# Tip Sheet: Paravertebral Spinal Nerves and Branches

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# Segments of the Spine

Each vertebra is labeled based on its region in the spine and its position within that region. Here's a breakdown:

#### 1.Cervical Vertebrae (C1-C7):

- 1. The cervical vertebrae are labeled C1 to C7, starting from the top of the spine down to the base of the neck.
- 2. The first cervical vertebra is called the atlas (C1), named after the Greek mythological figure who supported the heavens.
- 3. The second cervical vertebra is called the axis (C2), which forms a pivot joint with the atlas, allowing the head to rotate.
- 4. The remaining cervical vertebrae are numbered sequentially from C3 to C7.

#### 2.Thoracic Vertebrae (T1-T12):

1. The thoracic vertebrae are labeled T1 to T12 and are located in the upper back region, below the cervical vertebrae and above the lumbar vertebrae.

#### 3.Lumbar Vertebrae (L1-L5):

1. The lumbar vertebrae are labeled L1 to L5 and are situated in the lower back region, below the thoracic vertebrae and above the sacrum.

### 4.Sacral Vertebrae (S1-S5):

- 1. The sacral vertebrae are labeled S1 to S5, and they form the sacrum, which is a triangular bone at the base of the spine.
- 2. These vertebrae are fused together to form a single bone, the sacrum.

#### 5.Coccygeal Vertebrae (Co1-Co4/5):

- 1. The coccygeal vertebrae are labeled Co1 to Co4 or Co1 to Co5, depending on whether there are four or five vertebrae present in the coccyx.
- 2. They form the coccyx or tailbone and are typically fused together into a single bone.



Spine

Each vertebra's label indicates its position within its respective region of the spine, helping healthcare professionals accurately identify and reference specific vertebrae during assessments, diagnoses, and treatments.

The space between the vertebrae is called the intervertebral space. The intervertebral space, located between adjacent vertebrae in the spine, contains several structures that contribute to the spine's function and flexibility including synovial joints known as Facet.

When a provider references, for example "L<sub>3</sub>-4" they are typically indicating a specific level or segment of the lumbar spine.





Want a way to easily remember the types and number of vertebrae?

Think of the 7 cervical, 12 thoracic, and 5 lumber in terms of the ideal meal timings!

- Cereal @ 7 pm (7 cervical)
- Tasty Lunch @ 12 pm (12 thoracic)
- Light Dinner @ 5 pm (5 lumbar)





### Synovial Joints (Facet Joints):

Facet joints, also known as zygapophysial joints, are located on the posterior aspect of the vertebrae, connecting the superior and inferior articular processes of adjacent vertebrae.

These joints facilitate gliding and sliding movements between adjacent vertebrae, contributing to the flexibility and range of motion of the spine.





The facet joints are small, cartilage lined points of contact where the vertebrae in the spinal column meet the vertebrae above and below.

In this illustration of the lateral skull, we can see the *left* C<sub>5</sub>-6 is the facet joint.

In the posterior spinal segment illustration, we can see the *bilateral* facet joints.

### **Posterior Spinal Segment**







# Paravertebral Facet Joint Injections



A facet joint injection relieves spine pain by injecting numbing and anti-inflammatory medication directly into the affected joint and the surrounding nerves.

This minimally invasive procedure offers immediate pain relief from the numbing medication and long-term relief from inflammation reduction by the corticosteroid.

It's guided by imaging for precision and can provide relief lasting weeks to months, improving quality of life for those with facet joint-related discomfort. Codes 64490, 64491, 64492, 64493, 64494, 64495 describe the introduction/injection of a *diagnostic* or *therapeutic* agent into the paravertebral facet joint or into the nerves that innervate that joint by level.

Facet joints are *paired joints* with one pair at each vertebral level. **Imaging guidance and localization are required for the performance of paravertebral facet joint injections described by 64490, 64491, 64492, 64493, 64494, 64495.** If imaging is not used, report 20552, 20553. If ultrasound guidance is used, report 0213T, 0214T, 0215T, 0216T, 0217T, 0218T.

When determining a level, count the number of facet joints injected, not the number of nerves injected. Therefore, if multiple nerves of the same facet joint are injected, it would be considered as a single level. The add-on codes are reported when second, third, or additional levels are injected during the same session.

When the procedure is performed bilaterally at the same level, report one unit of the primary code with modifier 50.

### **CPT: Cervical or Thoracic**

- 64490 Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), cervical or thoracic; single level
  - OPT Changes: An Insider's View 2010
  - OPT Assistant Feb 10:9, Aug 10:12, Dec 10:13, Jan 11:8, Feb 11:4, Jun 12:10, Oct 12:15
  - Clinical Examples in Radiology Winter 10:15, Spring 11:10, Winter 18:8
- + 64491 second level (List separately in addition to code for primary procedure)
  - CPT Changes: An Insider's View 2010
  - OPT Assistant Aug 10:12, Jun 12:10, Oct 12:15
  - Clinical Examples in Radiology Winter 10:15

(Use 64491 in conjunction with 64490)

- + 64492 third and any additional level(s) (List separately in addition to code for primary procedure)
  - OPT Changes: An Insider's View 2010
  - OPT Assistant Feb 10:9, Aug 10:12, Jan 11:8, Feb 11:4, Jun 12:10, Oct 12:15
  - Clinical Examples in Radiology Winter 10:14, Spring 11:10, Winter 18:8

(Use 64492 in conjunction with 64490, 64491)





### **CPT: Lumbar**

64493 Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), lumbar or sacral; single level

- OPT Changes: An Insider's View 2010
- OPT Assistant Feb 10:9, Aug 10:12, Jan 11:8, Feb 11:4, Jun 12:10, Oct 12:15, May 18:10, Jul 20:14
- Clinical Examples in Radiology Winter 10:14, Spring 11:10, Winter 18:8

(For injection, anesthetic agent, nerves innervating the sacroiliac joint, use 64451)

- + 64494 second level (List separately in addition to code for primary procedure)
   > CPT Changes: An Insider's View 2010
   > CPT Assistant Feb 10:9, Aug 10:12, Jan 11:8, Feb 11:4, Jun 12:10, May 18:10, Jul 20:14
   > Clinical Examples in Radiology Winter 10:14, Spring 11:10, Winter 18:8
  - ►(Use 64494 in conjunction with 64490, 64493)

+ 64495 third and any additional level(s) (List separately in addition to code for primary procedure)
 *CPT Changes: An Insider's View* 2010
 *CPT Assistant* Feb 10:9, Aug 10:12, Jan 11:8, Feb 11:4, Jun 12:10, Oct 12:15, May 18:10
 *Clinical Examples in Radiology* Winter 10:14, Spring 11:10, Winter 18:8

(Use 64495 in conjunction with 64493, 64494)





# Clarification Points

- For bilateral paravertebral facet injection procedures, report 64490, 64493 with modifier 50. Report add-on codes 64491, 64492, 64494, 64495 twice, when performed bilaterally. Do not report modifier 50 in conjunction with 64491, 64492, 64494, 64495
- For paravertebral facet injection of the T12-L1 joint, or nerves innervating that joint, use 64490
- For unilateral paravertebral facet injection of the T12-L1 and L1-L2 levels or nerves innervating that joint, use 64490 and 64494 once
- For bilateral paravertebral facet injection of the T12-L1 and L1-L2 levels or nerves innervating that joint, use 64490 with modifier 50 once and 64494 twice

▶ Procedure	Cervical/Thoracic	Lumbar/Sacral
Multiple nerves injected at the same level	64490 X 1	64493 X 1
1 level injected unilaterally	64490 X 1	64493 X 1
1 level injected bilaterally	64490 50 X 1	64493 50 X 1
1 level injected bilaterally and 1 level injected unilaterally	64490 50 X 1 64491 X 1	64493 50 X 1 64494 X 1
2 levels injected unilaterally	64490 X 1 64491 X 1	64493 X 1 64494 X 1
2 levels injected bilaterally	64490 50 X 1 64491 X 2	64493 50 X 1 64494 X 2
3 or more levels injected unilaterally	64490 X 1 64491 X 1 64492 X 1	64493 X 1 64494 X 1 64495 X 1
3 or more levels injected bilaterally	64490 50 X 1 64491 X 2 64492 X 2	64493 50 X 1 64494 X 2 64495 X 2◀



## **Practical Application**

**TECHNIQUE:** The patient was placed on the fluoroscopy table in the prone position and the bilateral L4-L5 facet joint medial branch nerves were identified under fluoroscopic guidance and appropriate starting locations were marked on the skin. All areas were then prepped and draped in the usual sterile fashion and subsequently infiltrated with 2% lidocaine carried down into the subcutaneous tissues.

Under fluoroscopic guidance, 3 1/2 inch 22-gauge curved-tipped spinal needles were placed with their tips reaching the junctures of the transverse process attachments with the vertebral bodies in the superior aspect of the regions known to contain the medial branches to the facet joints of L4 and L5 bilaterally. A small amount of Isovue M non-ionic contrast was injected through each of the each of the needles to ascertain correct needle positioning prior to subsequent injection of 0.5 cc of Depo-Medrol followed by 1.0 cc of 0.25% Bupivacaine without preservative was injected through each of the needles, at the L4 and L5 levels bilaterally and then the needles were removed.



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- 1. Verification of imaging used, fluoroscopic
- 2. Spinal needles were inserted at L4 and L5 bilaterally
- 3. Steroid and anesthetic injection performed at level L4-L5 bilaterally



In the CPT Index, locate Injection/Paravertebral Facet Joint/Nerve with Image Guidance.

Or locate

Paravertebral Nerve/Injection/Therapeutic Agent, which refers to 64490 through 64495.

When looking at those codes, the selection is based on the site of the injection and level.

The injection was at the lumbar level L4-L5 reporting code 64493. Modifier 50 is reported to indicate it was a bilateral procedure. Injection See also Allergen Immunotherapy; Infusion

Paravertebral Facet Joint/Nerve with Image Guidance 64490-64495 with Ultrasound Guidance 0213T-0218T

### Paravertebral Nerve

Destruction 64633-64636 Infusion Anesthetic 64463 Injection Anesthetic 64461, 64462, 64490-64495 Diagnostic Agent 64490-64495 with Ultrasound Guidance 0213T-0218T Neurolytic 64633-64636 Therapeutic Agent 64490-64495 with Ultrasound Guidance 0213T-0218T



### **CPT® Codes:** 64493-50

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(For injection, anesthetic agent, nerves innervating the sacroiliac joint, use 64451)



# References

- Association, American M. CPT Professional 2023 and E/M Companion 2023 Bundle. Available from: VitalSource Bookshelf, American Medical Association (AMA), 2022.
- https://www.painspa.co.uk/procedure/cervical-facet-jointinjection/
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- https://www.nursinghero.com/study-guides/ap1x94x1/thevertebral-column
- https://sperlingmedicalgroup.com/locked-facet-joints-areeasy-to-diagnose-and-treat/
- https://rollinghillsmedical.com/facet-joint-injections/



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