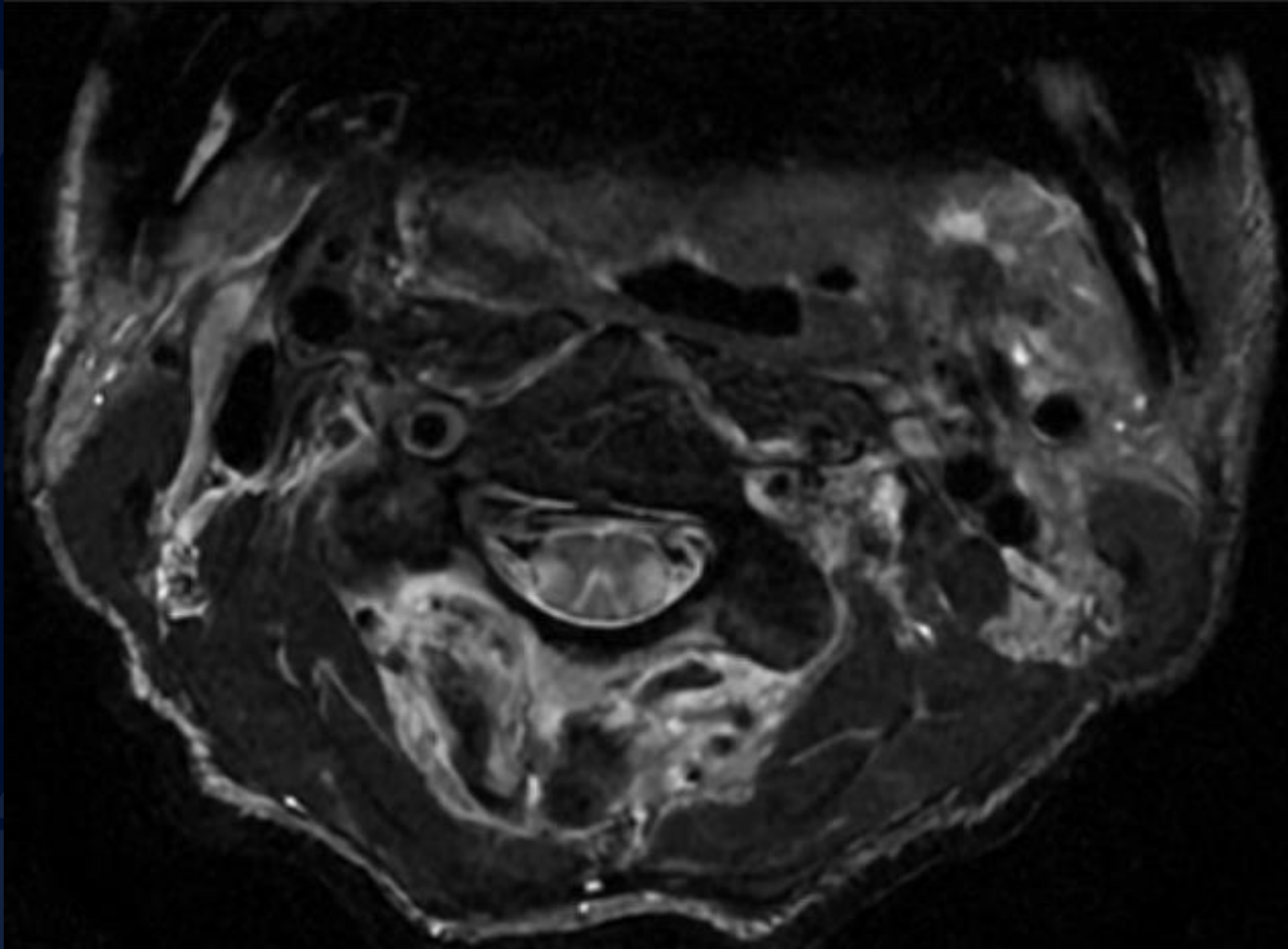
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide, partially overlapping the text.

74-year-old man with leg paresthesias and altered sense of taste

Emilse Almanza, MS3

Cervical Axial T2



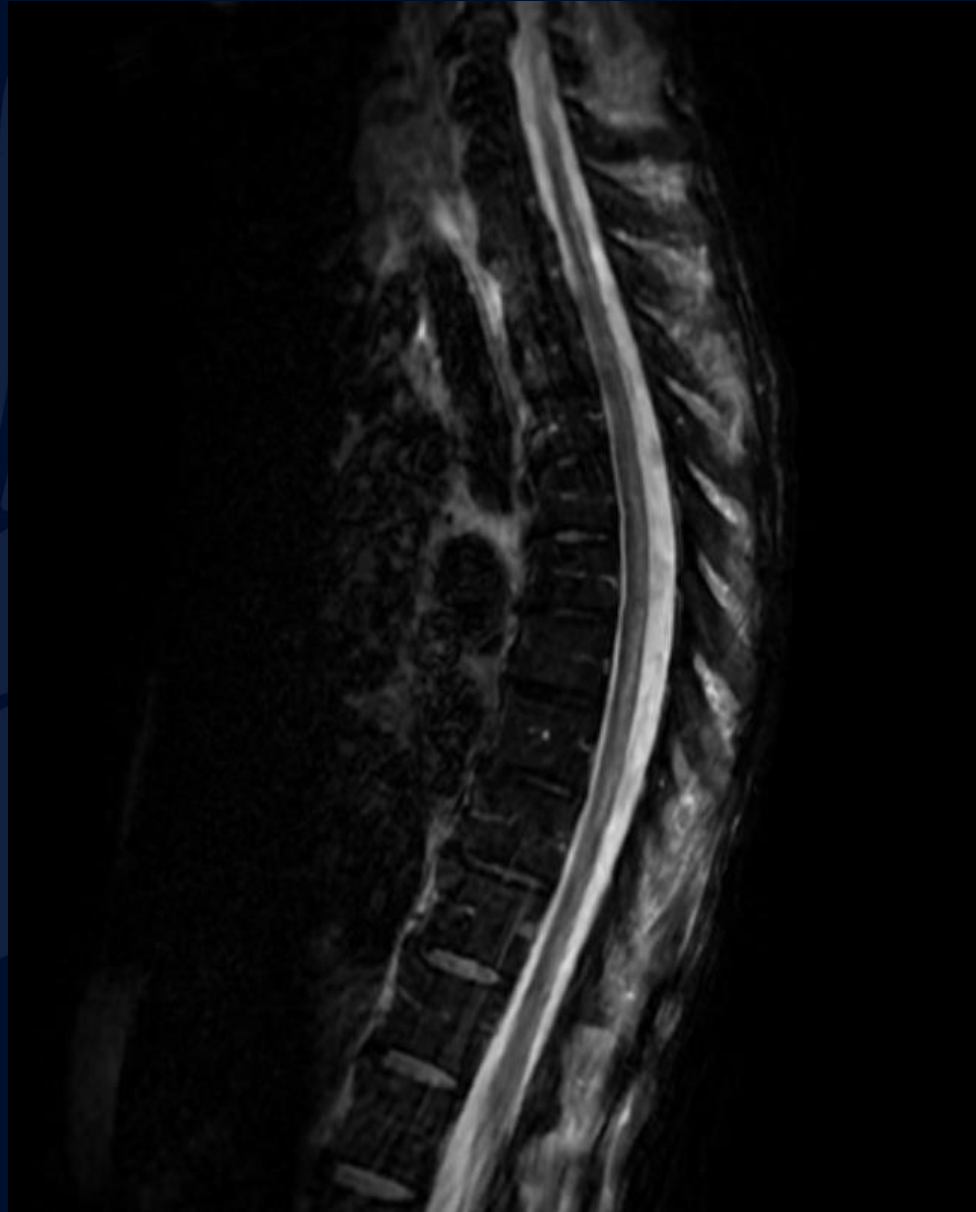
Cervical Sagittal STIR



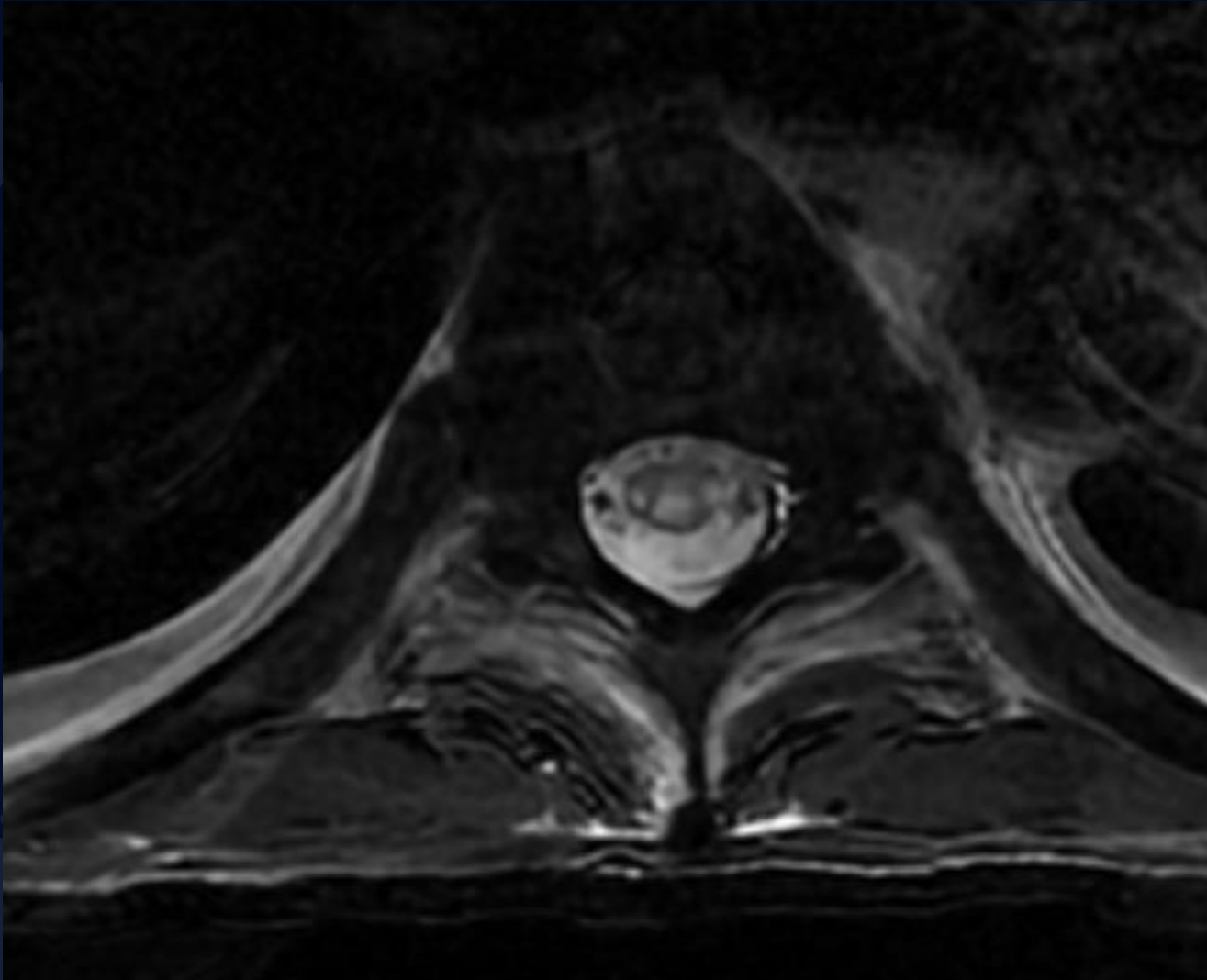
UConn
HEALTH

RADIOLOGY

Thoracic Sagittal STIR



Thoracic Axial T2

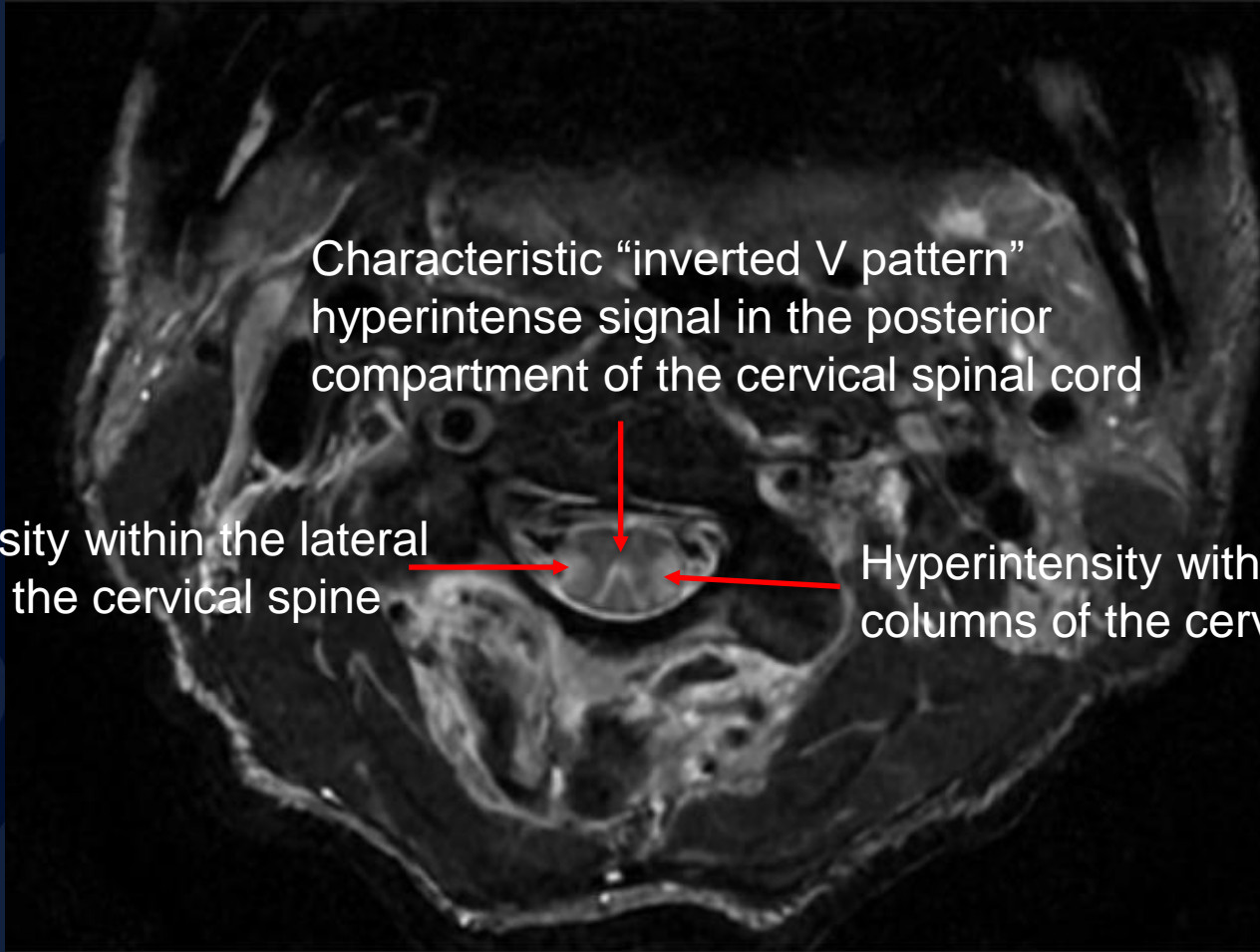




?

Subacute Combined Degeneration

Cervical Axial T2

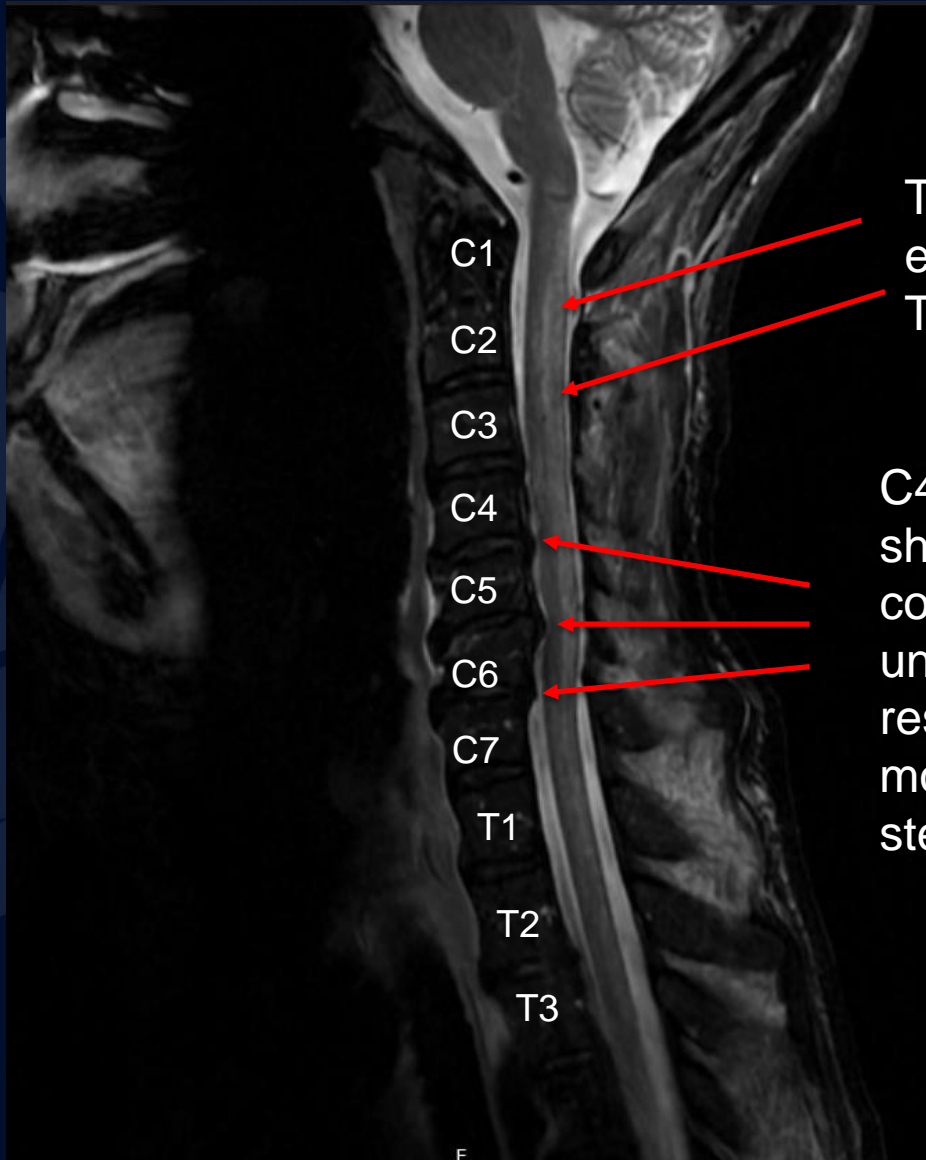


Characteristic “inverted V pattern”
hyperintense signal in the posterior
compartment of the cervical spinal cord

Hyperintensity within the lateral
columns of the cervical spine

Hyperintensity within the lateral
columns of the cervical spine

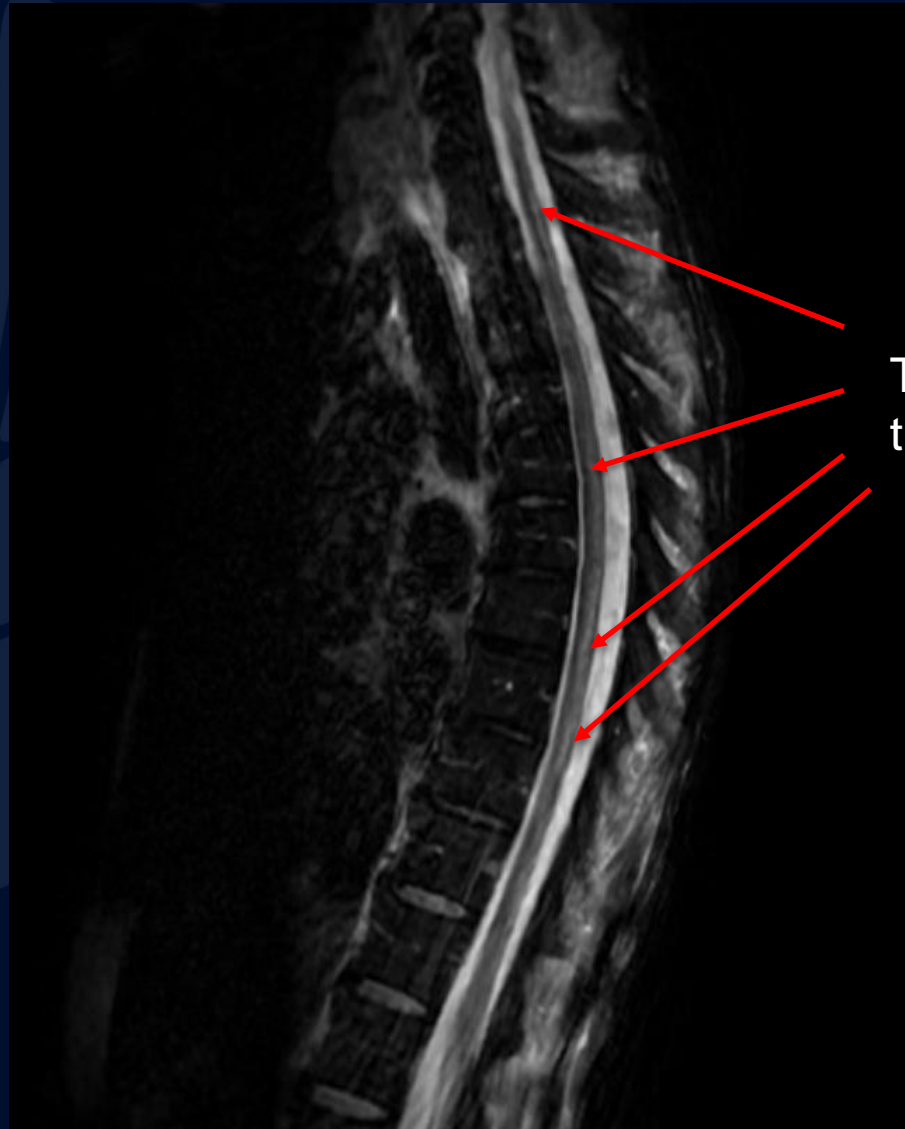
Cervical Sagittal T2



T2 hyperintense signal extending down from C1 to T12 (next slide)

C4-C5, C5-C6, C6-C7 show disc osteophyte complex with uncovertebral hypertrophy resulting in mild to moderate spinal canal stenosis

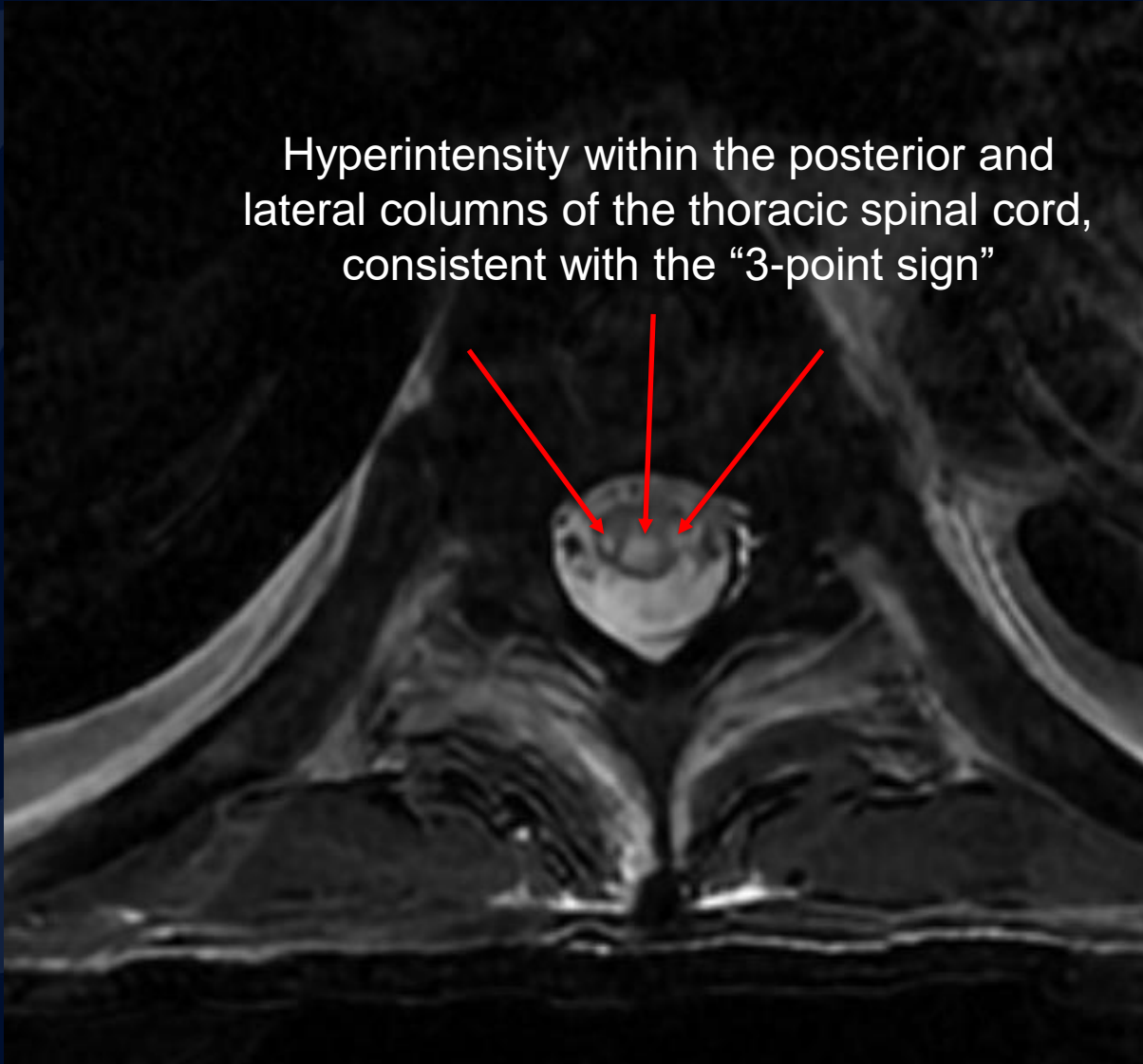
Thoracic Sagittal STIR



T2 hyperintense signal in the thoracic cord

Thoracic Axial T2

Hyperintensity within the posterior and lateral columns of the thoracic spinal cord, consistent with the “3-point sign”



Subacute Combined Degeneration (SCD)

- SCD:
 - Relatively rare myelopathy mainly caused by vitamin B12 deficiency and characterized by demyelination of the posterior columns of the cervical and/or thoracic spinal cord
- Clinical presentation:
 - Progressive weakness, ataxia, symmetric paresthesias that may progress to spasticity and paraplegia
 - Other findings can include depression, irritability, insomnia, cognitive slowing, visual disturbances, peripheral sensory deficits and abnormal deep tendon reflexes
- MRI findings commonly seen in SCD including:
 - Symmetric bilateral hyperintensities within the dorsal columns → Inverted “V” sign
 - Hyperintensities within the lateral columns involving the lateral corticospinal tract and sometimes the lateral spinothalamic tract as well

References

- Stabler SP. Clinical practice. Vitamin B12 deficiency. *N Engl J Med* 2013; 368:149.
- Green R, Datta Mitra A. Megaloblastic Anemias: Nutritional and Other Causes. *Med Clin North Am* 2017; 101:297.
- Hemmer B, Glocker FX, Schumacher M, et al. Subacute combined degeneration: clinical, electrophysiological, and magnetic resonance imaging findings. *J Neurol Neurosurg Psychiatry* 1998; 65:822.
- Zhang HN, Wang L, Sun L, Yang Y. Three-point sign in subacute combined degeneration of the spinal cord: A case report. *Medicine (Baltimore)*. 2018 Aug;97(31):e11620. doi: 10.1097/MD.00000000000011620. PMID: 30075538; PMCID: PMC6081136.
- Krishnan AV, Halmagyi GM. Acute transverse myelitis in SLE. *Neurology* 2004; 62:2087.
- Kumar N, Gross JB Jr, Ahlskog JE. Copper deficiency myelopathy produces a clinical picture like subacute combined degeneration. *Neurology* 2004; 63:33.
- Cheshire WP, Santos CC, Massey EW, Howard JF Jr. Spinal cord infarction: etiology and outcome. *Neurology* 1996; 47:321.
- Vasconcelos OM, Poehm EH, McCarter RJ, et al. Potential outcome factors in subacute combined degeneration: review of observational studies. *J Gen Intern Med* 2006; 21:1063.
- Lukehart SA, Hook EW 3rd, Baker-Zander SA, et al. Invasion of the central nervous system by *Treponema pallidum*: implications for diagnosis and treatment. *Ann Intern Med* 1988; 109:855.
- <https://radiopaedia.org/articles/subacute-combined-degeneration-of-the-cord-1?lang=us>