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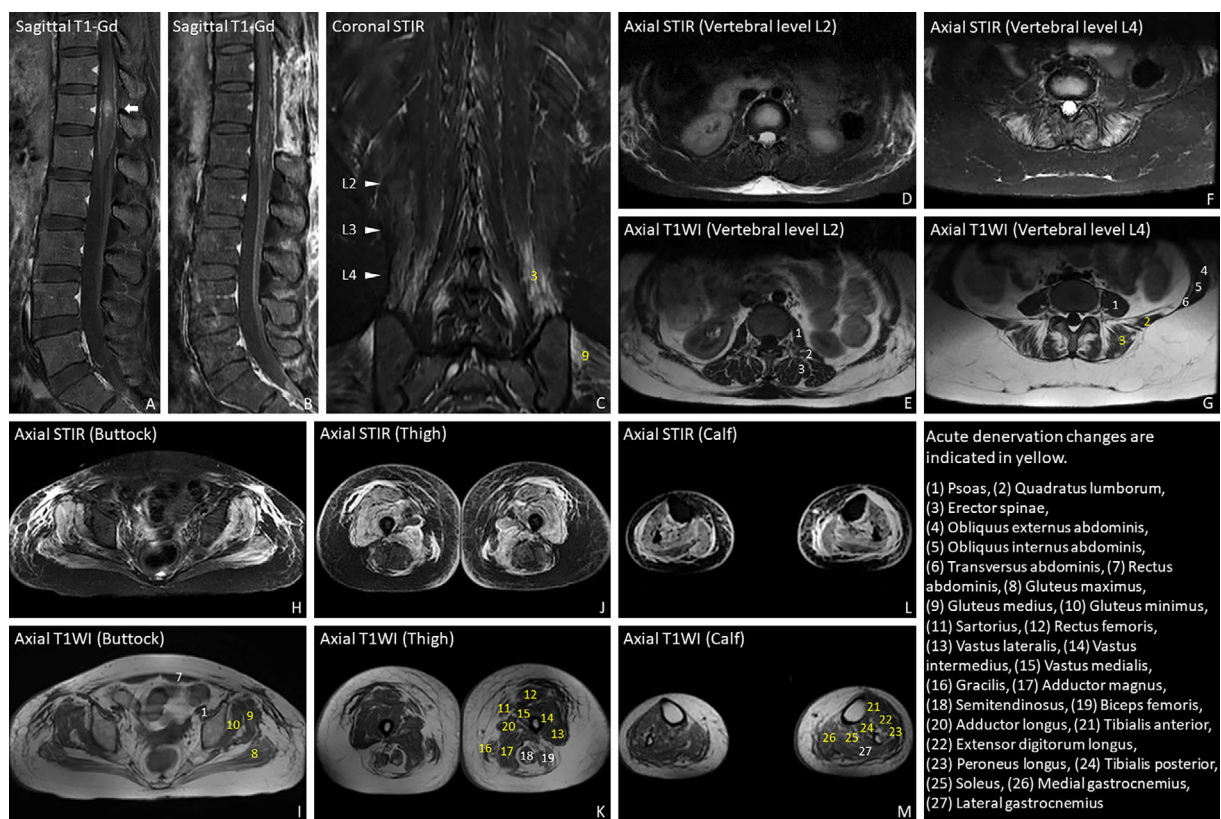
## MRI Mapping of Muscle Denervation in Metastatic Myelopathy

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**Picture.**

A 38-year-old woman with anaplastic lymphoma kinase-positive lung adenocarcinoma presented with acute leg weakness. On examination, she had flaccid paraplegia, bladder dysfunction, and sensory disturbance below the third lumbar (L3) level on all modalities. MRI revealed a conus medullaris lesion with gadolinium enhancement (Picture A). Under a diagnosis of spinal cord metastasis of lung cancer, the patient underwent resection of the spinal cord tumor

(Picture B) and treatment with alectinib. However, her neurological symptoms did not improve. Her serum CK level was not elevated. Needle electromyography showed abundant fibrillation and positive sharp waves in the right rectus femoris and tibialis anterior muscles. Muscle MRI at 3 months after the onset of myelopathy revealed acute denervation changes-with high intensity on short tau inversion recovery (STIR) images with T1 iso-intensity-in the paraspinal

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muscles below L3, as well as in the muscles of the buttock, thigh, and calf (numbered in yellow in Picture C-M) (1, 2). MRI showed no signal changes in muscles innervated by segments higher than L3 (numbered in white in Picture C-M). Myotomal mapping clearly disclosed segmental motor impairment at L3 to L5 and part of the S1 spinal cord segment.

**The authors state that they have no Conflict of Interest (COI).**

## References

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