Reporting Vertebral Body Tethering (22836-22838)

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For the CPT 2024 code set, three new codes (22836-22838) were added to the Musculoskeletal System subsection of the Surgery section to describe anterior thoracic vertebral body tethering (VBT). New guidelines and parenthetical notes were also added to instruct users of the appropriate code(s) to report thoracic VBT. This article provides an overview of the new codes and their intended use.

Spine (Vertebral Column)

Spinal Instrumentation

Codes 22836, 22837, 22838 describe anterior thoracic vertebral body tethering, which corrects scoliosis without fusion using a tether (cord) to compress the vertebral growth plates on the convex side of the curve to inhibit their growth, while allowing the growth plates on the concave side of the curve to continue to grow. Codes 22836, 22837 may not be reported with anterior instrumentation codes 22845, 22846, 22847.

For the following codes, when two surgeons work together as primary surgeons performing distinct part(s) of thoracic vertebral body tethering, each surgeon should report his or her distinct operative work by appending modifier 62 to the procedure code. Modifier 62 may be appended to procedure code(s) 22836, 22837, 22838, as long as both surgeons continue to work together as primary surgeons.

Regions of the spine include cervical, cervicothoracic, thoracic, thoracolumbar, lumbar, lumbosacral, sacral, and coccygeal.

22845 Anterior instrumentation; 2 to 3 vertebral segments (List separately in addition to code for primary procedure)

(Use 22845 in conjunction with 22100-22102, 22110-22114, 22206, 22207, 22210-22214, 22220-22224, 22310-22327, 22532, 22533, 22548-22558, 22590-22612, 22630, 22633, 22634, 22800-22812, 63001-63030, 63040-63042, 63045-63047, 63050-63056, 63064, 63075, 63077, 63081, 63085, 63087, 63090, 63101, 63102, 63170-63290, 63300-63307)

(For vertebral body tethering of the thoracic spine, see 22836, 22837, 22838)

(For vertebral body tethering of the lumbar or thoracolumbar spine, see 0656T, 0657T, 0790T)

22846 4 to 7 vertebral segments (List separately in addition to code for primary procedure)

(Use 22846 in conjunction with 22100-22102, 22110-22114, 22206, 22207, 22210-22214, 22220-22224, 22310-22327, 22532, 22533, 22548-22558, 22590-22612, 22630, 22633, 22634, 22800-22812, 63001-63030, 63040-63042, 63045-63047, 63050-63056, 63064, 63075, 63077, 63081, 63085, 63087, 63090, 63101, 63102, 63170-63290, 63300-63307)

(For vertebral body tethering of the thoracic spine, see 22836, 22837, 22838)

(For vertebral body tethering of the lumbar or thoracolumbar spine, see 0656T, 0657T, 0790T)

22847 8 or more vertebral segments (List separately in addition to code for primary procedure)

(Use 22847 in conjunction with 22100-22102, 22110- 22114, 22206, 22207, 22210-22214, 22220-22224, 22310- 22327, 22532, 22533, 22548-22558, 22590-22612, 22630, 22633, 22634, 22800-22812, 63001-63030, 63040-63042, 63045-63047, 63050-63056, 63064, 63075, 63077, 63081, 63085, 63087, 63090, 63101, 63102, 63170-63290, 63300-63307)

(Do not report 22845, 22846, 22847 in conjunction with 22836, 22837, 22838)

(For vertebral body tethering of the thoracic spine, see 22836, 22837, 22838)

(For vertebral body tethering of the lumbar or thoracolumbar spine, see 0656T, 0657T, 0790T)

#**22836** Anterior thoracic vertebral body tethering, including thoracoscopy, when performed; up to 7 vertebral segments

(For anterior lumbar or thoracolumbar vertebral body tethering, up to 7 vertebral segments, use 0656T)

#**22837** 8 or more vertebral segments

(Do not report 22836, 22837 in conjunction with 22845, 22846, 22847, 32601)

(For anterior lumbar or thoracolumbar vertebral body tethering, 8 or more vertebral segments, use 0657T)

#**22838** Revision (eg, augmentation, division of tether), replacement, or removal of thoracic vertebral body tethering, including thoracoscopy, when performed

(Do not report 22838 in conjunction with 22849, 22855, 32601)

Before the development of anterior VBT, spinal deformity was treated with arthrodesis of the anterior section/vertebral bodies of the spinal column. VBT differs from these existing procedures that are currently included in the CPT code set because it does not involve arthrodesis or fusion of the spine for correction of spinal deformity. Instead, VBT corrects scoliosis with a tether (cord) that compresses the convex vertebral growth plates inhibiting their growth, while allowing the concave growth plates to grow. On anterior VBT insertion, some initial deformity correction may be achieved as well. The first available codes to report VBT (0656T, 0657T) were added to the CPT code set in 2022.

Because of the quick adoption and increased use of VBT procedures in clinical practice, three new codes (22836-22838) were established for the CPT 2024 code set to report VBT for the thoracic region. Code 22836 describes anterior thoracic VBT of up to seven vertebral segments, and code 22837 describes VBT of eight or more vertebral segments. Code 22838 describes the revision (eg, augmentation, division of tether), replacement, or removal of thoracic VBT. All three codes include thoracoscopy when performed.

To accommodate the establishment of these new VBT codes (22836-22838), the following changes were made to the CPT 2024 code set:

- Category III codes 0656T and 0657T, previously used to report anterior VBT, were revised to limit their use to the lumbar or thoracolumbar spine region.
- New Category III code 0790T has been added to describe the work performed for revision, replacement, or removal of thoracolumbar or lumbar VBT, including thoracoscopy, when performed.
- In the spinal instrumentation guidelines, spine regions were defined as including the "cervical, cervicothoracic, thoracic, thoracolumbar, lumbar, lumbosacral, sacral, and coccygeal."
- The introductory guidelines in the Spine Deformity (eg, Scoliosis, Kyphosis) and Spinal Instrumentation subsections were revised to provide instruction for the appropriate reporting of new Category I codes 22836-22838 and new Category III code 0790T.

In addition, the following parenthetical notes were added to assist with the appropriate reporting of the new codes:

- Guidance on appending modifier 62 when two surgeons work together as primary surgeons to perform distinct parts of thoracic VBT
- Guidance to restrict reporting of the spinal deformity arthrodesis codes (22800, 22802, 22804, 22808, 22810, 22812) and kyphectomy codes (22818, 22819) in conjunction with thoracic VBT codes (22836-22838), or lumbar or thoracolumbar VBT codes (0656T, 0657T, 0790T)

The following clinical examples and procedural descriptions reflect typical clinical scenarios for which these new codes would be appropriately reported.

Clinical Example (22836)

A 13-year-old skeletally immature female, who was diagnosed with thoracic idiopathic scoliosis, has been either unsuccessful or intolerant of bracing. The curve magnitude and remaining growth suggest likely continued progression without intervention. A vertebral body tethering construct is applied from T6 to T11 to provide initial coronal correction through tensioning.

Description of Procedure (22836)

Co-Surgeon A—Exposure: Gain surgical access through the preferred approach, which is typically thoracoscopic, which typically requires a single-lung ventilation technique and lung deflation to gain access. At each operative level, gain access to the chest by a sharp thoracostomy laterally, typically in the axillary line. Insert the scope and deflate the lung on that side to enable visualization of the lateral aspect of the vertebral body. The procedure is typically performed thoracoscopically and visualized on a video monitor. Using an ultrasonic scalpel or a thermal device, incise the parietal pleura longitudinally to identify the segmental vessels along the vertebrae to be instrumented. At the seventh vertebral segments or less, coagulate the segmental vessels and expose the lateral aspect of the vertebral bodies intended for instrumentation. Dissection to release the diaphragm is required if the construct extends distally to T12 or L1. Because all the vertebral bodies to be instrumented cannot be approached through the same thoracostomy, the procedure must be repeated as many times as it takes to access all the vertebral levels involved in the procedure.

Co-Surgeon B—Tether Placement: Confirm the trajectory and placement on the vertebral body at all levels prior to each anchor insertion, screw preparation, and screw insertion using intraoperative fluoroscopy or CT guidance. Due to smaller vertebral body size and variable venous anatomy, caution should be taken if extending instrumentation proximal to T5. At each level, secure a pronged staple to the vertebral body as needed. Then use an entry awl to create a trajectory for the screw. Insert each screw in the narrow safe zone between the spinal canal posteriorly and the great vessels anteriorly. Approach to the next level of vertebra may require another level of thoracostomy as not all levels can be approached through the same thoracostomy. Tap the hole and select and insert a screw of appropriate length and diameter. Following placement of all screws, secure a cord to the most cranial screw and segmentally tension, maintaining compression by tightening set screws at the adjacent levels to achieve correction of the spinal curvature. Applying the correct amount of tension is critical to the procedure. Following final tensioning, use intraoperative fluoroscopy or radiography to assess curve correction on anteroposterior (AP) and lateral imaging.

Co-Surgeon A—Closure: Close each thoracotomy site and place a chest tube.

Clinical Example (22837)

A 13-year-old skeletally immature female, who is diagnosed with thoracic idiopathic scoliosis, has been either unsuccessful or intolerant of bracing. The curve magnitude and remaining growth suggest likely continued progression without intervention. A vertebral body tethering construct is applied from T5 to T12 to provide initial coronal correction through tensioning.

Description of Procedure (22837)

Co-Surgeon A—Exposure: Gain surgical access through the preferred approach, which is typically thoracoscopic, which typically requires a single-lung ventilation technique and lung deflation to allow access. At each operative level, gain access to the chest by a sharp thoracostomy laterally, typically in the axillary line. Insert the scope and deflate the lung on that side to enable visualization of the lateral aspect of the vertebral body. The procedure is typically performed thoracoscopically and visualized on a video monitor. Using an ultrasonic scalpel or a thermal device, incise the parietal pleura longitudinally to identify the segmental vessels along the vertebrae to be instrumented. At the seventh vertebral segments or less, coagulate the segmental vessels and expose the lateral aspect of the vertebral bodies intended for instrumentation. Dissection to release the diaphragm is required if the construct will extend distally to T12 or L1. Because all the vertebral bodies to be instrumented cannot be approached through the same thoracostomy, the procedure must be repeated as many times as it takes to access all the vertebral levels involved in the procedure.

Co-Surgeon B—Tether Placement: Confirm the trajectory and placement on the vertebral body at all levels prior to each anchor insertion, screw preparation, and screw insertion using intraoperative fluoroscopy or CT guidance. Due to smaller vertebral body size and variable venous anatomy, caution should be taken if extending instrumentation proximal to T5. At each level, secure a pronged staple to the vertebral body as needed. Then use an entry awl to create a trajectory for the screw. Insert each screw in the narrow safe zone between the spinal canal posteriorly and the great vessels anteriorly. Approach to the next level of vertebra may require another level of thoracostomy as not all levels can be approached through the same thoracostomy. Tap the hole and select and insert a screw of appropriate length and diameter. Following placement of all screws, secure a cord to the most cranial screw and segmentally tension, maintaining compression by tightening set screws at the adjacent levels. Applying the correct amount of tension is critical to the procedure. Following final tensioning, use intraoperative fluoroscopy or radiography to assess curve correction on AP and lateral imaging.

Co-Surgeon A—Closure: Close each thoracotomy site and place a chest tube.

Clinical Example (22838)

A 15-year-old female who is 2-years post-primary-tethering procedure presents with radiographic evidence of a broken tether device and an increase in the size of the scoliosis. The patient has remaining skeletal growth. The patient is referred for removal of the broken tether and placement of a new vertebral body tethering construct to provide coronal correction.

Description of Procedure (22838)

Co-Surgeon A—Exposure: Gain surgical access through the preferred approach, which is typically thoracoscopic and typically requires a single-lung ventilation technique and lung deflation to allow access. Several levels of thoracostomy may be required to visualize and manipulate the entire construct. Using an ultrasonic scalpel or thermal device, remove pleural adhesions from the intact anterior vertebral body tethering construct.

Co-Surgeon B—Tether Removal and Replacement: Inspect the cord and assess for any areas of breakage. Remove set screws and the broken cord. Assess the vertebral body screws. Remove or replace any loose vertebral body screws. New vertebral body screws may be added at adjacent levels. Confirm the trajectory and placement on the vertebral body screws at all levels prior to anchor insertion, screw preparation, and screw insertion using fluoroscopy or CT guidance. Due to smaller vertebral body size and variable venous anatomy, caution should be taken if extending instrumentation proximal to T5. Because all the vertebral bodies to be instrumented cannot be approached through the same thoracostomy, the procedure must be repeated as many times as it takes to access all the vertebral levels involved in the procedure. When appropriate, secure a new cord to the most cranial screw and segmentally tension, maintaining compression by tightening set screws at the adjacent levels. Applying the correct amount of tension is critical to the procedure and requires careful consideration of all patient factors. Remove the broken cord segments from the thorax. Following final tensioning, use intraoperative fluoroscopy or radiography to assess curve correction on AP and lateral imaging.

Co-Surgeon A—Closure: Close each thoracotomy site and place a chest tube.

