

## Case Description

- Case: 70-year-old male presented to ED with worsening:



### Past Medical History:

- Myocardial infarct
- Diabetic neuropathy
- Stroke (no deficits)
- Lumbar decompression

### Social History: retired carpenter

### Family History: unknown (adopted)

### Home Medications:

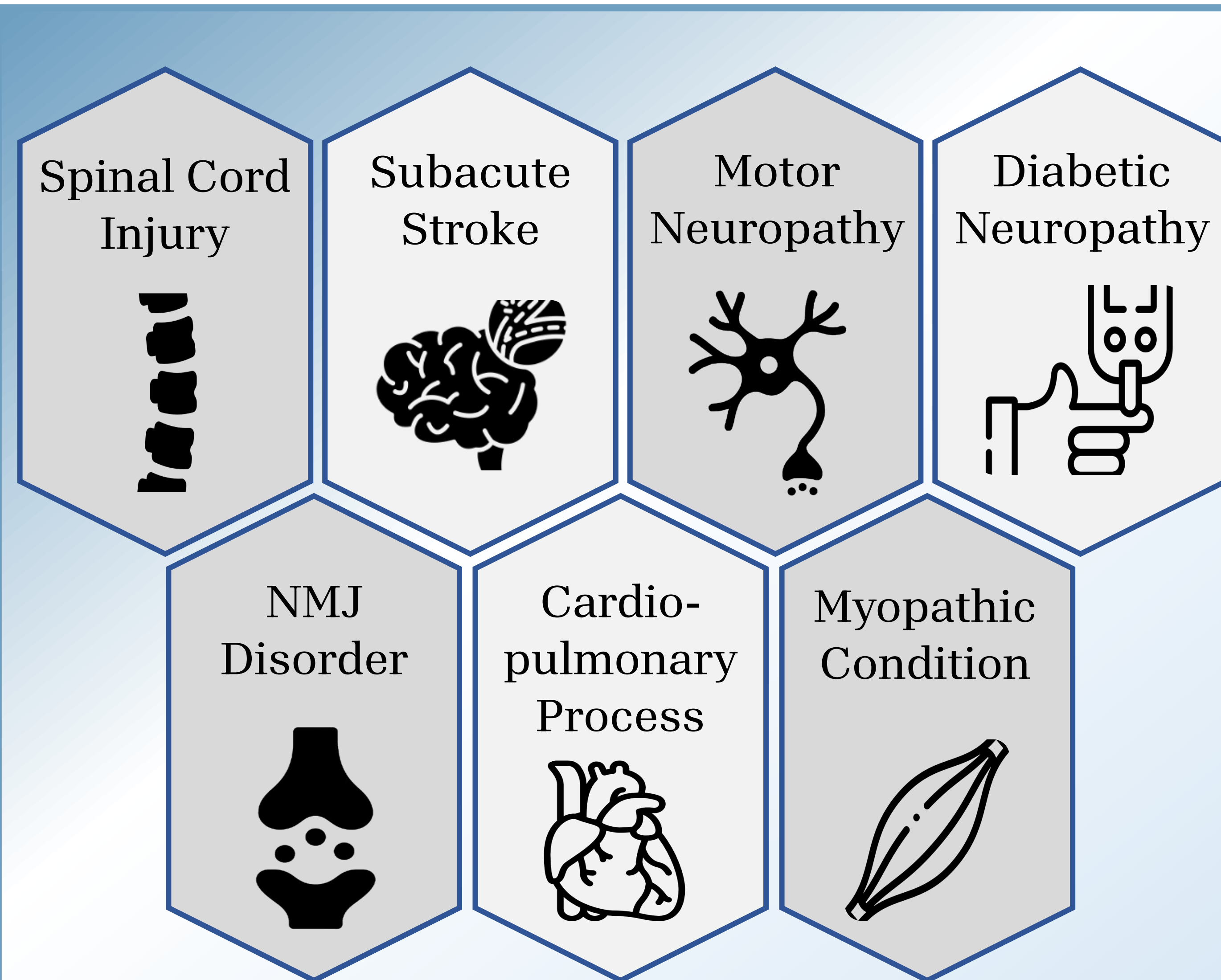
- Gabapentin
- Rosuvastatin
- Tamsulosin
- Sertraline
- Metoprolol
- Ranolazine

To understand the complexity of diagnosing progressive proximal muscle weakness in older adults with comorbidities

## Clinical Timeline

- 06/xx/24: Onset of leg weakness and falls
- 12/20/24: Increased falls, started using walker
- 01/24/25: Admitted to acute care hospital, initial workup completed, statin discontinued
- 01/31/25: Admitted to acute rehab at minimal assist for mobility and activities of daily living
- 02/06/25: Muscle biopsy suggests lipid storage myopathy → pulmonary function & nutritional evaluations
- 02/14/25: Discharged home with dx, supervision level, initiated treatment, & neuromuscular follow-up

## Differential Diagnosis



## Finalized Diagnosis

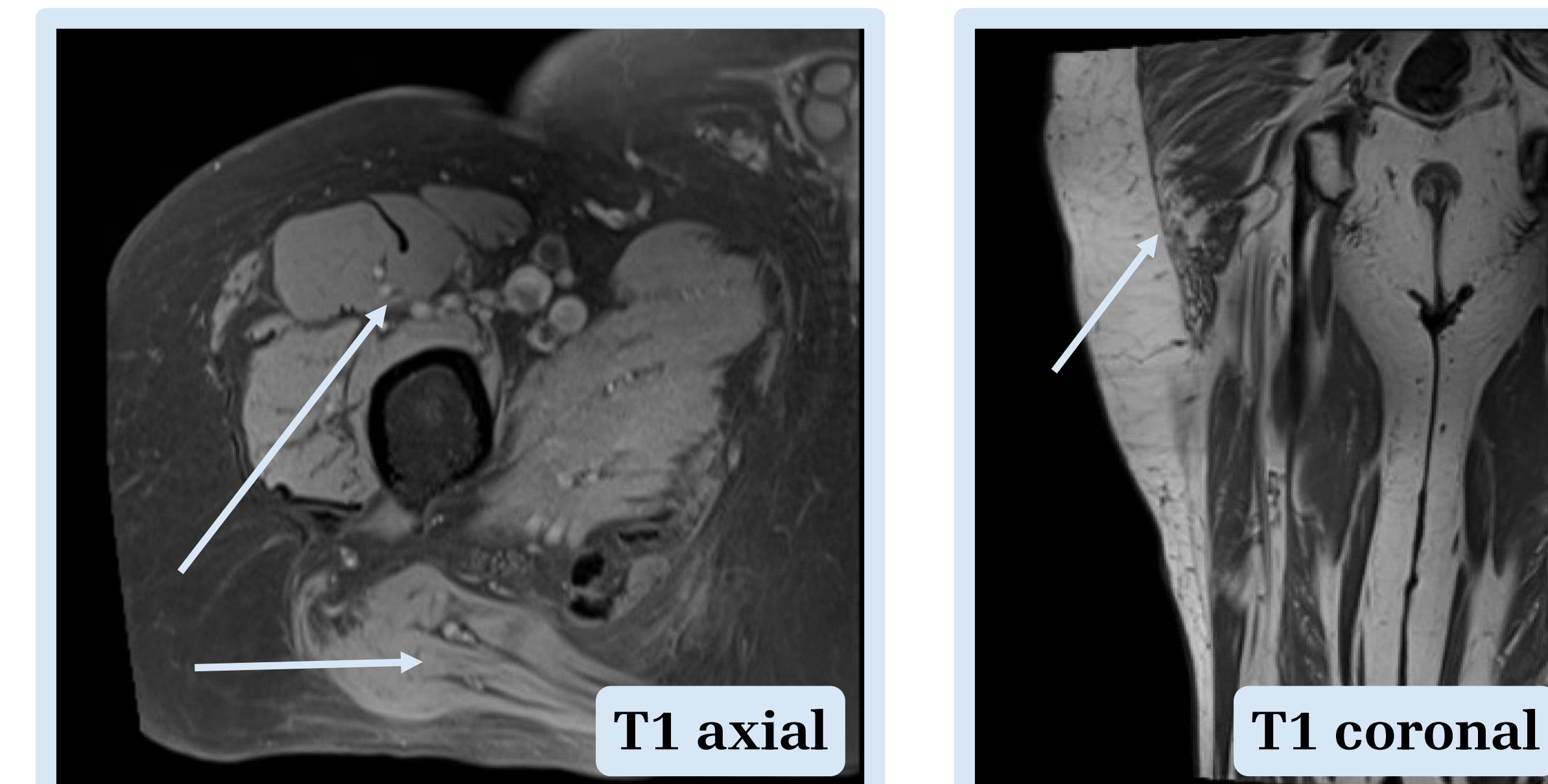


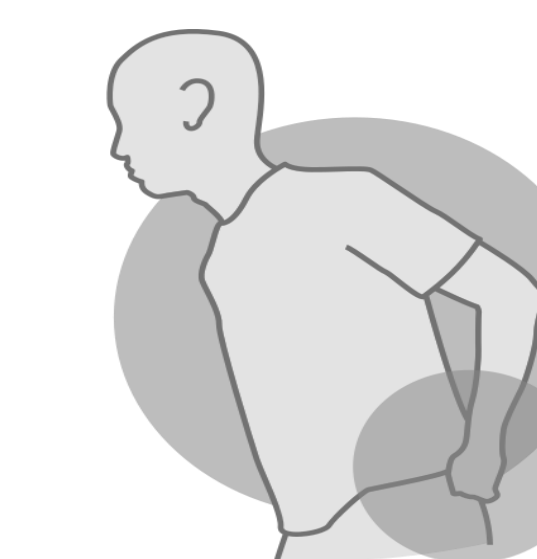
Figure 1. MRI of the proximal thigh and gluteal muscles showing fatty infiltration bilaterally

- Thigh Muscle Biopsy:** atrophic muscle fibers with increased sarcoplasmic lipid content indicate lipid storage myopathy (LSM)
- Urine Organic Acids:** elevated fatty acid metabolites bolster LSM diagnosis, including Multiple Acyl-CoA Dehydrogenase Deficiency (MADD) and Riboflavin Responsive Myopathy (RRM)

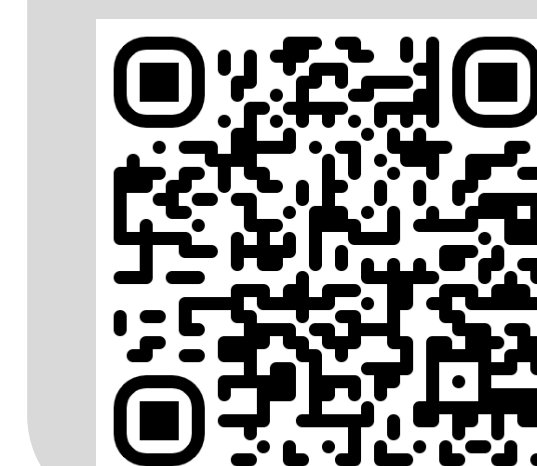
Clinicians should consider rare metabolic myopathies like LSM in the differential for unexplained proximal muscle weakness

## Discussion

- Late onset proximal weakness suggests a milder form of LSM with improved prognosis if treated promptly
- MADD and RRM are rare LSMs that can mimic common neuromuscular disorders. Sertraline has been associated with acquired MADD, and ranolazine linked with acquired LSM
- Timely diagnosis enables early treatment, improved function, quality of life, and informed decision-making



### References



## Initial Workup

- Physical Examination:**
  - 4/5 hip flexor strength, nontender palpation
  - Ambulatory fatigue, wide-based gait
  - Decreased foot sensation



Category	Tests	Results
Laboratory	CBC, A1C, BMP, TFT, Cortisol, Aldolase, CPK, ESR, CRP, Viral Panel	✓ Normal
Cardiac	Troponin, EKG, Cardiac Stress Test, ABI, Arterial Duplex	✓ Normal
Imaging	CXR, CT Pelvis, CT Head, MRI Thoracolumbar Spine	✓ Normal
Neuromuscular	Electrodiagnostics, LEMS Ab, VGCC Ab	✓ Normal

Table 1. Initial diagnostic workup