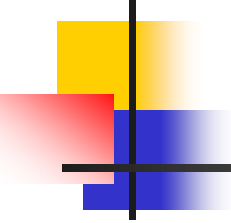


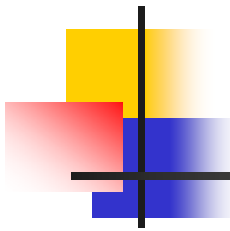
Case Report

- Gender: Female
- Age: 34.2



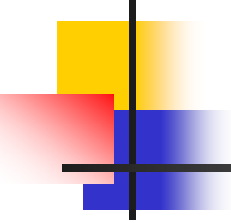
Chief complaint

- Right leg numbness progress in recent 1 month



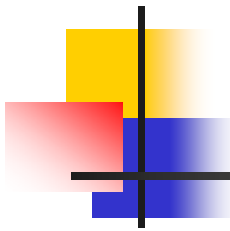
Present Illness

- The 34 year-old female came to Neurology OPD for help because of progressing right leg numbness.
- She has suffered right numbness from foot to buttock for 1 month.
- Parasthenia especially on pain and thermal sensation
- Poor sensation to pin prick and two point discrimination



Examination

- PE: No specific finding
- Neurological examination :
 - pain and thermal sensation
 - Poor sensation to pin prick and two point discrimination
- Muscle power: 5
- Tendon reflex: ++



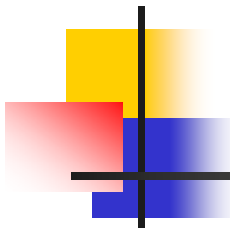
Lab Data

WBC 4.11 (L)

RBC 3.49 (L)

HGB 10.9 (L)

PLT 211



Biochemistry

Glucose 88

BUN 12

Creatinine 0.7

GOT 17

GPT 12

Na 142

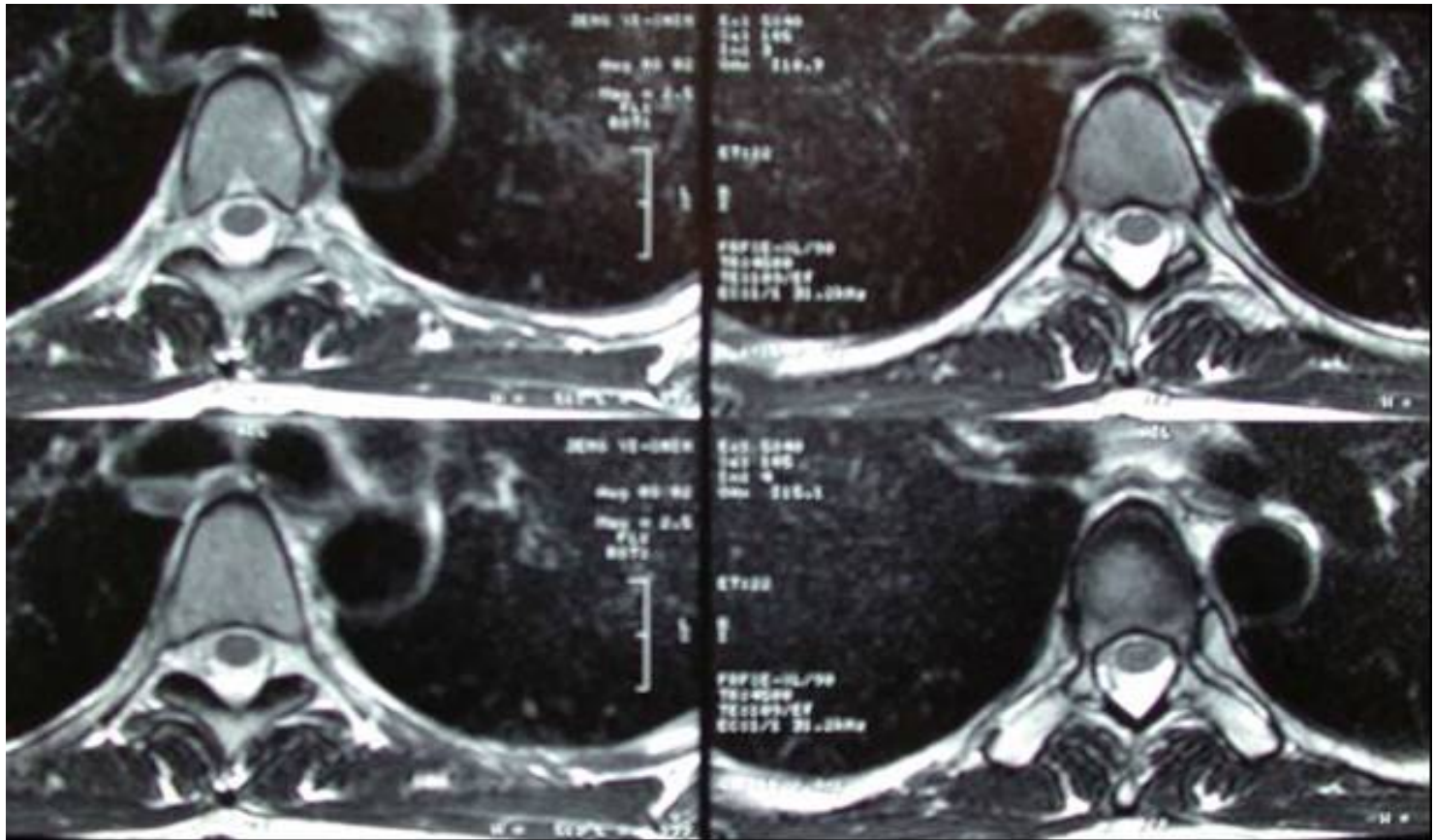
K 3.8

Ca 9.3

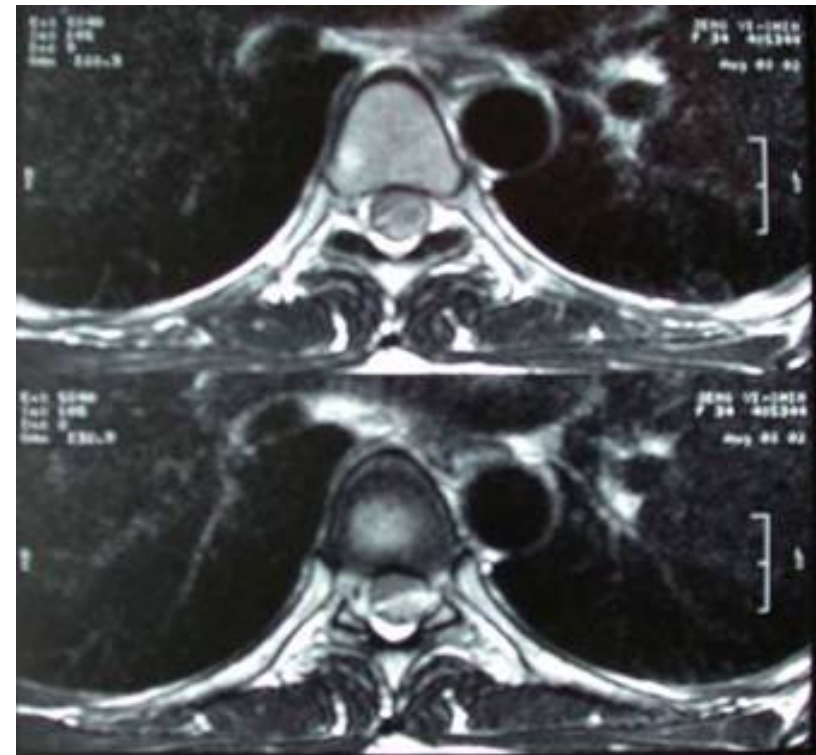
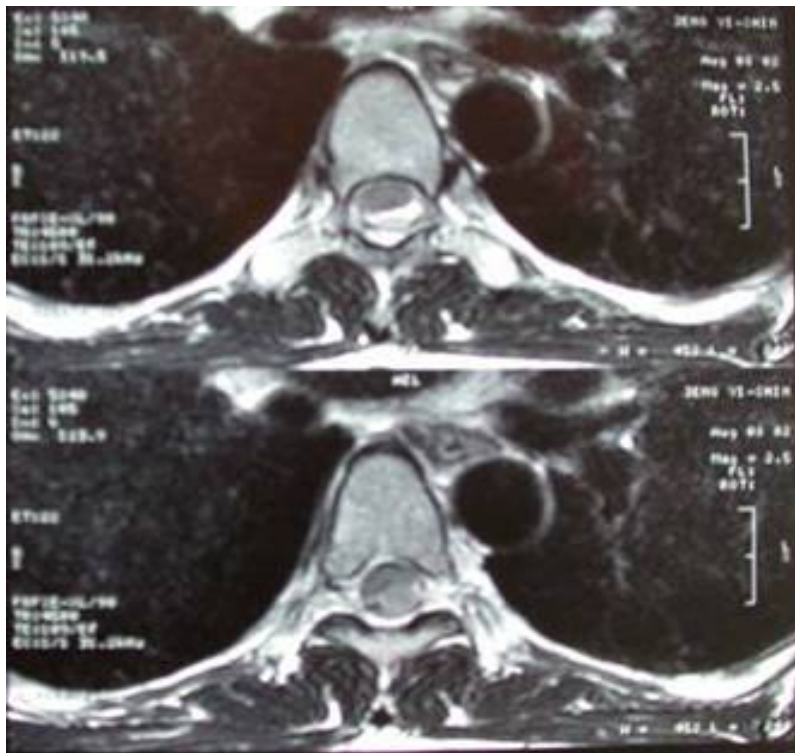
T2WI



T2WI



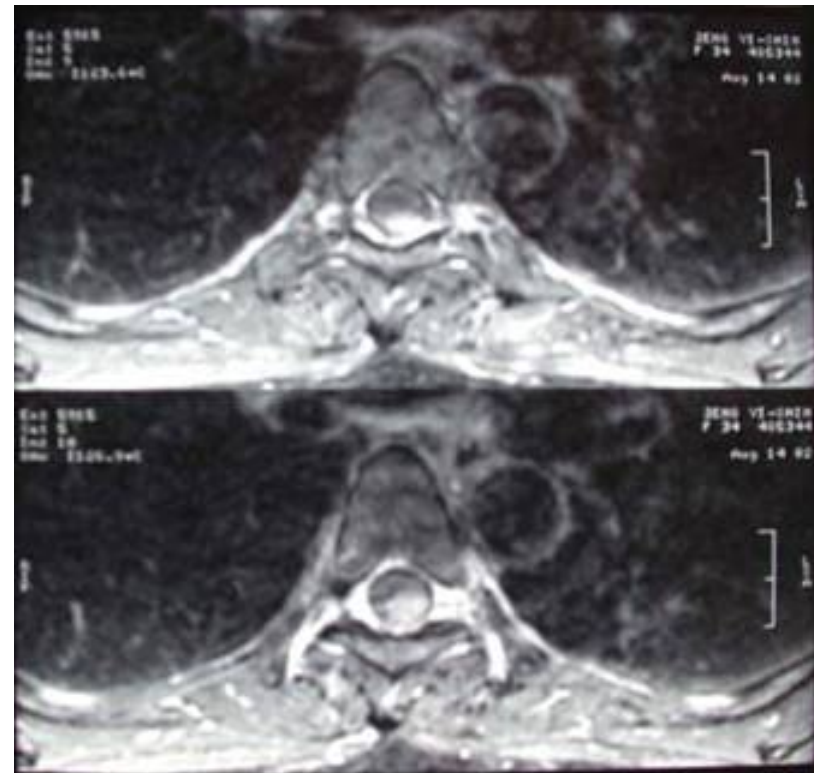
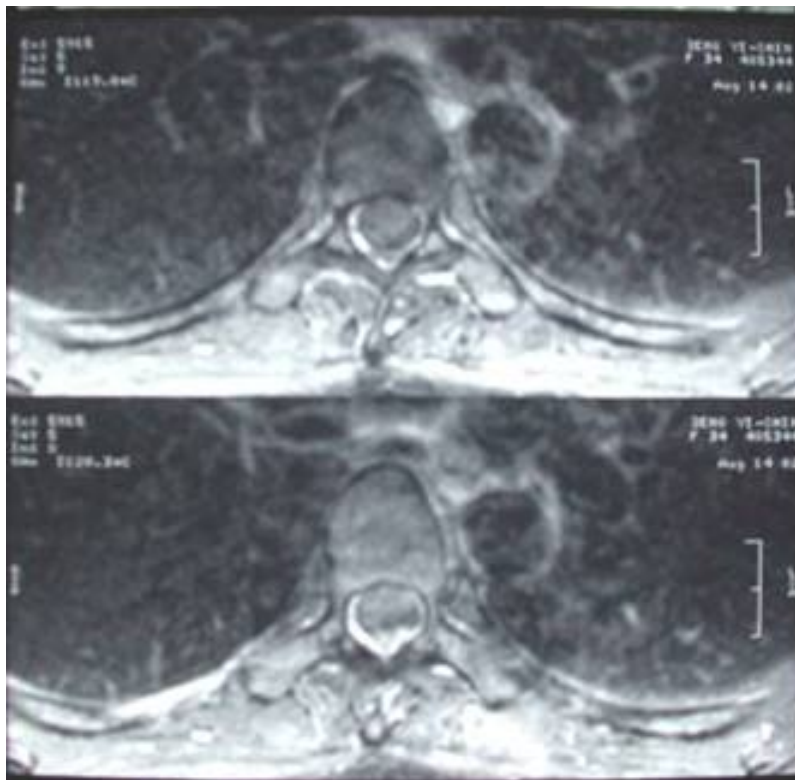
T2WI



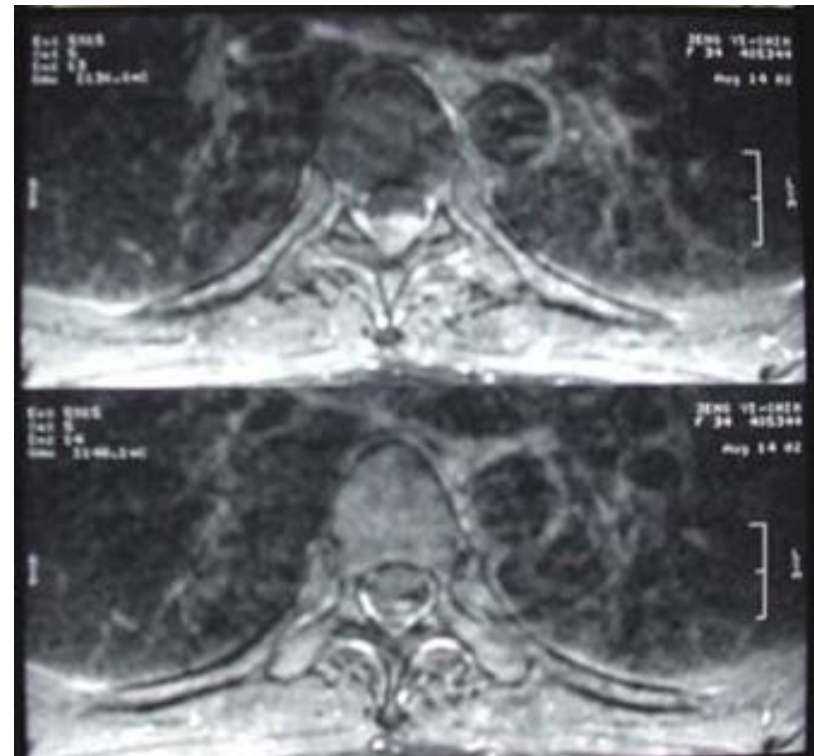
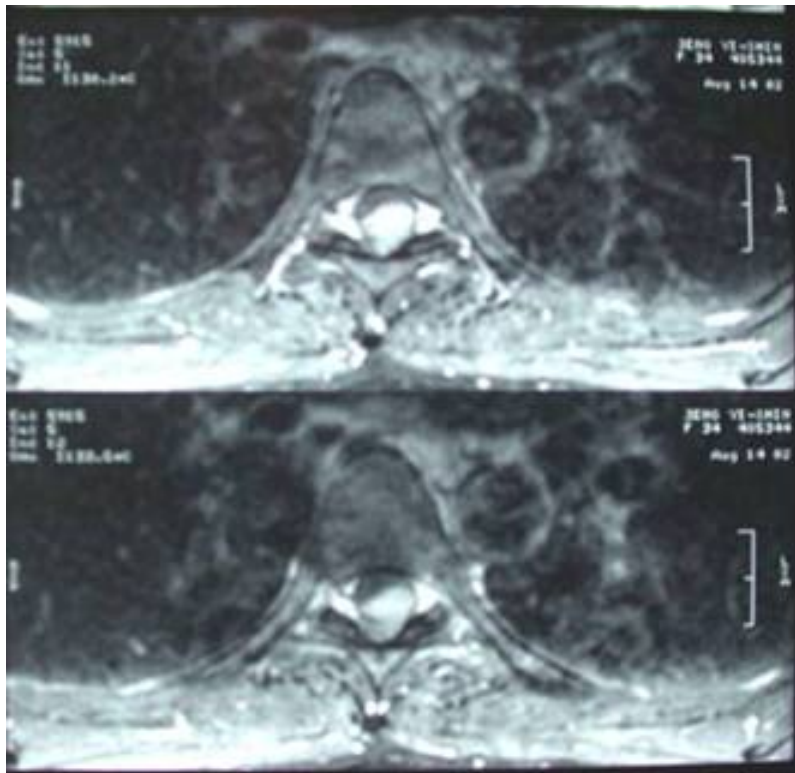
T1WI

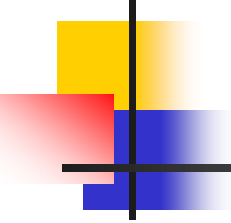


Post-Contrast T1WI



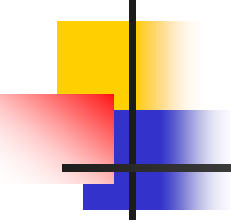
Post Contrast T1WI





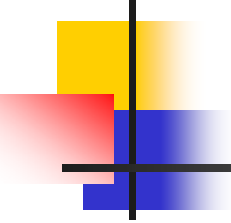
Impression

- Intradural extramedullary tumor R/O Meningioma



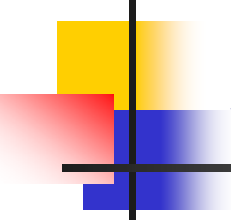
Spinal Tumor

- Extradural tumors
- Intradural extramedullary tumors
- Intramedullary tumors



Intramedullary tumors

- Astrocytoma
- Ependymoma
- Hemangioblastoma

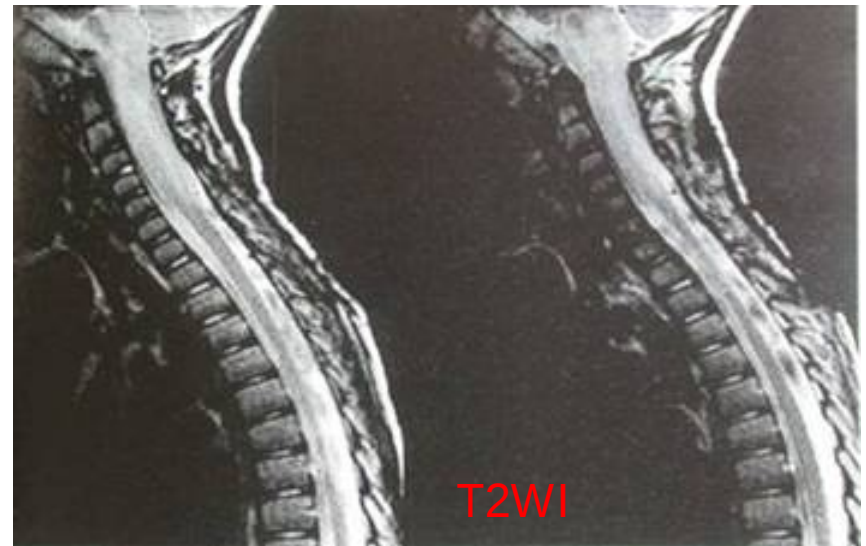
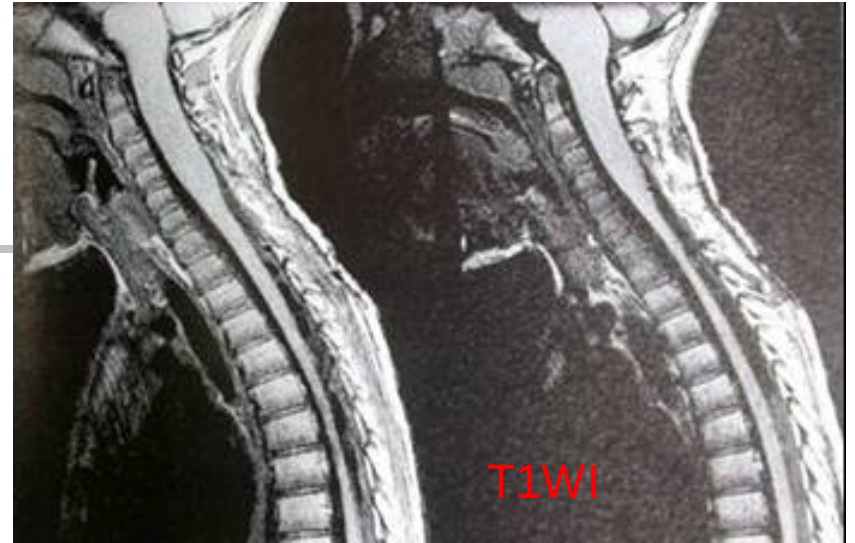


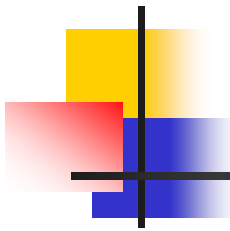
Astrocytoma

- More common in children
- Often locates in the thoracic cord
- Symptom is usually not specific
- Pain, gait difficulties and bladder dysfunction
- Plain film shows widening of the spinal canal and bony erosion

Astrocytoma

- On T1W image: low signal intensity
- On T2W image: lesion and associated edema are high signal intensity
- After contrast: enhance
- Treatment: surgery followed by radiotherapy





Ependymoma

- More often in **intracranial** than intraspinal
- Most often in **lower spinal cord**, conus medullaris and filum terminate
- Back or neck pain with radiation
- Erosion of the posterior surface of the vertebral body
- Iso or hypointense in T1WI, heterogeneous in T2WI

Ependymoma



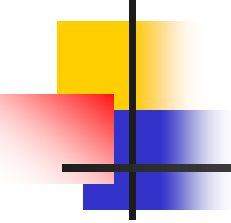
T1WI



T2WI

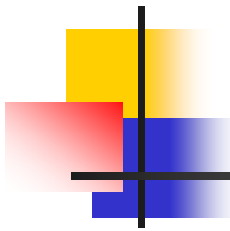


Contrast



Intradural Extramedullary Tumor

- Meningiomas
- Neurofibromas(Nerve sheath tumor)



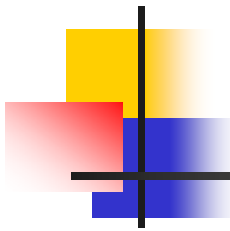
Nerve Sheath Tumor

- Most common **intraspinal** lesion
- Pain and radiculopathy
- Plain film shows posterior scalloping of the vertebral body and widening of the neural foramen

Nerve Sheath Tumor

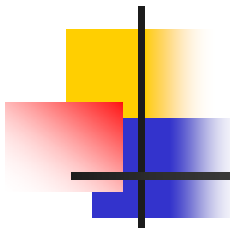


- T1WI: increased signal intensity
- T2WI: markedly increased signal intensity



Meningioma

- Usually in adults of 5th and 6th decade
- 60-80% in **females**
- Tend to be encapsulated and attached to dura
- 80% in the location of **thoracic spine**
- Pain, radicular pain, paresthesias, numbness, weakness, bowel or bladder abnormalities

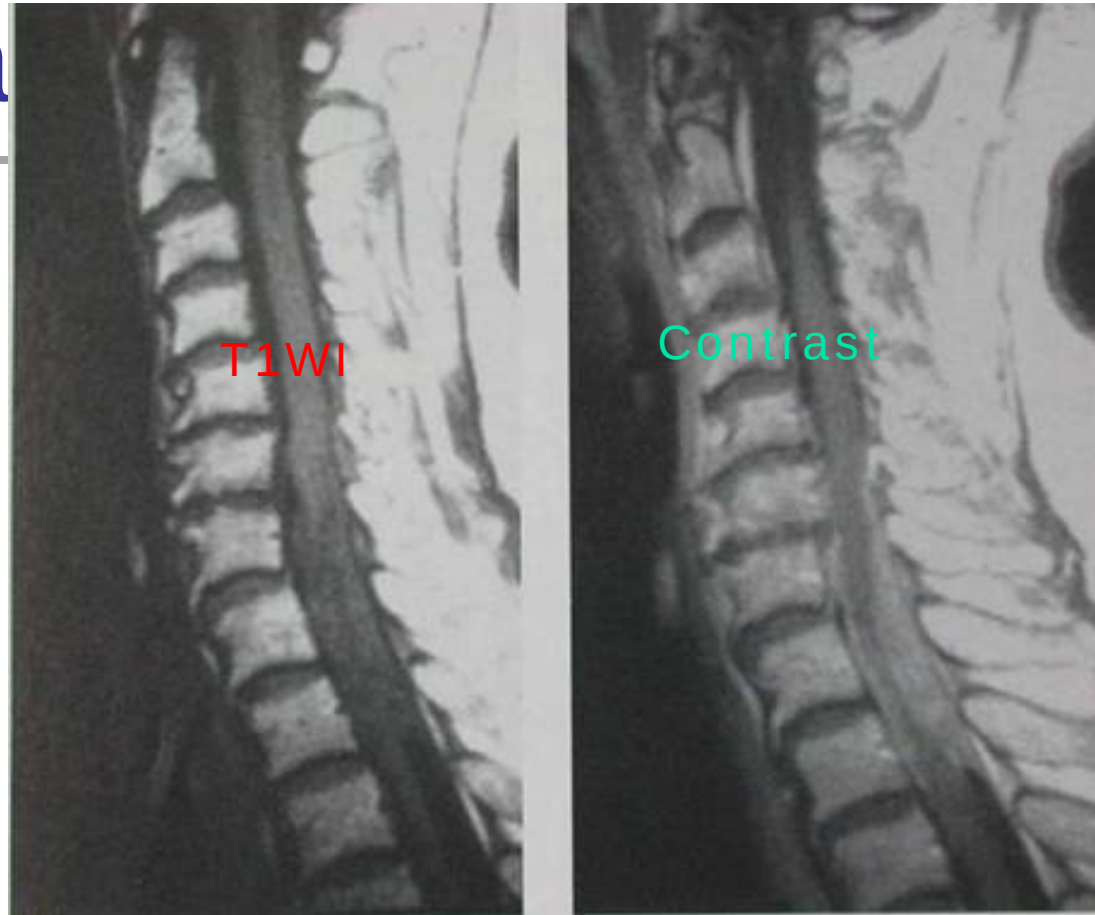


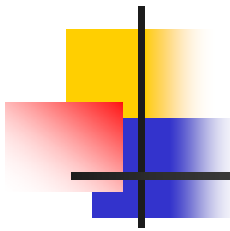
Meningioma

- Pedicle erosion and widening of the neural foramen
- CT: iso- or slightly hyperintense

Meningioma

- MRI T1WI: iso- or hypointense
- T2WI: slightly hyperintense
- Contrast: **enhance immediately**, intensely and homogenously



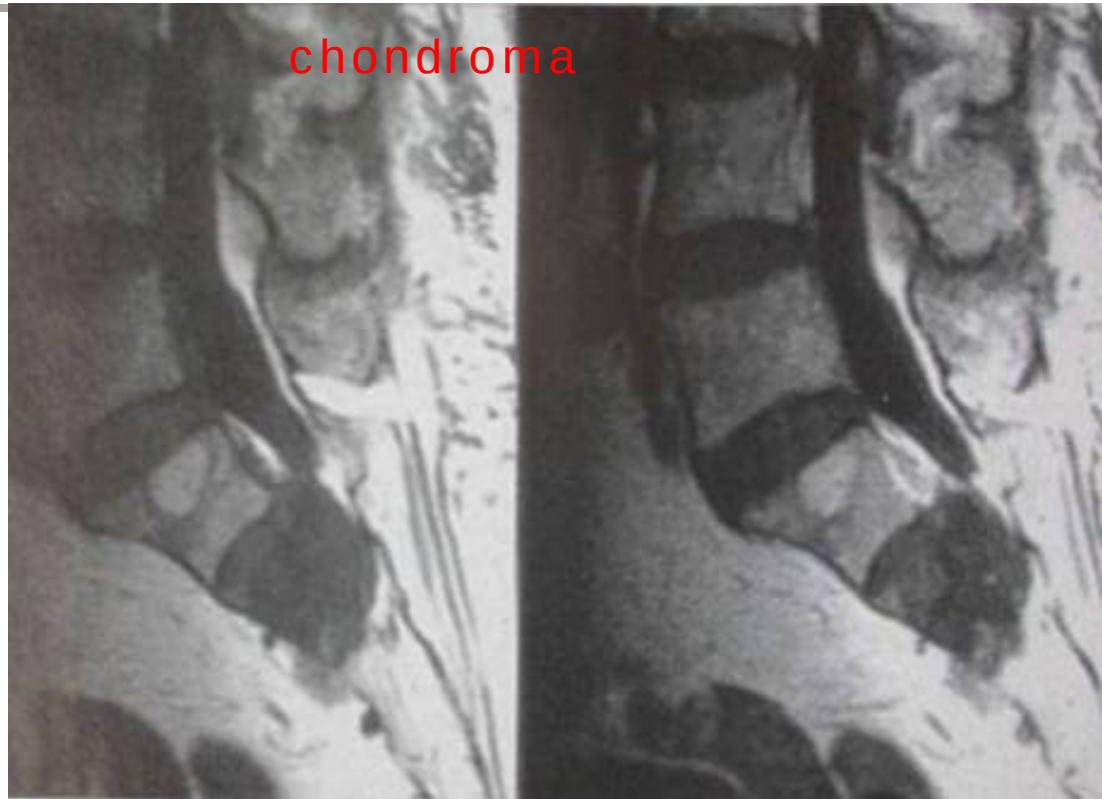


Nerve sheath tumor VS Meningioma

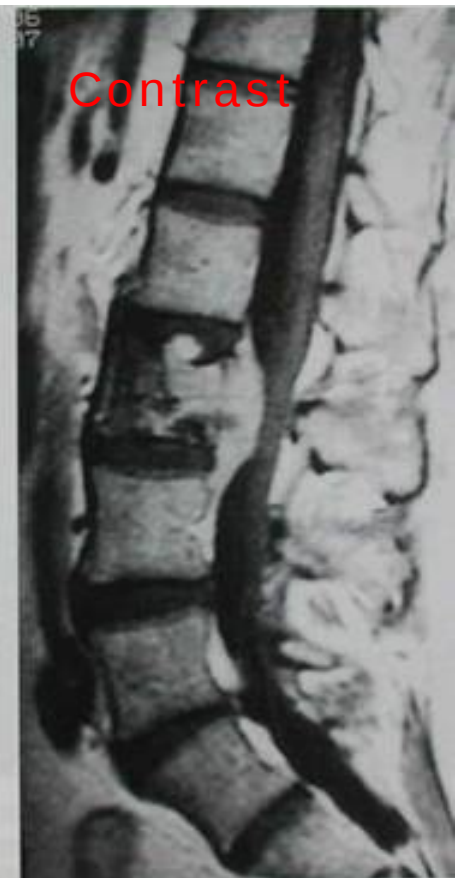
- Neural tumor tend to be located more anteriorly in the spinal canal
- Neurofibroma tends to be multiple, meningioma is usually solitary
- Nerve sheath tumor are not attached to the dura and have more mobility than meningioma
- Neural tumor can have a central area of decreased signal on T2WI that meningioma can't

Extradural Tumor

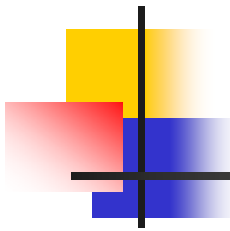
- Bone tumors
- Hemangioma
- Secondary tumor (Metastasis)



Extradural Tumor

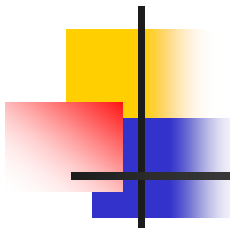


Vertebral hemangioma



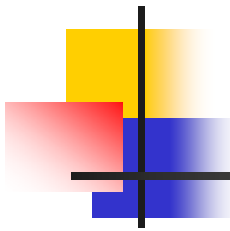
Metastatic disease to spine and Extradural space

- Myeloma(77%), breast cancer(61%), prostate(50%), stomach(44%), lymphoma(40%)
- The site of epidural tumor is mostly in thoracic spine (68%)
- Back pain is initial symptom in 80-90% patients



Metastatic disease to spine and Extradural space

- MR is extremely sensitive to detect the metastasis to vertebral body and extradural space
- Multiplicity strongly suggests metastasis
- T1W image: low intensity
- T2W image: varied appearance



Pathological Finding

- The specimen is 1.2*0.8*0.7 cm
- Grossly is brownish and elastic nodule accompanied by some meningeal tissue fragments and some vertebral bone chips
- Microscopically the brownish nodule shows a picture of meningioma with meningothelial pattern. Psammoma bodies are included.
- Invasion of vertebral body bones by meningioma is also found but it is not a sign of malignancy