

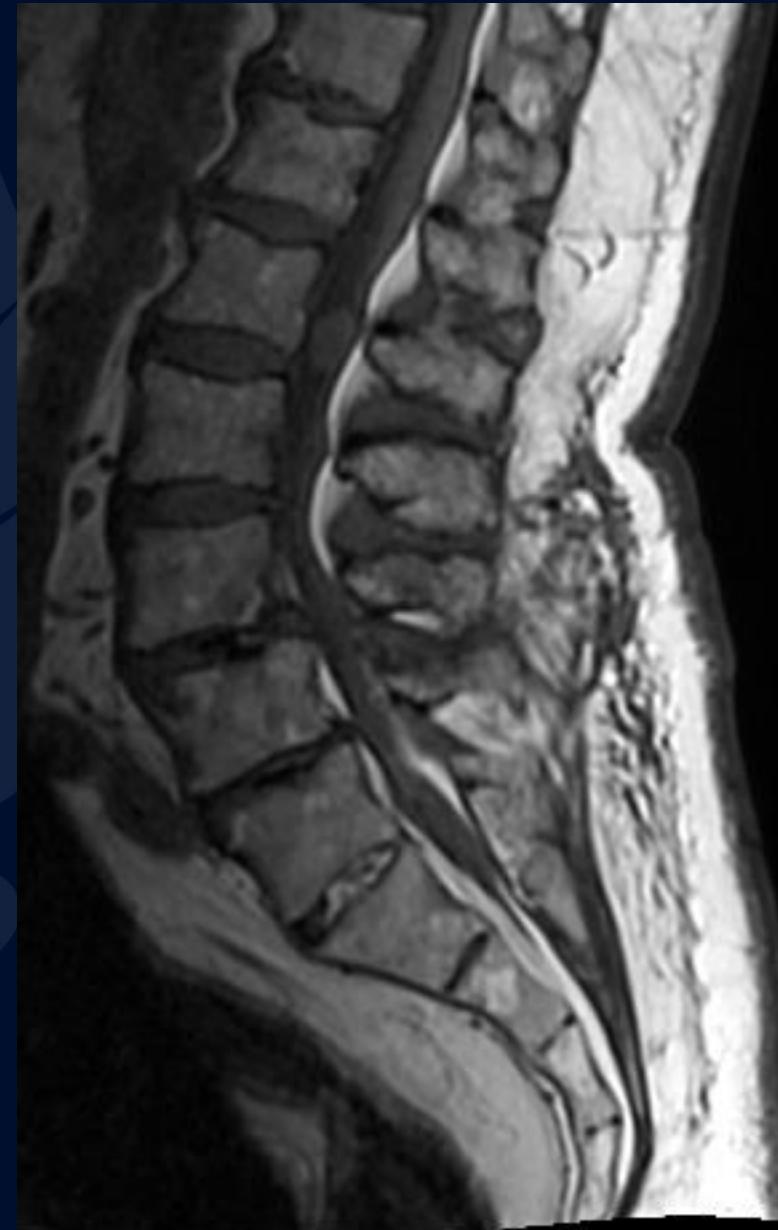


49-year-old female presenting with
low back pain and radiculopathy

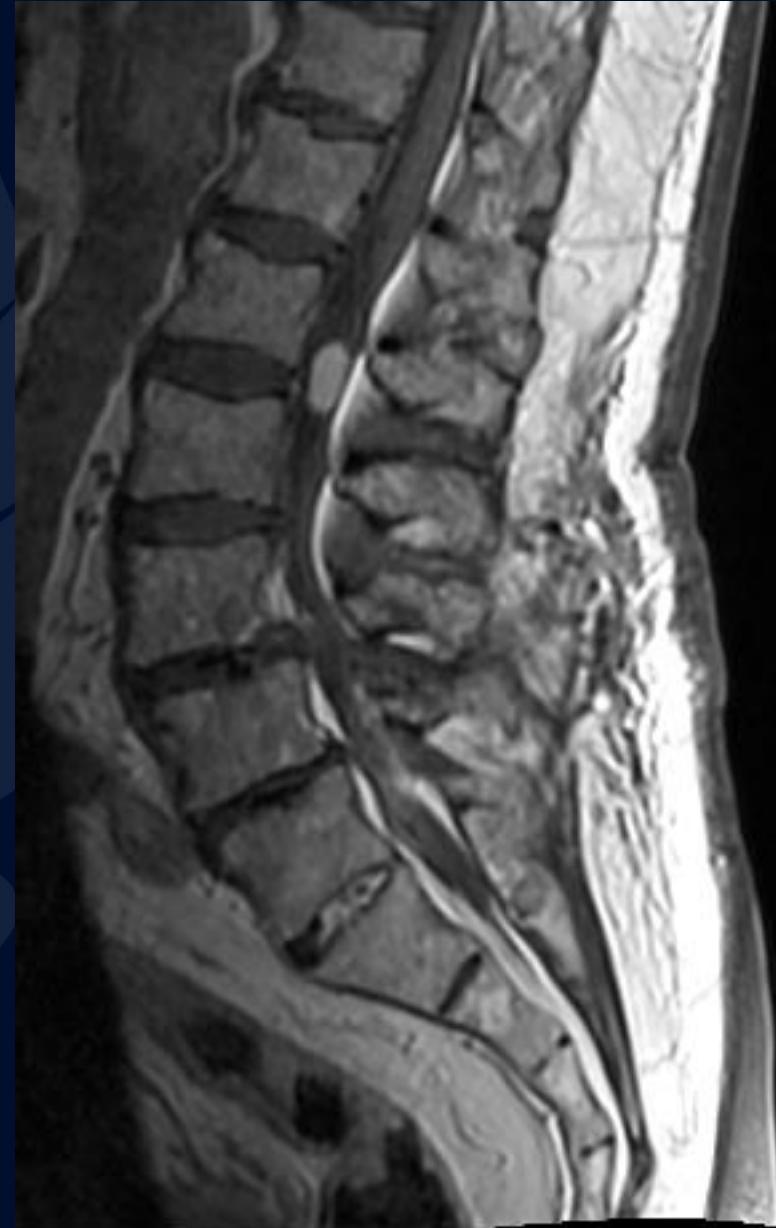
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MRI Sagittal T1



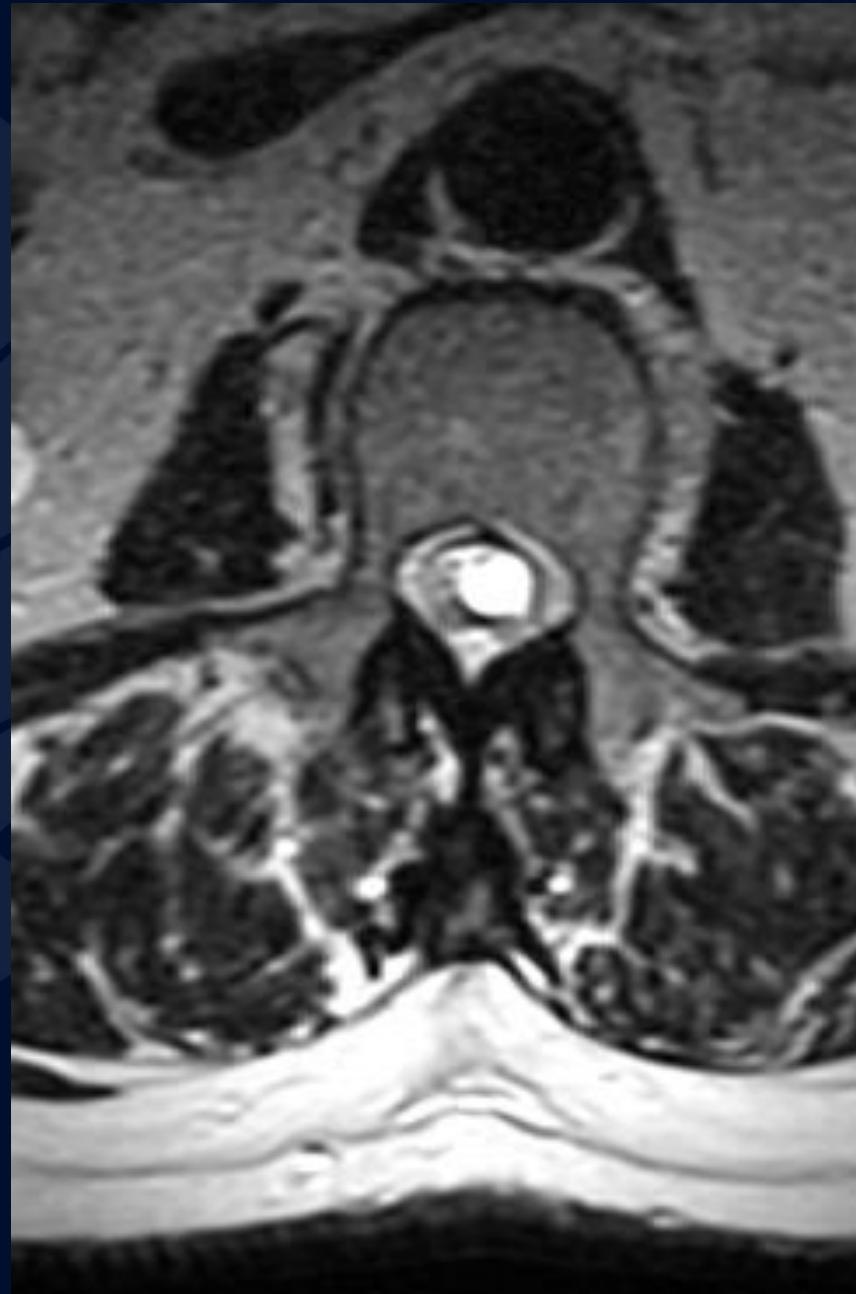
MRI Sagittal T1 + Gad



MRI Sagittal T2



MRI Axial T2





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Spinal Schwannoma

MRI Sagittal T1

Isointense lesion
in the within the
spinal canal



MRI Sagittal T1 + Gad

Enhancing lesion
within the spinal canal



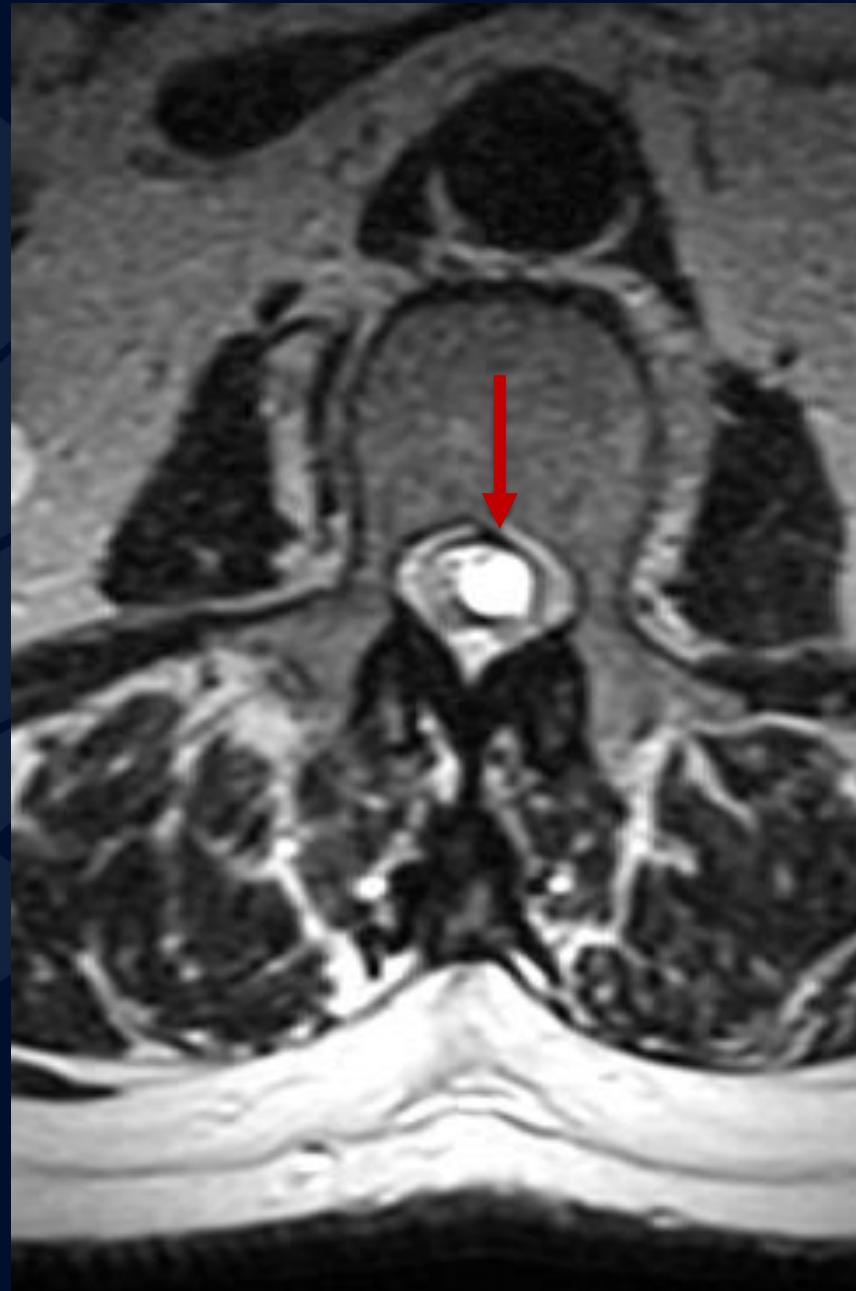
MRI Sagittal T2

T2 hyperintense
lesion in the within
the spinal canal



MRI Axial T2

T2 hyperintense
lesion in the within
the spinal canal



Spinal Schwannoma

Spinal Schwannomas typically arise from the dorsal sensory nerve roots, most commonly causing pain and radiculopathy

- Effects males and females equally in their 50-70s
- Well defined lesions on imaging with no evidence of invasion
- Associated with Neurofibromatosis Type 2

Differential

- Neurofibromatosis
- Meningioma
- Paraganglioma
- Myxopapillary Ependymoma
- Intradural Extramedullary Metastases

Imaging Findings

CT

- Low to intermediate attenuation
- Adjacent bone remodeling
- Intense contrast enhancement
 - Smaller tumors appear homogenous
 - Larger tumors appear heterogenous

MRI

- T1
 - Most are isointense (75%) with some being hypointense (25%)
- T1 C+
 - Enhancement (100%)
- T2
 - Nearly always hyperintense (95%)
 - Hemosiderin rim (with larger lesions) can appear hypointense

References

Gaillard F, Weerakkody Y, Ashraf A, et al. Spinal schwannoma. Reference article, Radiopaedia.org (Accessed on 17 Oct 2023) <https://doi.org/10.53347/rID-4745>

Wein S, Patel M, Yap J, et al. Schwannoma. Reference article, Radiopaedia.org (Accessed on 17 Oct 2023) <https://doi.org/10.53347/rID-19575>

Skolnik AD, Loevner LA, Sampathu DM, Newman JG, Lee JY, Bagley LJ, Learned KO. Cranial Nerve Schwannomas: Diagnostic Imaging Approach. *Radiographics*. 2016 Sep-Oct;36(5):1463-77. doi: 10.1148/rg.2016150199. Epub 2016 Aug 19. PMID: 27541436.

Stemmer-Rachamimov AO, Jo VY, Rodriguez FJ, Reuss DE, Schwannoma. In: WHO Classification of Tumours Editorial Board. Central nervous system tumours. Lyon (France): International Agency for Research on Cancer; 2021. (WHO classification of tumours series, 5th ed.; vol. 6).

Grossman RI, Yousem DM. Neuroradiology, the requisites. Mosby Inc. (2003) ISBN:032300508X.