - Atypical curve (e.g., short segment, >30’ kyphosis, left thoracic curve, associated organ anomalies);
    - Pre-operative planning; OR
    - When office notes clearly document how imaging will change management.
- Syrinx or syringomyelia (known or suspected) and thoracic spine MRI is contraindicated:
    - With neurologic findings and/or predisposing conditions (e.g. Chiari malformation, prior trauma, neoplasm, arachnoiditis, severe spondylosis
    - To further characterize a suspicious abnormality seen on prior imaging
    - Known syrinx with worsening symptoms
    - CSF leak highly suspected and supported by member history and/or physical exam findings (CT myelogram)
    - For pediatric population
    - Red flags that prompt imaging should include the presence of constant pain, night pain, and radicular pain lasting for 4 weeks or more
    - Back pain associated with suspected inflammation, infection, or malignancy.

Combination of Studies with Thoracic Spine CT

Cervical/Thoracic/Lumbar CTs

- CT myelogram or discogram.
- Any combination of these (cervical/thoracic, lumbar CT) for scliosis survey in infant/child with congenital scoliosis or under the age of 10.
- Any combination of these (cervical, thoracic, lumbar CT) for spinal survey in member with metastasis.
- Evaluation of spinal abnormalities associated with Arnold-Chiari Malformation. (Cervical, thoracic, lumbar spine due to association with tethered cord and syringomyelia).
- Tethered cord, or spinal dysraphism (known or suspected) based on preliminary imaging, neurological exam, and/or cutaneous stigmata when anesthesia required for imaging and MRI is contraindicated.
- Drop metastasis from brain or spine when MRI contraindicated.

Additional information related to thoracic spine CT

***Conservative Therapy**

Should include a multimodality approach consisting of a combination of active and inactive components. Inactive components, such as rest, ice, heat, modified activities, medical devices, acupuncture and/or stimulators, medications, injections (epidural, facet, bursal, and/or joint, not including trigger point), and diathermy can be utilized. Active modalities may consist of physical therapy, a physician supervised home exercise program**, and/or chiropractic care.

****Home Exercise Program (HEP)**

The following two elements are required to meet guidelines for completion of conservative therapy:

- Information provided on exercise prescription/plan; **AND**

- Follow-up with member with documentation provided regarding completion of HEP (after suitable 6 week period), or inability to complete HEP due to physical reason (i.e., increased pain, inability to physically perform exercises. (Member inconvenience or noncompliance without explanation does not constitute “inability to complete” HEP).

INDICATIONS FOR LUMBAR SPINE CT

NOTE: MRI is the imaging modality of choice for most lumbar spine imaging indications, unless contraindicated or not tolerated by the member.

Evaluation of known fracture

- Determine position of known fracture fragments.
- Assess union of a known fracture (physical exam, plain radiographs (x-rays) prior imaging suggest delayed or failed healing/non-healing.

Evaluation of neurologic deficits when lumbar spine MRI is contraindicated or inappropriate

- With any of the following new neurological deficits: lower extremity weakness, abnormal reflexes, or abnormal sensory changes along a particular dermatome (nerve distribution) as documented on physical exam; evidence of Cauda Equina Syndrome, bowel or bladder dysfunction, spasticity, sensory or motor level.

CT myelogram is indicated when signs and symptoms are incongruent with MRI findings

Evaluation of chronic back pain with any of the following when lumbar spine MRI is contraindicated

- With new or worsening objective neurologic deficits on exam.
- Failure of conservative treatment* for at least six (6) weeks within the last six (6) months.
- With progression or worsening of symptoms during the course of conservative treatment*.
- With an abnormal electromyography (EMG) or nerve conduction study (if performed) indicating a lumbar radiculopathy. (EMG is not recommended to determine the cause of axial lumbar, thoracic or cervical spine pain.)

Evaluation of new onset of back pain when lumbar spine MRI is contraindicated

- With new or worsening objective neurologic deficits on exam.
- Failure of conservative treatment* for at least six (6) weeks within the last six (6) months.
- With progression or worsening of symptoms during the course of conservative treatment*.
- With an abnormal electromyography (EMG) or nerve conduction study (if performed) indicating a lumbar radiculopathy. (EMG is not recommended to determine the cause of axial lumbar, thoracic or cervical spine pain.)

Evaluation of trauma or acute injury

- Presents with radiculopathy, muscle weakness, abnormal reflexes, and/or sensory changes along a particular dermatome (nerve distribution).
- With progression or worsening of symptoms during the course of conservative treatment*.

Pars defect (spondylolysis) or spondylisthesis

- Pars defect (spondylolysis) or spondylisthesis in adults when flexion/extension x-rays show instability.

- Pars defect (spondylolysis with spondylisthesis) on plain films in pediatric population (< 18 yr) (flexion extension instability not required) when MRI is contraindicated.

Evaluation of known or new compression fractures with worsening back pain

- With history of malignancy (if MRI is contraindicated).
- With an associated new focal neurologic deficit.
- Prior to a planned surgery/intervention or if the results of the MRI will change management.

Evaluation of known tumor, cancer, or evidence of metastasis with any of the following(MRI is usually the preferred study but CT may help characterize solitary indeterminate lesions.)

- Staging of known tumor.
- Follow-up evaluation of member undergoing active cancer treatment.
- Presents with new signs or symptoms (e.g. physical, laboratory and/or imaging findings) of new tumor or change in tumor.
- With evidence of metastasis on bone scan or previous imaging study.

Evaluation of suspected tumor when lumbar spine MRI is contraindicated or inappropriate

- Prior abnormal or indeterminate imaging that requires further clarification.

Indication for combination studies for the initial pre-therapy staging of cancer or active monitoring for recurrence as clinically indicated or evaluation of suspected metastases

- < 5 concurrent studies to include CT or MRI of any of the following areas as appropriate depending on the cancer: Neck, Abdomen, Pelvis, Chest, Brain, Cervical Spine, Thoracic Spine or Lumbar Spine.

Evaluation of known or suspected infection, abscess, or inflammatory disease when lumbar spine MRI is contraindicated

- As evidenced by signs/symptoms, laboratory or prior imaging findings.

Evaluation of spine abnormalities related to immune system suppression (e.g., HIV, chemotherapy, leukemia, or lymphoma) when lumbar spine MRI is contraindicated

- As evidenced by signs/symptoms, laboratory or prior imaging findings.

As part of initial post-operative/procedural evaluation

Note: CT best examination to assess for hardware complication, extent of fusion.

A follow-up study may be needed to help evaluate a member's progress after treatment, procedure, intervention, or surgery in the last 6 months. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.

- Changing neurologic status post-operatively.
- Surgical infection as evidenced by signs/symptoms, laboratory, or prior imaging findings.
- Residual or recurrent symptoms with any of the following neurological deficits: Lower extremity weakness, objective sensory loss or abnormal reflexes.

Other indications for a lumbar spine CT

- Preoperative evaluation and lumbar spine MRI is contraindicated.
- CT discogram.
- Suspicious sacral dimple (those that are deep, larger than 0.5 cm, located within the superior portion of the gluteal crease or above the gluteal crease, or associated with other cutaneous markers) in members < 6 months should have ultrasound when lumbar spine MRI is contraindicated.
- Tethered cord or spinal dysraphism (known or suspected) based on preliminary imaging, neurological exam and/or high risk cutaneous stigmata when lumbar spine MRI is contraindicated.
- Suspected ankylosing spondylitis/spondyloarthropathies with non-diagnostic or indeterminate x-ray and rheumatology workup.
- Known Arnold-Chiari syndrome and lumbar spine MRI is contraindicated.
- Congenital abnormalities when lumbar spine MRI is contraindicated or for characterization of boney detail:
    - In the presence of neurologic deficit, progressive spinal deformity, or for preoperative planning.
    - Back pain and vertebral anomalies (hemivertebrae, hypoplasia, agenesis, butterfly, segmentation defect, bars or congenital wedging) in a child on preliminary imaging.
    - Scoliosis with any of the following:
    - Progressive spinal deformity;
    - Neurologic deficit;
    - Early onset;
    - Atypical curve (e.g., short segment, >30' kyphosis, left thoracic curve, associated organ anomalies);
    - Pre-operative planning; **OR**
    - When office notes clearly document how imaging will change management.
- CSF leak highly suspected and supported by member history and/or physical exam findings (CT Myelogram).
- For pediatric population if MRI is contraindicated:
    - Red flags that prompt imaging should include the presence of constant pain, night pain and radicular pain lasting for 4 weeks or more.
    - Back pain associated with suspected inflammation, infection, or malignancy.

Combination of Studies with Lumbar Spine CT

Cervical/Thoracic/Lumbar CTs

- CT myelogram or discogram.
- Any combination of these (cervical/thoracic/lumbar spine CT) for scoliosis survey in infant/child when MRI is contraindicated.
- Any combination of these (cervical/thoracic/lumbar spine CT) for spinal survey in member with metastasis.
- Evaluation of spinal abnormalities associated with Arnold-Chiari Malformation. (Cervical, thoracic, lumbar spine due to association with tethered cord and syringomyelia).

- Tethered cord, or spinal dysraphism (known or suspected) based on preliminary imaging, neurological exam, and/or cutaneous stigmata when anesthesia required for imaging and MRI is contraindicated.
- Drop metastasis from brain or spine when MRI contraindicated.

Additional information related to thoracic spine CT

Conservative Therapy

Should include a multimodality approach consisting of a combination of active and inactive components. Inactive components, such as rest, ice, heat, modified activities, medical devices, acupuncture and/or stimulators, medications, injections (epidural, facet, bursal, and/or joint, not including trigger point), and diathermy can be utilized. Active modalities may consist of physical therapy, a physician supervised home exercise program**, and/or chiropractic care.

****Home Exercise Program (HEP)**

The following two elements are required to meet guidelines for completion of conservative therapy:

- Information provided on exercise prescription/plan; **AND**
- Follow-up with member with documentation provided regarding completion of HEP (after suitable 6 week period), or inability to complete HEP due to physical reason (i.e., increased pain, inability to physically perform exercises. (Member inconvenience or noncompliance without explanation does not constitute “inability to complete” HEP).

BILLING/CODING INFORMATION:

CPT Coding:

72125	Computed tomography, cervical spine; without contrast material
72126	Computed tomography, cervical spine; with contrast material(s)
72127	Computed tomography, cervical spine; without contrast material, followed by contrast material(s) and further sections
72128	Computed tomography, thoracic spine; without contrast material
72129	Computed tomography, thoracic spine; with contrast material(s)
72130	Computed tomography, thoracic spine; without contrast material, followed by contrast material(s) and further sections
72131	Computed tomography, lumbar spine; without contrast material
72132	Computed tomography, lumbar spine; with contrast material(s)
72133	Computed tomography, lumbar spine; without contrast material, followed by contrast material(s) and further sections
76380	Computed tomography, limited or localized follow-up study

LOINC Codes:

The following information may be required documentation to support medical necessity: physician history and physical, physician progress notes, plan of treatment and reason for computed tomography (CT) of the spine (cervical, thoracic, lumbar).

Documentation Table	LOINC Codes	LOINC Time Frame Modifier Code	LOINC Time Frame Modifier Codes Narrative
Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Attending physician progress note	18741-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Plan of treatment	18776-5	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology reason for study	18785-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology comparison study-date and time	18779-9	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology comparison study observation	18834-2	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology-study observation	18782-3	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology-impression	19005-8	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim
Radiology study-recommendation (narrative)	18783-1	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim

REIMBURSEMENT INFORMATION:

Reimbursement for computed tomography (72125 – 72133, 76380) performed on the same anatomical area is limited to two (2) computed tomography (72125 – 72133, 76380) within a 6-month period.

Computed tomography (72125 – 72133, 76380) in excess of two (2) computed tomography (72125 – 72133, 76380) within a 6-month period are subject to medical review of documentation to support medical necessity. Documentation should include radiology reason for study, radiology comparison study-date and time, radiology comparison study observation, radiology impression, and radiology study recommendation.

Reimbursement for computed tomography (72125 – 72133, 76380) for an oncologic condition undergoing active treatment or active treatment completed within the previous 12 months on the same anatomical area is limited to four (4) computed tomography (72125 – 72133, 76380) within a 12-month period. Computed tomography (72125 – 72133, 76380) for an oncologic condition in excess of four (4) computed tomography (72125 – 72133, 76380) within a 12-month period are subject to medical review of documentation to support medical necessity. Documentation should include radiology reason for study, radiology comparison study-date and time, radiology comparison study observation, radiology impression, and radiology study recommendation.

Re-imaging or additional imaging of the spine (cervical, thoracic, lumbar) due to poor contrast enhanced exam or technically limited exam is the responsibility of the imaging provider.

PROGRAM EXCEPTIONS:

Coverage for the radiology services referenced in this guideline performed and billed in an outpatient or office location will be handled through the Radiology Management program for select products. The National Imaging Associates (NIA) will determine coverage for these services for select products. Refer to member's contract benefits.

Federal Employee Plan (FEP): FEP is excluded from the National Imaging Associates (NIA) review; follow FEP guidelines.

Medicare Advantage products:

No Local Coverage Determination (LCD) was found at the time of the last guideline reviewed date.

The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: Computed Tomography, (220.1) located at cms.gov

DEFINITIONS:

Acute: having a short and relatively severe course.

Arnold-Chiari syndrome (Chiari malformations): herniation of the cerebellar tonsils and vermis through the foramen magnum into the spinal canal. It is always associated with lumbosacral myelomeningocele, and hydrocephalus and mental defects are common.

Cauda Equine syndrome: dull aching pain of the perineum, bladder, and sacrum, generally radiating in a sciatic fashion, with associated paresthesias and areflexic paralysis, due to compression of the spinal nerve roots.

Chronic: persisting over a long period of time.

Neoplasm: any new and abnormal growth; specifically a new growth of tissue in which the growth is uncontrolled and progressive.

Osteoarthritis: a noninflammatory degenerative joint disease seen mainly in older persons, characterized by degeneration of the articular cartilage, hypertrophy of bone at the margins, and changes

in the synovial membrane. It is accompanied by pain, usually after prolonged activity, and stiffness, particularly in the morning or with inactivity

Radiculitis: inflammation of the root of a spinal nerve, especially of that portion of the root, which lies between the spinal cord and the intervertebral canal. Also called radicular neuritis.

Radiculopathy: disease of the nerve roots.

Spondylolisthesis: forward displacement (olisthy) of one vertebra over another, usually of the fifth lumbar over the body of the sacrum, or of the fourth lumbar over the fifth, usually due to a developmental defect in the pars interarticularis.

Spondylolysis: dissolution of a vertebra; a condition marked by platyspondylia, aplasia of the vertebral arch, and separation of the pars interarticularis.

Syringomyelia: a chronic progressive disease of the spinal cord associated with sensory disturbances, muscle atrophy, and spasticity.

Syrinx: a pathological cavity in the brain or spinal cord especially in syringomyelia.

Tethered cord: a congenital anomaly resulting from defective closure of the neural tube; the conus medullaris is abnormally low and is tethered by one or more forms of intradural abnormality such as a short, thickened filum terminale, fibrous bands or adhesions, or an intraspinal lipoma.

RELATED GUIDELINES:

Computed Tomography to Detect Coronary Artery Calcification, 04-70450-02

Computed Tomographic Angiography (CTA), 04-70450-03

Computerized Axial Tomography (CT), Head/Brain 04-70450-18

Computerized Axial Tomography (CT), Temporal Bone/Mastoid & Maxillofacial 04-70450-19

Computerized Axial Tomography (CT), of the Neck for Soft Tissue Evaluation 04-70450-20

Computerized Axial Tomography (CT), Thorax 04-70450-21

Computerized Axial Tomography (CT) Abdomen and Pelvis 04-70450-22

Computerized Axial Tomography (CT), Extremity (Upper & Lower) 04-70450-24

Whole Body Computed Tomography (CT) Scanning, 04-70450-25

OTHER:

Other name used to report computed tomography (CT):

CAT scanning

Pediatric Examinations

The use of CT in pediatric examinations requires assessment of the risks, benefits and use of the studies. The lowest possible radiation dose consistent with acceptable diagnostic image quality should be used in pediatric examinations. Radiation doses should be determined periodically based on a reasonable

sample of pediatric examinations. Technical factors should be appropriate for the size and the age of the child and should be determined with consideration of parameters (e.g., characteristics of the imaging system, organs in the radiation field, lead shielding).

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 03/26/20.

GUIDELINE UPDATE INFORMATION:

09/15/09	New Medical Coverage Guideline.
01/01/10	Revised Florida Blue Radiology Management program exception section.

09/15/11	Scheduled review: no change in position statements. Added 76380. Revised limitation to two (2) within a 6-month period. Updated references.
10/01/11	Revision; formatting changes.
05/15/12	Revised and expanded position statement for: cervical spine; chronic or degenerative changes, trauma or acute injury (added abnormal EMG or nerve conduction study) and progression or worsening of symptoms and other (added neurological deficits and evaluation of immune system suppression. Revised and expanded position statement for: thoracic spine; added (fracture, back pain (new onset) and trauma or acute injury with criteria and other (added neurologic deficits and evaluation of immune system suppression) Revised and expanded position statement for: lumbar spine; tumor, cancer or evidence of metastasis-tumor evaluation (clarified covered indications) and other (added neurologic deficits and evaluation of immune system suppression. Deleted but is not limited to. Updated references.
10/15/13	Scheduled review; MCG subject changed to “Computed Tomography (CT) Spine (Cervical, Thoracic, Lumbar)”. Updated definitions, program exceptions and reference sections.
01/01/15	Scheduled review; added non-healing to fracture section (cervical, thoracic and lumbar), chronic, muscle weakness and abnormal reflexes to chronic or degenerative changes section (cervical and lumbar), exacerbation of chronic back pain, muscle weakness, abnormal reflexes, new extremity numbness or tingling and criteria to chronic or degenerative changes to thoracic spine section, when spine MRI is contraindicated to immune system suppression to other section (cervical, thoracic and lumbar), or new onset of abnormal sensory changes along a particular dermatome (nerve distribution) as documented on physical exam for neurologic deficits (other section: cervical, thoracic and lumbar), syrinx or syringomyelia to other section (cervical and thoracic), re-ordered fracture section (thoracic spine), and definition for syringomyelia and syrinx. Added limitation statement for an oncologic condition; limited to four (4) computed tomography within a 12-month period. Updated references.
03/15/18	Revision; revised position statement. MCG subject: Changed “Computerized” to “Computed” and removed “Axial”. Updated references.
11/15/19	Revised position statements for (cervical, thoracic, lumbar). Lumbar CT: added evaluation of chronic back pain. Updated references
04/15/20	Review/revision. Revised position statement and expanded indications and criteria for (cervical, thoracic, lumbar).