SPINAL CORD COMPRESSION involves tumor invasion or extension into the epidural space or pathologically collapsed vertebral bone fragments impinging on the spinal cord.

**CAUTION!**
Early detection and treatment is essential to prevent progression of symptoms.

**RISK FACTORS**
- Patients with solid organ malignancies with high incidence for vertebral metastasis
- Patients with lung cancer, prostate cancer, breast cancer, or multiple myeloma

**EARLY SIGNS & SYMPTOMS**
- Back pain that generally worsens in the supine position and improves upon sitting or standing
- Pain that can be aggravated by activities that increase intra-abdominal or intra-thoracic pressure, such as coughing, sneezing, or straining

**CAUSES/PATHOPHYSIOLOGY**
- Hematogenous spread of malignant cancer cells into the dural sac, causing spinal cord compression or collapse
- Direct tumor extension into vertebral column

**LATER SIGNS & SYMPTOMS**
- Motor weakness that may present as limb heaviness and clumsiness
- Sensory loss that presents as numbness of the fingers or toes, paresthesias, or loss of proprioception, which leads to loss of sensation of touch, pain and temperature
- Autonomic dysfunction resulting in difficulty starting and stopping urination and bowel incontinence
- Possible medical emergent hypertension, depending on location of compression
- Irreversible paralysis

**EMERGENCY INTERVENTIONS**
- Corticosteroids and pain management agents
- Spinal decompression with radiation therapy and/or surgery

**DIAGNOSTIC ASSESSMENT**
- Perform complete medical assessment with neurologic examination.
- Magnetic resonance imaging (MRI) has very high sensitivity and specificity for spinal cord compression.
- Computed tomography scan is acceptable if patient is not able to tolerate MRI.

**NURSING CONSIDERATIONS**
- Pain management
- Mobility and safety issues
- Skin care
- Bowel and bladder function

**ADDITIONAL RESOURCES**