LCD KYPHOPLASTY

Contractor Information

Contractor Name
First Coast Service Options, Inc.

Contract Number
09102

Contract Type
MAC - Part B

LCD Information

LCD ID
L29209

LCD Title
Vertebroplasty, Vertebral Augmentation; Percutaneous

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Jurisdiction
Florida

Original Effective Date
02/02/2009

Revision Effective Date
03/31/2014

Revision Ending Date
N/A

Retirement Date
N/A

Notice Period Start Date
02/14/2014

Notice Period End Date
03/31/2014
CMS National Coverage Policy

Language quoted from CMS National Coverage Determinations (NCDs) and coverage provisions in interpretive manuals are italicized throughout the Local Coverage Determination (LCD). NCDs and coverage provisions in interpretive manuals are not subject to the LCD Review Process (42 CFR 405.860[b] and 42 CFR 426 [Subpart D]). In addition, an administrative law judge may not review an NCD. See §1869(f)(1)(A)(i) of the Social Security Act.

Unless otherwise specified, italicized text represents quotation from one or more of the following CMS sources:

N/A

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

Indications

Percutaneous Vertebroplasty

Percutaneous vertebroplasty is a therapeutic, interventional neurosurgical and radiological procedure that consists of the percutaneous injection of a biomaterial, methyl methacrylate, into a lesion of a thoracic or lumbar vertebral body. The procedure is utilized for pain relief and bone strengthening of weakened vertebral bodies.

The procedure is performed under fluoroscopic guidance, although some prefer the use of computed tomography (CT) with fluoroscopy for needle positioning and injection assessment. An intraosseous venogram is sometimes performed before cement injection to determine whether the needle is positioned within a direct venous anastomosis to the central or epidural veins, to minimize extravasation into venous structures. Conscious sedation with additional local anesthesia (1% lidocaine) is generally utilized; however, patients who experience difficulties with ventilation or are unable to tolerate prone position during the procedure may require general anesthesia or deep sedation with airway and ventilation support. The methyl methacrylate is injected into the vertebral body until resistance is met or until cement reaches the posterior wall. The procedure usually lasts from 1 to 2 hours, unless cement is injected into two or more vertebral bodies.

Percutaneous vertebroplasty procedure will be considered medically reasonable and necessary for the following indications:

- Painful osteolytic vertebral body metastatic disease;
- Painful multiple myeloma involving the vertebral body;
- Painful and/or aggressive hemangioma; or
- Painful, debilitating, osteoporotic vertebral collapse/compression fractures that have not responded to non-surgical medical management. (i.e., weeks to months of conservative management (e.g. narcotic and/or non-narcotic medication, physical therapy modalities) with and without methods of immobility (e.g. rest, bracing)), or in the rare exception to weeks to months of non-surgical medical management see “Limitation of Coverage”

Percutaneous Vertebral Augmentation

Percutaneous vertebral augmentation (vertebral augmentation) is a minimally invasive procedure for the treatment of compression fractures of the vertebral body. The procedure includes a cavity creation which results in fracture reduction along with an attempt to restore vertebral body height and alignment. Using image guidance x-rays, incisions are made and a probe is placed into the vertebral space where the fracture is located. The collapsed vertebral body is drilled and a device which displaces, removes or
compacts the compressed area of the vertebrae is used to create a cavity prior to injection of bone filler (polymethylmethacrylate) (PMMA).

Vertebral augmentation procedure will be considered medically reasonable and necessary for the following indications:

• Painful osteolytic vertebral body metastatic disease;
• Painful multiple myeloma involving the vertebral body; or
• Painful, debilitating osteoporotic vertebral collapse/compression fractures that have not responded to non-surgical medical management. (i.e., weeks to months of conservative management (e.g. narcotic and/or non-narcotic medication, physical therapy modalities) with and without methods of immobility (e.g. rest, bracing)), or in the rare exception to weeks to months of non-surgical medical management see “Limitation of Coverage”.

The decision to perform these procedures should take into consideration the following factors: the local and general extent of the disease, the spinal level involved, the severity of pain experienced by the patient, previous treatments and their outcomes, as well as the patient’s neurological condition, general state of health, and life expectancy. It is expected that only those skilled in this procedure/technique will perform it. Rapid access to emergency equipment and personnel is required for both percutaneous vertebroplasty and percutaneous vertebral augmentation.

Limitations of Coverage

Percutaneous vertebroplasty and percutaneous vertebral augmentation are not to be considered prophylactic for osteoporosis of the spine or for chronic back pain of long-standing duration, even if associated with old compression fractures.

In the rare exceptions to providing weeks to months of non-surgical medical management, the documentation must support that one or more vertebral compression fractures are present (confirmed by MRI or CT/bone scan if MRI is contraindicated) and that the patient’s pain is predominantly, if not solely, related to the demonstrated fracture(s). Complete assessment of the patient by the physician who performs the procedure is an absolute requirement. The History and Physical exam must be present in the medical record prior to performance of the procedure. The documentation must support the patient has severe debilitating pain unresponsive to adequate pain control and the rationale of proceeding to treatment within a brief period of time after the vertebral fracture has occurred. The medical record must document that appropriate imaging has been performed preoperatively and that the findings of the imaging performed correlate unequivocally with the patient’s pain.

Absolute Contraindications for both Percutaneous Vertebroplasty and Percutaneous Vertebral Augmentation

• Absence of confirmed acute or subacute fracture;
• Symptoms that cannot be related to a fracture;
• Radicular symptoms that are explained by bone impinging on nerves or another anatomic lesion;
• Unstable fracture;
• Asymptomatic vertebral compression fracture;
• Spinal canal compromise secondary to tumor resulting in myelopathy;
• Active osteomyelitis, whether fungal bacterial or mycobacterial;
• Symptomatic spinal stenosis with cauda equine symptoms or signs of cord compression;
• Uncorrected coagulation disorders; and
• Known allergy to any material used in the procedure (i.e. PMMA)

Absolute contraindications for Vertebral Augmentation

• Compression fractures without radiographic evidence of edema shown by medical record to be more than one year old;
• Retropulsed fracture fragment(s) or tumor mass causing significant spinal canal compromise (i.e. long tract or neurological symptom); and
When it is technically not feasible (e.g., vertebra plana).

**Relative Contraindications to Percutaneous Vertebroplasty**

- significant vertebral collapse (i.e., vertebra reduced to less than one-third its original height); and
- extensive vertebral destruction

Sacroplasty (0200T, 0201T and 22899) performed for sacral insufficiency fractures due to osteoporosis or other conditions have been suggested as an extension of thoracic/lumbar procedures. The peer reviewed literature is incomplete. Sacroplasty is not the subject of this LCD. This coverage decision is limited to lesions of a thoracic or lumbar vertebral body. Therefore, claims for this procedure will continue to be evaluated on a case by case basis.

**Coding Information**

**Bill Type Codes**

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service. Absence of a Bill Type does not guarantee that the policy does not apply to that Bill Type. Complete absence of all Bill Types indicates that coverage is not influenced by Bill Type and the policy should be assumed to apply equally to all claims.

**Revenue Codes**

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report this service. In most instances Revenue Codes are purely advisory; unless specified in the policy services reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all Revenue Codes indicates that coverage is not influenced by Revenue Code and the policy should be assumed to apply equally to all Revenue Codes.

<table>
<thead>
<tr>
<th>Bill Type Code</th>
<th>Description</th>
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<tr>
<td>99999</td>
<td>Not Applicable</td>
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**CPT/HCPCS Codes**

<table>
<thead>
<tr>
<th>Group 1 Paragraph</th>
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<tr>
<td>Group 1 Codes</td>
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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>22520</td>
<td>PERCUTANEOUS VERTEBROPLASTY (BONE BIOPSY INCLUDED WHEN PERFORMED), 1 VERTEBRAL BODY, UNILATERAL OR BILATERAL INJECTION; THORACIC</td>
</tr>
<tr>
<td>22521</td>
<td>PERCUTANEOUS VERTEBROPLASTY (BONE BIOPSY INCLUDED WHEN PERFORMED), 1 VERTEBRAL BODY, UNILATERAL OR BILATERAL INJECTION; LUMBAR</td>
</tr>
<tr>
<td>22522</td>
<td>PERCUTANEOUS VERTEBROPLASTY (BONE BIOPSY INCLUDED WHEN PERFORMED), 1 VERTEBRAL BODY, UNILATERAL OR BILATERAL INJECTION; EACH ADDITIONAL THORACIC OR LUMBAR VERTEBRAL BODY (LIST SEPARATELY IN ADDITION TO CODE FOR PRIMARY PROCEDURE)</td>
</tr>
<tr>
<td>22523</td>
<td>PERCUTANEOUS VERTEBRAL AUGMENTATION, INCLUDING CAVITY CREATION (FRACTURE REDUCTION AND BONE BIOPSY INCLUDED WHEN PERFORMED) USING MECHANICAL DEVICE, 1 VERTEBRAL BODY, UNILATERAL OR BILATERAL CANNULATION (EG, KYPHOPLASTY); THORACIC</td>
</tr>
<tr>
<td>22524</td>
<td>PERCUTANEOUS VERTEBRAL AUGMENTATION, INCLUDING CAVITY CREATION (FRACTURE REDUCTION AND BONE BIOPSY INCLUDED WHEN PERFORMED) USING</td>
</tr>
</tbody>
</table>
MECHANICAL DEVICE, 1 VERTEBRAL BODY, UNILATERAL OR BILATERAL CANNULATION (EG, KYPHOPLASTY); LUMBAR

22525
PERCUTANEOUS VERTEBRAL AUGMENTATION, INCLUDING CAVITY CREATION (FRACTURE REDUCTION AND BONE BIOPSY INCLUDED WHEN PERFORMED) USING MECHANICAL DEVICE, 1 VERTEBRAL BODY, UNILATERAL OR BILATERAL CANNULATION (EG, KYPHOPLASTY); EACH ADDITIONAL THORACIC OR LUMBAR VERTEBRAL BODY (LIST SEPARATELY IN ADDITION TO CODE FOR PRIMARY PROCEDURE)

72291
RADIOLOGICAL SUPERVISION AND INTERPRETATION, PERCUTANEOUS VERTEBROPLASTY, VERTEBRAL AUGMENTATION, OR SACRAL AUGMENTATION (SACROPLASTY), INCLUDING CAVITY CREATION, PER VERTEBRAL BODY OR SACRUM; UNDER FLUOROSCOPIC GUIDANCE

72292
RADIOLOGICAL SUPERVISION AND INTERPRETATION, PERCUTANEOUS VERTEBROPLASTY, VERTEBRAL AUGMENTATION, OR SACRAL AUGMENTATION (SACROPLASTY), INCLUDING CAVITY CREATION, PER VERTEBRAL BODY OR SACRUM; UNDER CT GUIDANCE

76380
COMPUTED TOMOGRAPHY, LIMITED OR LOCALIZED FOLLOW-UP STUDY

ICD-9 Codes that Support Medical Necessity

Medicare is establishing the following limited coverage for CPT codes 22520-22525, 72291, and 72292 (Percutaneous vertebroplasty and Percutaneous vertebral augmentation):

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>170.2</td>
<td>MALIGNANT NEOPLASM OF VERTEBRAL COLUMN EXCLUDING SACRUM AND COCCYX</td>
</tr>
<tr>
<td>198.5</td>
<td>SECONDARY MALIGNANT NEOPLASM OF BONE AND BONE MARROW</td>
</tr>
<tr>
<td>203.00</td>
<td>MULTIPLE MYELOMA, WITHOUT MENTION OF HAVING ACHIEVED REMISSION</td>
</tr>
<tr>
<td>203.01</td>
<td>MULTIPLE MYELOMA IN REMISSION</td>
</tr>
<tr>
<td>203.02</td>
<td>MULTIPLE MYELOMA, IN RELAPSE</td>
</tr>
<tr>
<td>228.09</td>
<td>HEMANGIOMA OF OTHER SITES</td>
</tr>
<tr>
<td>238.6</td>
<td>NEOPLASM OF UNCERTAIN BEHAVIOR OF PLASMA CELLS</td>
</tr>
<tr>
<td>733.00*</td>
<td>OSTEOPOROSIS UNSPECIFIED</td>
</tr>
<tr>
<td>733.01*</td>
<td>SENILE OSTEOPOROSIS</td>
</tr>
<tr>
<td>733.02*</td>
<td>IDIOPATHIC OSTEOPOROSIS</td>
</tr>
<tr>
<td>733.03*</td>
<td>DISUSE OSTEOPOROSIS</td>
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<tr>
<td>733.09*</td>
<td>OTHER OSTEOPOROSIS</td>
</tr>
<tr>
<td>733.13*</td>
<td>PATHOLOGICAL FRACTURE OF VERTEBRAE</td>
</tr>
<tr>
<td>805.2</td>
<td>CLOSED FRACTURE OF DORSAL (THORACIC) VERTEBRA WITHOUT SPINAL CORD INJURY</td>
</tr>
<tr>
<td>805.4</td>
<td>CLOSED FRACTURE OF LUMBAR VERTEBRA WITHOUT SPINAL CORD INJURY</td>
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*Medicare is establishing the following limited coverage for ICD-9 Code 733.13

Claims submitted with ICD-9-CM code 733.13 as an indication for percutaneous vertebroplasty and percutaneous vertebral augmentation must include both the ICD-9-CM diagnosis code 733.13 (Pathologic fracture of vertebrae) and an additional ICD-9-CM diagnosis code indicating the etiology of the pathological fracture. Additional ICD-9-CM
codes accepted for claims submitted with 733.13 (Pathologic fracture of vertebrae) are as follows: 733.00, 733.01, 733.02, 733.03, and 733.09.

ICD-9 Codes that DO NOT Support Medical Necessity
N/A

ICD-10 Codes that Support Medical Necessity
N/A

ICD-10 Codes that DO NOT Support Medical Necessity
N/A

General Information

Associated Information

Documentation Requirements

Medical record documentation (e.g., office/progress notes, history and physical, procedure notes) must indicate the medical necessity for performing this service. The documentation must also support that the service was performed. In addition the medical record documentation should indicate the local and general extent of the disease, the spinal level involved, the severity of pain experienced by the patient, previous treatments and their outcomes, as well as the patient’s neurological condition and general state of health.

The History and Physical exam must be present in the medical record prior to performance of the procedure. The documentation must support the patient has severe debilitating pain unresponsive to adequate pain control and the rationale of proceeding to treatment within a brief period of time after the vertebral fracture has occurred. The medical record must document that appropriate imaging has been performed preoperatively and that the findings of the imaging performed correlate unequivocally with the patient’s pain.

When the service is performed for painful, debilitating, osteoporotic vertebral collapse/compression fractures, documentation must support that fractures have not responded to non-surgical medical management. (i.e., weeks to months of conservative management (e.g. narcotic and/or non-narcotic medication, physical therapy modalities) with and without methods of immobility (e.g. rest, bracing)). In the rare exceptions to providing weeks to months of non-surgical medical management, the documentation must support that one or more vertebral compression fractures are present (confirmed by MRI or CT/bone scan if MRI is contraindicated) and that the patient’s pain is predominantly, if not solely, related to the demonstrated fracture(s).

Documentation of the necessity of percutaneous vertebroplasty or vertebral augmentation in more than two levels should be maintained in patient's medical record and made available to Medicare upon request. If a repeat procedure on a single vertebra is to be performed, medical record documentation must support the medical necessity of the repeat procedure.

The Centers for Medicare & Medicaid Services (CMS) Online Manual System, Publication 100-08, Medicare Program Integrity Manual, Chapter 13, Section 13.5.1 outlines that “reasonable and necessary” services are “ordered and/or furnished by qualified personnel.” Services will be considered medically reasonable and necessary only if performed by appropriately trained providers. This training and expertise must have been acquired within the framework of an accredited residency and/or fellowship program in the applicable specialty/subspecialty or must reflect extensive continued medical education activities. If these skills have been acquired by way of continued medical education, the courses must be comprehensive, offered or sponsored or endorsed by an academic institution in the United States and/or by the applicable specialty/subspecialty society in the United States, and designated by the American
Utilization Guidelines

The use of percutaneous vertebroplasty or vertebral augmentation in more than two vertebral levels is rarely justified. Documentation of the necessity of use in more than two levels should be maintained in patient’s medical record and made available to Medicare upon request. Coverage for any procedure is limited to no more than three (3) vertebral levels on any date of service if there is radiographic evidence to support acute fracture. Payable levels are only within the range of T5-L-5.

One procedure per lifetime per vertebra will be allowed. If a repeat procedure on a single vertebra is to be performed, medical record documentation must support the medical necessity of the repeat procedure.

Payment of vertebroplasty (CPT codes 22520, 22521, and 22522) and vertebral augmentation (CPT codes 22523, 22524, and 22525) will be all-inclusive for the entire procedure (i.e. injection, intraosseous venography, etc.). For both vertebroplasty and vertebral augmentation, radiological supervision and interpretation can be separately reported using CPT code 72291 for fluoroscopic guidance and 72292 for Computed tomography (CT), for each vertebral body.

Bone biopsy done at the same level as percutaneous vertebroplasty and percutaneous vertebral augmentation (CPT codes 20225, 20250, and 20251 is considered integral to both procedures and should not be separately billed.

Sources of Information and Basis for Decision


LCDs and policies from other Medicare contractors and private insurers, accessed September, 2013.


Revision History Information

<table>
<thead>
<tr>
<th>Revision Number</th>
<th>Effective Date</th>
<th>Explanation</th>
<th>Last Updated</th>
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</thead>
<tbody>
<tr>
<td>R2</td>
<td>03/31/2014</td>
<td>Revision Number: 3 Publication: February 2014 Connection LCR B2014-023 Explanation of Revision: The LCD for Percutaneous Vertebral Augmentation (formerly Kyphoplasty) has been revised to address the limited indications for this service. In addition, the current LCD was combined with Percutaneous Vertebroplasty, which will be retired once this LCD is effective. The effective date of this revision is based on date of service.</td>
<td>02/04/2014</td>
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Associated Documents

Attachments
Attachments such as Coding Guidelines and Comment Summaries are available in the Medicare coverage database located on the Centers for Medicare & Medicaid Services (CMS) website. To view attachments, go to http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx?clickon=search and enter the LCD ID in the search window; when the LCD is displayed select LCD Attachments from the "Jump to Section" dropdown list.

Related Local Coverage Documents
This LCD has no Related Documents.

Related National Coverage Documents
This LCD has no Related National Coverage Documents.

**Keywords**

Keywords
N/A