Cohere Medicare Advantage Policy - Vertebral Corpectomy

Clinical Policy for Medical Necessity Review

Version: 3
Revision Date: May 29, 2025

Important Notices

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Policy Information:

Specialty Area: Musculoskeletal Care
Policy Name: Cohere Medicare Advantage Policy - Vertebral Corpectomy
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Vertebral Corpectomy

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.

- There are no applicable NCDs and/or LCDs for vertebral corpectomy.

Description

A corpectomy is the surgical removal of a portion of the vertebral body, thereby relieving pressure on the spinal cord.[1] A corpectomy is used to treat degenerative disease, deformities, infection, tumor, or fracture. Single or multi-level disc disease is treated via an anterior approach (with fusion) to improve symptoms related to short-segment ossification of the posterior longitudinal ligament.[2,3] Other approaches (posterior, lateral, oblique) are preferred if there is a contraindication to the anterior approach.[4] Partial vertebral excision/partial corpectomy is used when appropriate to the patient's anatomical presentation and degree of spinal compression.

Medical Necessity Criteria

Indications

Full/partial vertebral corpectomy is considered appropriate when **ANY** of the following is **TRUE**:

- The procedure is necessary as part of treatment for a cervical spine injury or trauma as indicated by **ALL** of the following[5]:
  - Symptomatic acute cervical myelopathy or radiculopathy; **AND**
  - Neuroimaging (e.g., MRI) findings correlate with symptoms[6]; **OR**
- The procedure is a full/partial cervical corpectomy and **ALL** of the following[7]:

- Radiographic findings on advanced imaging (MRI or CT myelogram)show **ANY** of the following[6,7]:
  - Ossified posterior longitudinal ligament; **OR**
  - Unstable cervical burst fracture; **OR**
  - Cervical vertebral osteomyelitis that has not responded to nonoperative management (intravenous and oral antimicrobial therapy) or is causing spinal cord compression or significant stenosis; **OR**
  - Cervical vertebral body tumor[8]; **OR**
  - Correction of cervical kyphosis[8]; **OR**
  - Failure of previous cervical surgery such as disc replacement or interbody fusion cage; **OR**
  - Cervical vertebral fracture related to previous surgery; **AND**
- **ANY** of the following:
  - The patient has myelopathy and **ANY** of the following[3,9]:
    - **ANY** of the following symptoms:
      - Gait disturbance or abnormality; **OR**
      - Lower or upper extremity weakness; **OR**
      - Paresthesias or numbness in the upper extremities; **OR**
      - Loss of dexterity/coordination; **OR**
      - Bowel or bladder dysfunction; **OR**
    - MRI or other neuroimaging reveals spinal cord compression behind the vertebral body that involves at least ⅓ of the vertebral body height related to cervical spondylosis that correlates with clinical presentation[3]; **OR**
    - **ANY** of the following physical examination findings of myelopathy:
      - Lhermitte's sign: an electric shock-like sensation down the spine or into the upper extremities with forward flexion of the cervical spine; **OR**
      - Hoffman's sign; **OR**
      - **ANY** of the following lower motor neuron (LMN) findings in the upper extremities:
        - Weakness; **OR**
        - Atrophy; **OR**
      - **ANY** of the following upper motor neuron (LMN) findings in the lower extremities:
        - Hypertonicity; **OR**
        - Hyperreflexia; **OR**

        - Positive Babinski (extension of toes with distal to proximal plantar stimulation of foot); **OR**
        - Multiple beats or sustained clonus; **OR**
        - Decreased sensation, proprioception, or vibratory sense; **OR**
        - Loss of sphincter tone; **OR**
- The procedure is a full/partial thoracic corpectomy, and radiographic findings on advanced imaging (MRI or CT myelogram) show **ANY** of the following:
    - Trauma (vertebral fractures) in the thoracic region; **OR**
    - Tumors present in the thoracic region; **OR**
    - Osteophyte or herniated disc with extension or free fragment behind 50% or more of the vertebral body[11,12]; **OR**
- The procedure is a full/partial lumbar corpectomy, and radiographic findings on advanced imaging (MRI or CT myelogram) show **ANY** of the following[13]:
    - The patient has an unstable lumbar burst fracture; **OR**
    - Lumbar vertebral osteomyelitis that has not responded to nonoperative management (intravenous and oral antimicrobial therapy); **OR**
    - Lumbar vertebral body tumor[8]; **OR**
    - Severe lumbar kyphosis causing significant pain, neurological problems, or spinal cord or nerve root compression[8,14,15]; **OR**
    - Failure of previous lumbar surgery such as disc replacement or failed interbody fusion cage with subsidence; **OR**
    - Lumbar vertebral fracture related to previous surgery.

Non-Indications

Full/partial vertebral corpectomy is not considered appropriate if **ANY** of the following is **TRUE**:

- There are no absolute non-indications for a vertebral corpectomy.

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
22100	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; cervical
22101	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; thoracic
22102	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; lumbar
22103	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; each additional segment (List separately in addition to code for primary procedure)
22110	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; cervical
22112	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; thoracic
22114	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; lumbar
22116	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

22899	Unlisted procedure, spine
63081	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment
63082	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, each additional segment (List separately in addition to code for primary procedure)
63085	Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, single segment
63086	Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, each additional segment (List separately in addition to code for primary procedure)
63087	Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; single segment
63088	Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; each additional segment (List separately in addition to code for primary procedure)
63090	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or

	retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; single segment
63091	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; each additional segment (List separately in addition to code for primary procedure)
63101	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (eg, for tumor or retropulsed bone fragments); thoracic, single segment
63102	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (eg, for tumor or retropulsed bone fragments); lumbar, single segment
63103	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (eg, for tumor or retropulsed bone fragments); thoracic or lumbar, each additional segment (List separately in addition to code for primary procedure)
63300	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, cervical
63301	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by

	transthoracic approach
63302	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by thoracolumbar approach
63303	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, lumbar or sacral by transperitoneal or retroperitoneal approach
63304	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, cervical
63305	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by transthoracic approach
63306	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by thoracolumbar approach
63307	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, lumbar or sacral by transperitoneal or retroperitoneal approach
63308	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; each additional segment (List separately in addition to codes for single segment)

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Evaluation of Clinical Harms and Benefits

Clinical determinations for Medicare Advantage beneficiaries are made in accordance with 42 CFR 422.101 guidance outlining CMS's required approach to decision hierarchy in the setting of NCDs/LCDs identified as being "not fully established". When clinical coverage criteria are "not fully established," Medicare Advantage organizations are instructed to create publicly accessible clinical coverage criteria based on widely-accepted clinical guidelines and/or scientific studies backed by a robust clinical evidence base. Clinical coverage criteria provided by Cohere Health in this manner include coverage rationale and risk/benefit analysis.

The potential clinical harms of using these criteria for full/partial vertebral corpectomy may include:

- Adverse effects from delayed or denied treatment, including the progression of neurological deterioration, which can result in reductions in quality of life, impairments in the activities of daily living, and moderate to severe disability.[3] In cases of persistent spinal canal stenosis, a delay or denial may also result in spinal cord demyelination and necrosis.[6]

The clinical benefits of using these criteria for full/partial vertebral corpectomy may include:

- Improved patient selection, resulting in better long-term outcomes, including lower rates of surgical revisions and complications.[5] Tabaraee et al. (2020) found that minimally invasive thoracolumbar corpectomies are a safe and viable procedure with lower blood loss, shorter hospitalization times, and shorter procedure times.[16]
- Maintenance of rigorous patient safety standards aligned to best available evidence. Patients undergoing a vertebral corpectomy have a higher risk of graft-related complications if they have previously undergone a laminectomy.[17]
- Appropriate allocation of healthcare resources at the individual beneficiary and population levels.

Medical Evidence

Gerstmeyer et al. (2025) used the adult 2020 Nationwide Readmission Database to assess all-cause 90-day readmission rates and risk factors associated with lumbar corpectomy. Of the 3,238 lumbar corpectomy patients included in the study, 20.8% were readmitted after their surgery. As a whole, the group of readmitted patients was much older and had higher comorbidity burdens than other patients. The authors concluded that the results of their study underscore the importance of preoperative patient selection for invasive procedures like lumbar corpectomies.[18]

A systematic review conducted by Wipplinger et al. (2022) compared morbidities of anterolateral and posterolateral lumbar corpectomy approaches. While the authors found comparable neurological outcomes between the two approaches, the review of 64 articles found that anterolateral corpectomies were associated with fewer complications and lower revision rates.[19]

In a retrospective case series of 119 patients, Tatter et al. (2021) examined the complication and revision rates of anterior cervical corpectomy and fusion (ACCF). The authors concluded that ACCF procedures are safe and effective with low revision and complication rates for degenerative and traumatic spinal disorders. Of the 119 patients included in the study, only 9 would ultimately need revision.[5]

Audat et al. (2018) compared the experiences of 140 patients with cervical spondylotic myelopathy who had been divided into 2 groups. The first group underwent posterior decompression, lateral mass instrumentation, and fusion. Group 2 underwent anterior decompression, instrumentation, and fusion. The authors found no significant differences in the clinical or radiological results of the two groups of patients.[4]

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Clinical Guideline Revision History/Information

Original Date: May 31, 2024		
Review History		
Version 2	6/10/2024	422.101 Disclaimer added
Version 3	5/29/2025	Annual Review Updated conservative care language. Removed the cervical radiculopathy section, as corpectomy is rarely indicated for radiculopathy. Added “Osteophyte or herniated disc with extension or free fragment behind 50% or more of the vertebral body” to the radiographic findings for full/partial thoracic corpectomy. Added “interbody fusion cage” to the “failure of previous cervical surgery such as disc replacement” indication. Added “causing significant pain, neurological problems, or spinal cord or nerve root compression” to the “severe lumbar kyphosis” indication (page 6). The MRI and neuroimaging indication on page 6 now reads, “MRI or other neuroimaging reveals spinal cord compression behind the vertebral body that involves at least ⅓ of the vertebral body height related to cervical spondylosis…”

		Reformatted and added new studies (references #7,14,15) to the Medical Evidence section.