

**Contractor Name**

Wisconsin Physicians Service (WPS)

**Contractor Number**

00951, 00952, 00953, 00954  
5101, 5201, 5301, 5401  
05102, 05202, 05302, 05402,  
52280

**Contractor Type**

Carrier  
Fiscal Intermediary A  
MAC A  
MAC B

**LCD Database ID Number****LCD Version Number****LCD Title**

Vertebroplasty (Percutaneous) and Kyphoplasty

**Contractor's Determination Number**

RAD-032

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**CMS National Coverage Policy**

Title XVIII of the Social Security Act section 1862 (a)(1)(A). This section allows coverage and payment of those services that are considered to be medically reasonable and necessary.

Title XVIII of the Social Security Act section 1862 (a)(7). This section excludes routine physical examinations and services

Title XVIII of the Social Security Act section 1833 (e). This section prohibits Medicare payment for any claim which lacks the necessary information to process the claim.

**Primary Geographic Jurisdiction**

**Carrier B:** Wisconsin, Illinois, Michigan, Minnesota

**Legacy A:** Alaska, Alabama, Arizona, Arkansas, California - Entire State, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Iowa, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Maryland, Maine, Michigan, Minnesota, Missouri - Entire State, Mississippi, Montana, North Carolina, North Dakota, Nebraska, New Hampshire, New Jersey, New Mexico, Nevada, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Vermont,

Washington, Wisconsin, West Virginia, Wyoming, District of Columbia, American Samoa, Guam, Northern Mariana Islands, Virgin Islands

**MAC A:** Iowa, Missouri, Nebraska, Kansas

**MAC B:** Iowa, Missouri, Nebraska, Kansas

**Oversight Region**

Region I

Region V

**Original Determination Effective Date**

**Revision Effective Date**

**Indications and Limitations of Coverage and/or Medical Necessity**

**A. Description:**

Compression fractures and neoplastic conditions affecting vertebral bodies can result in pain and/or disability. The therapeutic options have focused on reduction of pain and have included bedrest, narcotic analgesics, braces and surgery. Newer treatment options include percutaneous vertebroplasty and kyphoplasty.

Percutaneous Vertebroplasty is a therapeutic procedure which consists of the injection of a biomaterial (usually polymethylmethacrylate) under imaging guidance (either fluoroscopy or CT) into a cervical, thoracic, or lumbar vertebral body stabilizing the fractured vertebral body which facilitates restoring mobility and decreasing disability and pain. Percutaneous vertebroplasty is usually performed under local anesthesia and may be performed as an outpatient procedure.

Kyphoplasty, while different, is another minimally invasive procedure used to treat vertebral compression fractures. Using fluoroscopic or CT guidance, a bone tamp is inserted into the vertebral body to improve the height of the vertebra. The defect produced by the tamp is filled with a bone substitute or cement (e.g., polymethylmethacrylate). This procedure is usually performed under general or monitored anesthesia.

Following the procedure, the patient must remain supine for a limited time.

**B. Indications**

The principal indications for percutaneous vertebroplasty and kyphoplasty are listed as follows:

1. Painful osteolytic metastasis;
2. Multiple myeloma with painful vertebral body involvement;
3. Painful and/or aggressive hemangiomas;
4. Osteoporotic vertebral collapse with persistent debilitating pain, which has not responded to, accepted standard medical treatment;
5. Unstable fractures due to osteoporosis (Kummell's Disease);
6. Steroid-induced fractures;
7. Reinforcement or stabilization of vertebral body prior to surgery;
8. Painful vertebral eosinophilic granuloma with spinal instability.

The decision for treatment should be multidisciplinary and take into consideration the local and general extent of the disease, the spinal level involved, the severity of pain experienced by the patient as well as his or her neurologic condition, previous treatments and their outcomes, the general state of health and life expectancy.

Percutaneous Vertebroplasty or Kyphoplasty is not to be considered a prophylactic procedure for osteoporosis of the spine. It also should not be used for chronic back pain of long-standing duration, even if associated with old compression fractures, unless pain is localized to a specific chronic fracture and medical therapy has failed.

**C. Limitations of Coverage**

Percutaneous vertebroplasty/kyphoplasty is contraindicated for the following:

1. Uncorrected coagulation disorders
2. Presence of infection (local or systemic)
3. Known allergy to any of the materials used in either of the procedures

The following is a list of relative contraindications:

1. Extensive vertebral destruction;
2. Significant vertebral collapse in which the vertebra is less than 1/3 of its original height;
3. Neurologic symptoms related to spinal cord and nerve root compression;
4. Cervical vertebroplasty (However, in rare instances, these are performed by physicians who are highly skilled in this procedure).

If percutaneous vertebroplasty or kyphoplasty is performed despite a relative contraindication, the medical record must clearly document the rationale for this decision.

**Bill Type Codes:**

12x	Hospital-inpatient or home health visits (Part B only)
13x	Hospital-outpatient (HHA-A also) (under OPPTS 13X must be used for ASC claims submitted for OPPTS payment)
22x	SNF-inpatient or home health visits (Part B only)
83x	Special facility or ASC surgery-ambulatory surgical center (Discontinued for Hospitals Subject to Outpatient PPS; hospitals must use 13X for ASC claims submitted for OPPTS payment -- eff. 7/00)
85x	Special facility or ASC surgery-rural primary care hospital

**Revenue Codes:**

0360	Operating room services-general classification
052X	Free-standing clinic-general classification
0761	Treatment or observation room-treatment room

**CPT/HCPCS Codes**

- 22520 Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; thoracic
- 22521 Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; Lumbar
- 22522 Each additional thoracic or lumbar vertebral body (list separately in addition to code for primary procedure)
- 22523 Percutaneous Vertebroplasty augmentation, including cavity creation (fracture

22524	reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation ( <b>eg., Kyphoplasty</b> ); thoracic Percutaneous Vertebroplasty augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation ( <b>eg., Kyphoplasty</b> );
22525	reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation ( <b>eg., Kyphoplasty</b> ); lumbar Percutaneous Vertebroplasty augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation ( <b>eg., Kyphoplasty</b> ); each additional thoracic or lumbar vertebral body (list separately in addition to code for primary procedure)
72291	Radiological supervision and interpretation, percutaneous vertebroplasty or vertebral augmentation including cavity creation, per vertebral body, under fluoroscopic guidance
72292	Radiological supervision and interpretation, percutaneous vertebroplasty or vertebral augmentation including cavity creation, per vertebral body, under CT guidance

### Does the CPT 30% Rule Apply

No

### ICD-9 Codes that Support Medical Necessity

Note: ICD-9 codes must be coded to the highest level of specificity.

170.2	Malignant neoplasm of vertebral column, excluding sacrum and coccyx
198.5	Secondary malignant neoplasm of bone and bone marrow
200.00-209.69	All malignant neoplasms of the lymphatic and hematopoietic tissues
213.2	Benign neoplasms of vertebral column, excluding sacrum and coccyx
228.09	Hemangioma of other sites
238.0	Neoplasm of uncertain behavior, bone and articular cartilage
238.6	Neoplasm of uncertain behavior, plasma cells
238.7	Neoplasm of uncertain behavior, other lymphatic and hematopoietic tissues
239.2	Neoplasm of unspecified nature, bone, soft tissue and skin
255.0	Cushing Syndrome (use as secondary diagnosis with 995.20 to indicate steroid-induced osteoporosis and fracture)
268.2,	Osteomalacia, unspecified
268.9	Unspecified vitamin D deficiency
275.40	Disorders of calcium metabolism, unspecified
275.41	Hypocalcemia
275.49	Other disorders of calcium metabolism
277.81	Primary carnitine deficiency
277.82	Carnitine deficiency due to inborn errors of metabolism
277.83	Iatrogenic carnitine deficiency
277.84	Other secondary carnitine deficiency
277.89	Other specified disorders of metabolism
721.7	Kummell's Disease
733.00 –	Osteoporosis, unspecified
733.09	
733.13	Pathologic fracture of vertebrae
805.00 –	Fracture of vertebra column without mention of spinal cord injury; unspecified level
805.08	

### **ICD-9 Codes that Support Medical Necessity**

Note: ICD-9 codes must be coded to the highest level of specificity.

805.2	Closed fracture of dorsal (thoracic) vertebra without mention of spinal cord injury
805.4	Closed fracture of lumbar vertebra without mention of spinal cord injury
995.20	Unspecified adverse effect of drug, medicinal and biological substance (use as primary diagnosis with 255.0 to indicate steroid-induced osteoporosis and fracture)

### **Diagnosis that Supports Medical Necessity**

ICD-9 codes listed

### **ICD-9 Codes that DO NOT Support Medical Necessity**

Those codes that are not listed in this policy

### **Diagnoses that DO NOT Support Medical Necessity**

Those diagnoses that are not listed in this policy

### **Documentation Requirements**

Documentation supporting the medical necessity of this item, such as ICD-9 codes, must be submitted with each claim. Claims submitted without such evidence will be denied as being not medically necessary.

The medical record must include documentation of the specific signs, symptoms and condition associated with the billed ICD-9 code. This information must be available to the carrier upon request.

To establish medical necessity the medical record must indicate that other non-invasive corrective medical treatment has been tried and failed.

### **Utilization Guidelines**

N/A

### **Sources of Information and Basis for Decision**

1. Do HM, Jensen ME, Marx WF, et al. Percutaneous vertebroplasty in vertebral osteonecrosis (Kummell's spondylitis). *Neurosurg Focus* 7 (1): Article 2, 1999.
2. Barr, JD, Barr MS, Lenley TJ, et al. Percutaneous Vertebroplasty for Pain Relief and Spinal Stabilization. *SPINE* (April 15, 2000 8:923-8).
3. Cotton A, Boutry N, Cortet B, et al. Percutaneous Vertebroplasty: State of the Art. *RadioGraphics* 1998; 18:311-323.
4. Jensen ME, Evans AJ, Mathis JM et al. Percutaneous Polymethylmethacrylate Vertebroplasty in The Treatment of Osteoporotic Vertebral Body Compression Fractures: Technical Aspects. *AJNR Am J Neuroradiol* 1997; 18:1897-1904.
5. Debussche-Depriester C, Deramond H, Fardellone P, et al. Percutaneous vertebroplasty with acrylic cement in the treatment of osteoporotic vertebral crush fracture syndrome. *Neuroradiology* 1991; 33 [Suppl]: 149-152.
6. Cloft HJ, Easton DN, Jensen ME, et al. Exposure of Medical Personnel to Methylmethacrylate Vapor during Percutaneous Vertebroplasty. *AJNR Am J Neuroradiol* 1999; 20:352-353.
7. Deramond H, Depriester C, Toussaint P, et al. Percutaneous Vertebroplasty. *Seminars in Musculoskeletal Radiology* 1997; 1 (2):285-295.
8. Weill A, Chiras J, Simon JM, et al. Spinal Metastases: Indications for and Results of Percutaneous Injection of Acrylic Surgical Cement. *Radiology* 1996; 199:241-237.

9. Cotten A, Dewatre F, Cortet B, et al. Percutaneous Vertebroplasty for Osteolytic Metastases and Myeloma: Effects of the Percentage of Lesion filling and the Leakage of Methymethacrylate at Clinical Follow-up. Radiology 1996; 200:525-530.
10. Gangi A, Kastler BA, Dietemann JL. Percutaneous Vertebroplasty Guided by a Combination of CT and Fluoroscopy. AJNR Am J Neuroradiol 1994; 15:83-86.
11. Mathis JM, Petri M, Naff N. Percutaneous Vertebroplasty Treatment of Steroid-Induced Osteoporotic Compression Fractures. Arthritis and Rheumatism 1998; 41 (1):171-175.
12. Nicola N, Lins E. Vertebral Hemangioma: Retrograde Embolization-Stabilization with Methymethacrylate. Surg Neurol 1987; 27:481-486.
13. Cardon T, Hachulla E, Flipo RM, et al. Percutaneous Vertebroplasty with Acrylic Cement in the Treatment of a Langerhans Cell Vertebral Histiocytosis. Clinical Rheumatology 1994; 13:518-521.
14. Padovani B, Kasriel O, Brunner P, et al. Pulmonary Embolism Caused by Acrylic Cement: A Rare Complication of Percutaneous Vertebroplasty. AJNR Am J Neuroradiol 1999; 20:375-377.
15. Local Medical Review Policies from Alaska, Arizona, California, Colorado, Hawaii, Iowa, Nevada, New York, North Dakota, Oregon, Rhode island, South Dakota, Tennessee, Texas, Utah, Washington, Wyoming.
16. Society of Cardiovascular & Interventional Radiology
17. American Society of Neuroradiology
18. American Society of Interventional and Therapeutic Neuroradiology
19. CPT Assistant - March 2001 Issue
20. 2003 Medicare Fee Schedule Data Base
21. 2004 Medicare Fee Schedule Data Base

#### **Advisory Committee Meeting Notes**

Meeting Date:

Wisconsin	9/25/2009
Illinois	9/16/2009
Michigan	9/09/2009
Minnesota	9/24/2009
Iowa	10/08/2009
Kansas	10/08/2009
Missouri	10/08/2009
Nebraska	10/08/2009

This policy does not reflect the sole opinion of the contractor or the Contractor Medical Director(s). Although the final decision rests with the contractor, this policy was developed in cooperation with the Carrier Advisory Committee(s), which include representatives of various medical specialty societies.

#### **Start Date of Comment Period**

10/08/2009

#### **End Date of Comment Period**

11/23/2009

#### **Start Date of Notice Period**

(Published)

#### **Revision History Number/Explanation**

#### **Last Reviewed On**

**Related Documents**

[See the Coding and Billing Article for \(RAD-032\)](#)

**Does this LCD contain a "Least Costly Alternative" Provision?**

No

DRAFT

## Billing and Coding Guidelines

### RAD-032 Vertebroplasty (Percutaneous) and Kyphoplasty

#### Effective Date:

#### CPT/HCPCS Codes

22520	Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; thoracic
22521	Percutaneous vertebroplasty, one vertebral body, unilateral or bilateral injection; Lumbar
22522	Each additional thoracic or lumbar vertebral body (list separately in addition to code for primary procedure)
22523	Percutaneous Vertebroplasty augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (eg., Kyphoplasty); thoracic
22524	Percutaneous Vertebroplasty augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one vertebral body, unilateral or bilateral cannulation (eg., Kyphoplasty); lumbar
22525	Percutaneous Vertebroplasty augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device, one 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 or vertebral augmentation including cavity creation, per vertebral body, under fluoroscopic guidance
72292	Radiological supervision and interpretation, percutaneous vertebroplasty or vertebral augmentation including cavity creation, per vertebral body, under CT guidance

#### Coding Guidelines

1. Percutaneous vertebroplasty of one vertebral body must be reported as 22520 for thoracic and 22521 for lumbar injection, unilateral or bilateral.
2. Bill CPT code 22522 for each additional vertebral body on which the procedure is performed during the same session. Do not append modifier 51, since this is an add-on code. Use 22522 in conjunction with codes 22520 or 22521 as appropriate.
3. Kyphoplasty of one vertebral body must be reported as 22523 for thoracic and 22524 for lumbar injection, unilateral or bilateral.
4. Kyphoplasty should be billed 22525 for each additional vertebral body on which the procedure is performed during the same session. Do not append modifier 51, since this is an add-on code. Use 22525 in conjunction with codes 22523 or 22524 as appropriate.
5. If more than one level is treated, multiple surgery billing guidelines apply.
6. Radiologic supervision and interpretation may be separately reported using CPT code 72291 use for fluoroscopic guidance or CPT code 72292 for CT guidance, for each vertebral body for which percutaneous vertebroplasty or kyphoplasty is performed.
7. When billing for osteoporosis (733.00-733.09) that results in a pathologic fracture (733.13) or a fracture of the spinal column without spinal cord injury (805.00-805.08, 805.2, 805.4) both the osteoporosis code (733.00-733.09) and a fracture code (733.13, 805.00-805.08, 805.2, 805.4) must be on the claim.
8. ICD 9 code 255.0 (Cushing Syndrome) must be billed as a secondary diagnosis to code 995.20 to indicate steroid-induced osteoporosis and fracture

9. The procedure carries a 10-day “global fee” period. E&M services on the day of the procedure and during the 10-day post-op period generally are not payable with the exception of significant, separately identifiable E&M service. In this situation, append modifier 25 to the E&M code, if appropriate.
10. Standard payment adjustment rules for the multiple procedures apply. The first procedure is allowed 100% of the fee schedule and the additional at 50% except for the add-on code.
11. Do not use bilateral modifier 50 with the procedure codes. The procedure is per vertebral body, unilateral or bilateral.
12. No separate payment for venography performed during the operative session may be allowed.
13. Some physicians are erroneously billing for open vertebroplasty surgeries, using the code for percutaneous vertebroplasty. These surgeries are performed during various open spinal procedures such as the open treatment of vertebral fractures/dislocations (CPT 22325-22328) and various laminotomy/decompression procedures (CPT 63003-63091).
14. Since CPT codes 22520-22521 include localization of the vertebra (e) to be injected, they are not appropriate to use for open vertebroplasty; the localization has been accomplished through the surgical incision, and is therefore, included by the use of the primary procedure code(s).
15. To bill for open vertebroplasty that was performed with other open spinal procedures, use code 22899 (NOC). Place the name of the procedure “Open Vertebroplasty” in Item 19 of the CMS 1500 form or its equivalent when billing EMC. Bill for the number of vertebral levels injected, whether unilateral or bilateral. This code should not be reported for any vertebral level on which another procedure is already being performed on a vertebral body, such as open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s) (22325-22328).
16. Bone biopsy, (CPT code 20225, 20250 or 20251) unless performed as a separate procedure on a different body site, is considered integral to both Vertebroplasty (Percutaneous) and Kyphoplasty AND THUS NOT BILLABLE SEPARATELY.
17. If a bone biopsy is billed as a separate procedure, use modifier 59 to identify when the biopsy code is a distinct and separate service from the Vertebroplasty (percutaneous) or Kyphoplasty. Identify the site (such as L1) in item 19 of the CMS-1500 form or its electronic equivalent.
18. CPT code 62292 (Injection procedure for chemonucleolysis, including discography, intervertebral disk, single or multiple levels, lumbar) is not considered to be a procedure that is performed as part of Percutaneous Vertebroplasty or Kyphoplasty.

**Date Published:**

**Revision History, Number and Explanation**

**Notes**

\* - An asterisk indicates a revision to that section of the policy.