COVERAGE:

Percutaneous Vertebroplasty (PV) or Percutaneous Kyphoplasty (PK) **may be considered medically necessary** for patients with osteolytic vertebral metastasis and myeloma with both of the following:

- Severe, debilitating back pain; AND
- Treatment with chemotherapy and/or radiation therapy has failed to alleviate symptoms.

PV or PK is **considered experimental, investigational or unproven** for any other indication.

DESCRIPTION:

**PV** is an interventional radiology technique involving the fluoroscopically guided injection of a methyl methacrylate polymer through a needle inserted into a weakened vertebral body. PV has been most extensively used in patients with osteolytic metastases and multiple myeloma as a method of relieving pain and improving bone strength. The technique has also been investigated as a therapy for vertebral collapse related to osteoporosis, or as a treatment of painful vertebral hemangioma. The procedure has been used in all levels of the vertebrae, i.e., cervical, thoracic, and lumbar.

**PK** is a minimally invasive interventional radiology technique involving the fluoroscopically guided injection of a methyl methacrylate polymer following the use of a KyphX Inflatable Bone Tamp (IBT) for the reduction and fixation of vertebral bone compression fractures (VCF). This procedure may be performed using either local or general anesthesia. IBT is designed to be placed inside the fractured bone through a narrow working channel. Once inside, the KyphX Inflatable Bone Tamp is carefully inflated. This applies direct force to compact the soft inner cancellous bone and push up the broken hard outer bone. The Tamp is removed and the newly created cavity is filled with the physician's choice of bone cement. Following Kyphoplasty, patients have reported a significant early reduction of pain, disability and deformity.

RATIONALE:

Percutaneous vertebroplasty and Kyphoplasty have been researched as a means for palliative treatment of vertebral fractures and vertebral collapse caused by (including but not limited to):
1. Primary malignant neoplasms of the bone or bone marrow;
2. Osteolytic vertebral metastasis; AND
3. Osteoporosis.

To date the published literature consists of a large number of case studies in a variety of patient populations. In 2003, Fourney and colleagues examined the safety and effectiveness of PV and PK in painful vertebral body fractures in cancer patients. A retrospective review of patients (from October 2000 to February 2002) included only patients with myeloma or other primary site malignancies. A diagnosis of cancer and disabling pain secondary to a pathological thoracic or lumbar vertebral body fracture was established in all patients. Severe pain limited ambulation of some of the patients. In all patients, traditional therapy consisting of analgesic medication, bed rest, and external brace therapy failed in all patients. Many of the patients were considered poor surgical risks due to comorbid medical illnesses or multilevel spine disease. Fifty-six patients underwent PV alone (34 patients or 61%), PK alone (15 patients or 27%) or both procedures (7 patients or 13%). All patients were afflicted with intractable pain secondary to vertebral body fractures. Follow up ranged from 1 day to 19.7 months with median follow up of 4.5 months. Data reported showed a decrease in Visual Analog Scale (VAS) pain scores. The preoperative VAS scores were reported as a median score of 8 (a score of 10 indicates severe pain and a score of 0 indicates no pain). At 1 month, 3 months, and 6 month follow ups, median VAS scores were reported as 2. Improvement or complete pain relief was noted with 49 procedures completed (84%) and no change occurred after 5 procedures completed (9%). No patients suffered neurological deficits resulting from either PV or PK.

End results are consistent with existing case studies reviewing vertebral body fractures in cancer patients showing a palliative effect from the use of PV or PK.

PRICING:

None

REFERENCES:


DISCLAIMER:
State and federal law, as well as contract language, including definitions and specific inclusions/exclusions, takes precedence over Medical Policy and must be considered first in determining coverage. The member’s contract benefits in effect on the date that services are rendered must be used. Any benefits are subject to the payment of premiums for the date on which services are rendered. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.
HMO Blue Texas physicians who are contracted/affiliated with a capitated IPA/medical group must contact the IPA/medical group for information regarding HMO claims/reimbursement information and other general polices and procedures.