

## Neoplasms (Tumors) of the Spine

### Malignant Neoplasms (Cancer)

Malignant neoplasms, by definition, are those that invade surrounding tissues and can spread through the bloodstream and lymphatic channels to distant sites. Malignant tumors cannot generally be cured by surgical removal. Malignant neoplasms of the spine (or any other part of the body) are classified as either primary or secondary. Secondary neoplasms, also known as metastases, are those that arise in some other part of the body and spread to the spine. Primary malignant neoplasms are those that originate in the spine itself.

**Metastases** to the spine are very common (Figure 10). Common cancers that metastasize to the spine include breast, lung and prostate cancer. Spine metastases usually occur in the vertebral bodies and pedicles, but also can occur in the nerves, spinal cord, dura or CSF. Spine metastases often present as compression fractures, also known as pathologic fractures.

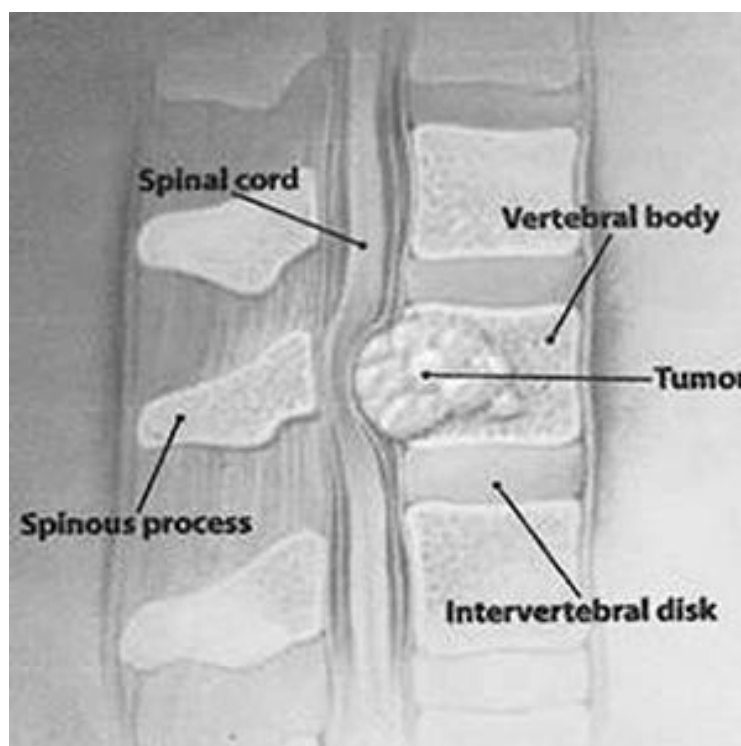


Figure 10: Drawing of mid-sagittal view of the spine with metastasis in vertebral body. Posterior is to the left, anterior is to the right.

Primary malignant neoplasms of the bony spine are rare, other than multiple myeloma and lymphoma which arise in bone marrow and which are relatively common.

Cancers of the spinal cord include astrocytoma, ependymoma and others (Figure 11).



Figure 11: Mid-sagittal MRI showing an ependymoma (white) of the mid thoracic spinal cord.

A partial list of cancers that develop from the various structures of the spine are as follows:

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|-------------------|--|
| • Bone            | Multiple myeloma, lymphoma, osteosarcoma           |
| • Dura, arachnoid | Malignant meningioma, malignant nerve sheath tumor |
| • Spinal Cord     | Astrocytoma, ependymoma                            |