

# Malignant Spinal Cord Compression

## Adapting Conventional Rehabilitation Approaches



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### KEYWORDS

• Malignant spinal cord compression • Neoplastic spinal cord injury • Rehabilitation

### KEY POINTS

- Spinal tumors are classically grouped into 3 categories: extradural tumors, intradural extramedullary, and intradural intramedullary tumors.
- Localized spine pain is the most common symptom in patients with epidural spinal cord compression at time of diagnosis.
- Motor weakness is the second most common symptom in patients with epidural spinal cord compression at time of diagnosis.
- Management of spinal tumors varies according to the stability of the spine, neurologic status, and pain. Treatment options include surgical intervention, radiation therapy, and systemic treatments, such as chemotherapy and hormonal therapy.
- Principles of neurorehabilitation applied to patients with traumatic spinal cord injury are equally appropriate for patients with spinal tumors.

### INTRODUCTION

When combined with medical, radiation, and surgical oncology care, rehabilitation can serve to relieve symptoms, improve quality of life, enhance functional independence, and prevent further complications in patients with malignant spinal cord compression.<sup>1</sup>

### EPIDEMIOLOGY AND PATHOPHYSIOLOGY

Spinal tumors are classically grouped into 3 categories: extradural tumors, intradural extramedullary tumors, and intradural intramedullary tumors (**Box 1**).

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**Box 1****Tumors of the spine***Extradural spinal tumors*

## Primary malignant tumors

- Lymphoma
- Osteosarcoma
- Ewing sarcoma
- Chondrosarcoma
- Chordoma
- Sacroccygeal teratoma
- Malignant fibrous histiocytoma
- Solitary plasmacytoma
- Fibrosarcoma

## Primary benign tumors

- Vertebral hemangioma
- Giant cell tumor
- Osteochondroma
- Osteoid osteoma
- Osteoblastoma

## Sources of epidural metastases

## Adult

- Prostate cancer
- Breast cancer
- Lung cancer
- Thyroid cancer
- Non-Hodgkin lymphoma
- Hodgkin disease
- Multiple myeloma
- Renal cell carcinoma
- Colorectal cancers
- Sarcoma
- Germ cell tumor
- Unknown primary

## Pediatrics

- Sarcoma: primarily Ewing sarcoma
- Neuroblastoma
- Germ cell tumors
- Hodgkin disease

*Intradural extramedullary tumors*

## Primary malignant tumors

- Malignant nerve sheath tumors
- Hemangiopericytoma

## Primary benign tumors

- Meningioma
- Schwannoma
- Neurofibroma
- Paranglioma
- Ganglioneuroma

## Sources of leptomeningeal disease

- Glioblastoma
- Central nervous system lymphoma
- Leukemia
- Lymphoma
- Breast cancer
- Lung cancer
- Melanoma

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