

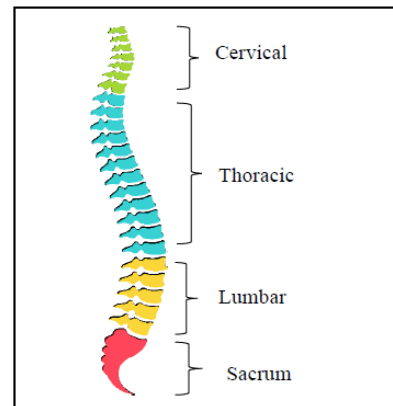
Epidural Spinal Cord Compression

Spinal Anatomy

The spine has 2 parts, the spinal cord, a solid bundle of nerves that begins at the bottom of the brain and extends to the lower back, and the nerves that carry signals from the spine throughout the entire body. The spinal cord is contained in a protective bony tube called the vertebral column. The vertebral column is formed by a series of bones (vertebral bodies) that alternate with discs. The nerves, which originate from the spine, exit the vertebral column through small holes (neural foramina).

The spine is divided into 4 regions, cervical spine (neck), thoracic spine (the upper and middle back), lumbar spine (lower back) and sacrum (tail bone).

The main function of the spine is to carry information from the brain to the body and vice versa. Consequently, it is an extremely important part of the body that when injured has significant consequences.



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Cancer and the spine

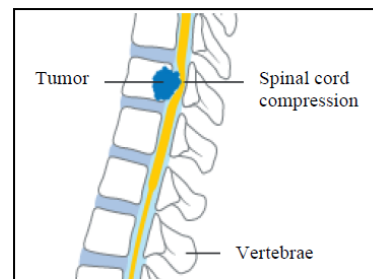
The most common way cancer affects the spine is when tumors spread, or metastasize, to the bones that form the vertebral column. This has several effects:

- Damage the bones of the back/neck causing them to break
- Tumor that has spread to the bone can grow out of the bone and press on the spine and nerves.

This can cause different symptoms:

- Back or neck pain
- Pain that radiates into arms, legs or chest
- Weakness in arms or legs
- Numbness in arms or legs
- Increased difficulty walking
- Changes in bowel or bladder function

Usually symptoms get worse over days or weeks and may be severe. Symptoms depend on the size and location of the tumor.



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Diagnosis

When patients complain of symptoms suggesting spinal metastases, it generally demands urgent attention. Your care team will order pictures of the area, usually a CT scan or MRI. These images will show the tumor, the severity of the bone fracture (if present), and how bad the spinal cord and nerves are compressed.

Treatment

A treatment plan is developed by members of a multidisciplinary team specialized in management of cord compression from tumors. A variety of factors is considered when making decisions about treatment.

The team usually consists of:

- Neuroradiology: Interpret imaging
- Neurosurgery: Spine surgeon
- Neuro-Radiation medicine: Specialize in radiation treatment, specifically to brain and spine
- Neuro-Oncology: Specialize in spine tumors
- Medical Oncology: Treat cancer with medicines

Goals of Treatment:

- Prevent permanent damage to the spinal cord and nerves
- Treat symptoms resulting from the compression
- Stabilize spinal column

Treatment options:

It is not uncommon for a cancer to spread to the bones of the back. Often, no specific treatment is needed. If necessary, treatments may include:

Corticosteroids:

- Dexamethasone is the most common corticosteroid used. The purpose of this medicine is to decrease pressure on the spine and nerves related to the tumor. It often will help with symptoms. You cannot stop this medication quickly. If it is prescribed, you will need to wean off of this medication slowly to prevent additional effects

Surgery:

- Stabilize the spine if vertebral column is severely damaged by tumor
- Remove the part of the tumor placing pressure on spine and nerves. Often the goal is not to remove the tumor entirely, but rather to remove the part of the tumor contacting and placing the most pressure on the spine

Radiation:

- Beams of energy focused on the tumor. The goal is to slow or stop the growth of the tumor

Chemotherapy:

- Medicines that treat the tumor. The goal with chemotherapy is to slow or stop the growth of the tumor

Pain medicines

- Pain medications may be needed to help with symptoms. There are many different ways to treat pain, especially if it is nerve pain and you may need to be seen by a pain management specialist.

Patient Education



Back and neck pain are common symptoms that effect many people. Usually, it does not mean something serious is occurring. However, if you have cancer and are experiencing new pain, it should be brought to the attention of your care team so it can be assessed.

Members of your care team are here to discuss the plan of action in the event you are diagnosed with spinal metastases. Please do not hesitate to ask.