

## Introduction

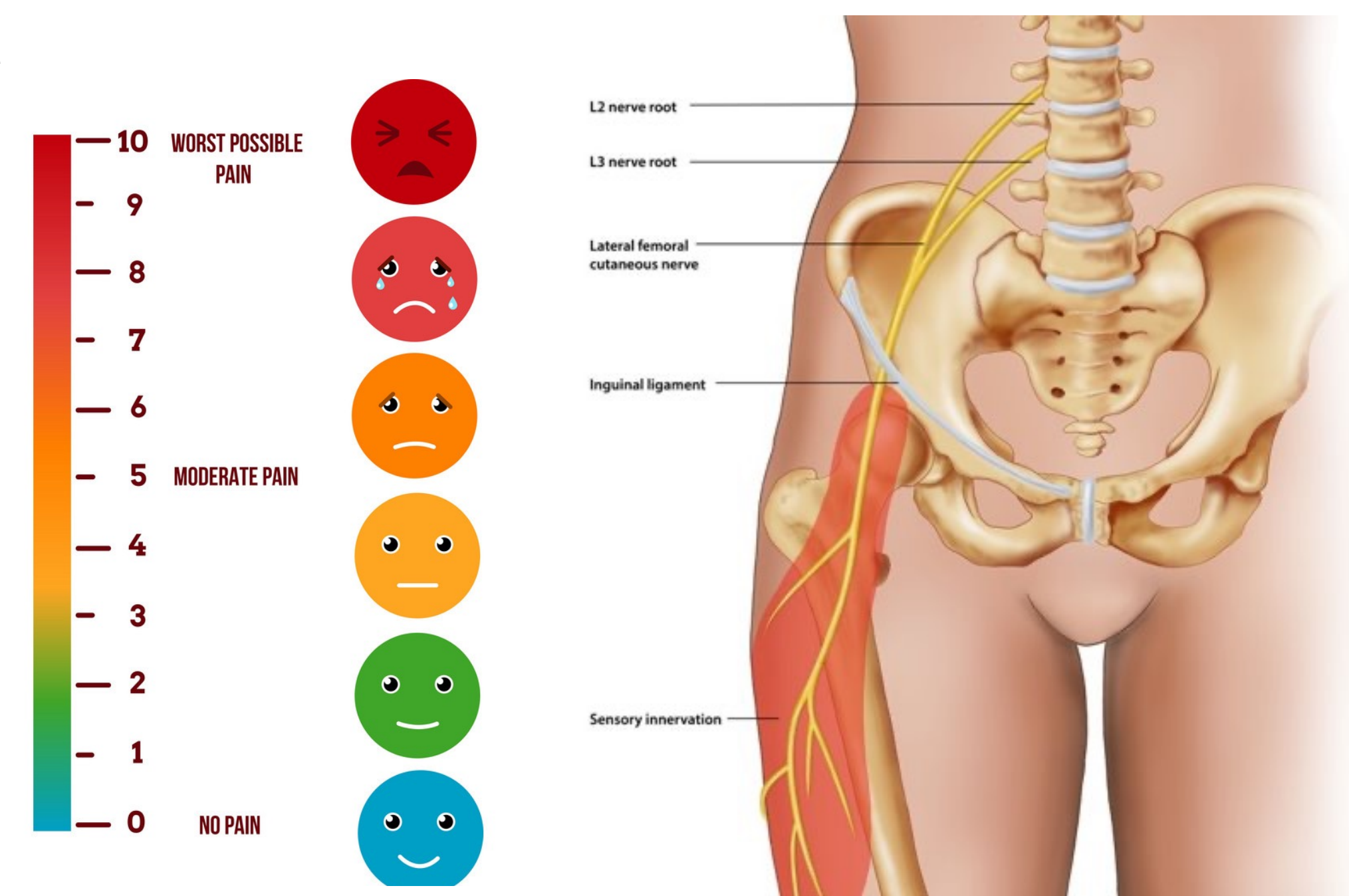
The lateral femoral cutaneous nerve (LFCN) is a sensory nerve that is vulnerable to damage secondary to post-operative complications in abdominal/pelvic surgeries, trauma, and occupational-related injuries [1]. Meralgia paresthetica (MP) is a sequela of LFCN compression that is characterized by numbness, tingling, and burning sensation in the outer thigh. Patients can present with a variety of symptoms of differing severity [2]. The treatment for MP ranges from non-surgical therapy to nerve decompression or neurolysis. Traditionally, a visual analog scale (VAS) and Electromyography (EMG) are used to diagnose and often dictate management. However, there are many limitations to these test modalities. We propose MRI neurography (MRN) as an adjunct for the diagnosis and management of meralgia paresthetica.

## Method

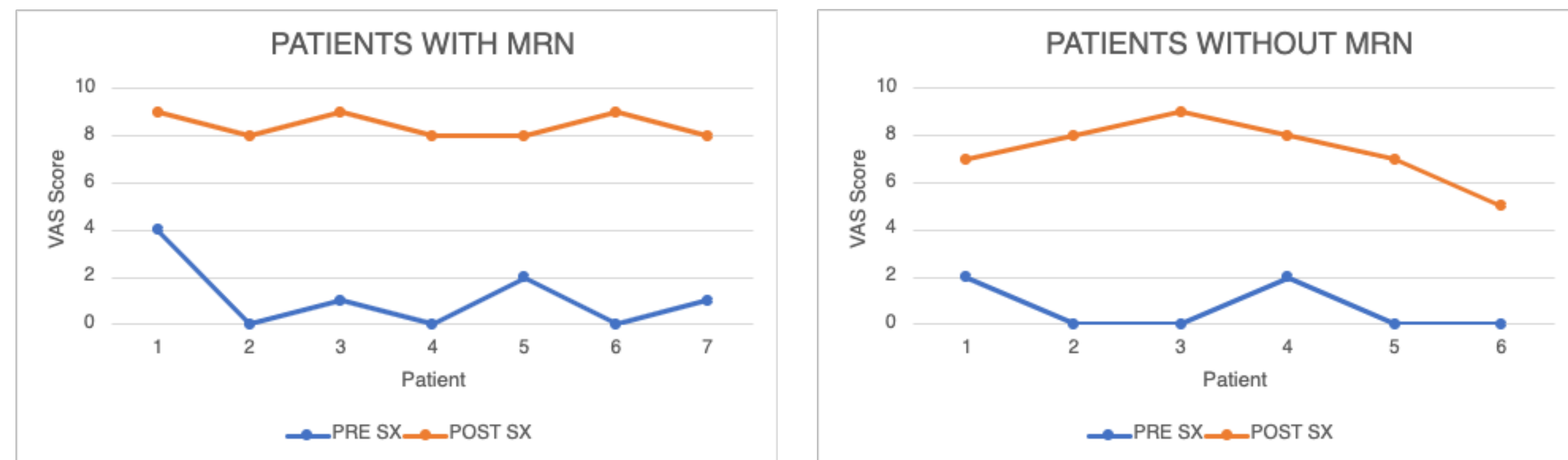
We reviewed 13 consecutive patients who were surgically treated for meralgia paresthetica between the years 2021-2022.

### Treatment protocol based on VAS:

- 3-4/10 → LFCN decompression
- 5-7/10 → Decompression or RPNI
- 8-10/10 → TMR or RPNI



## Post-operative VAS Scores

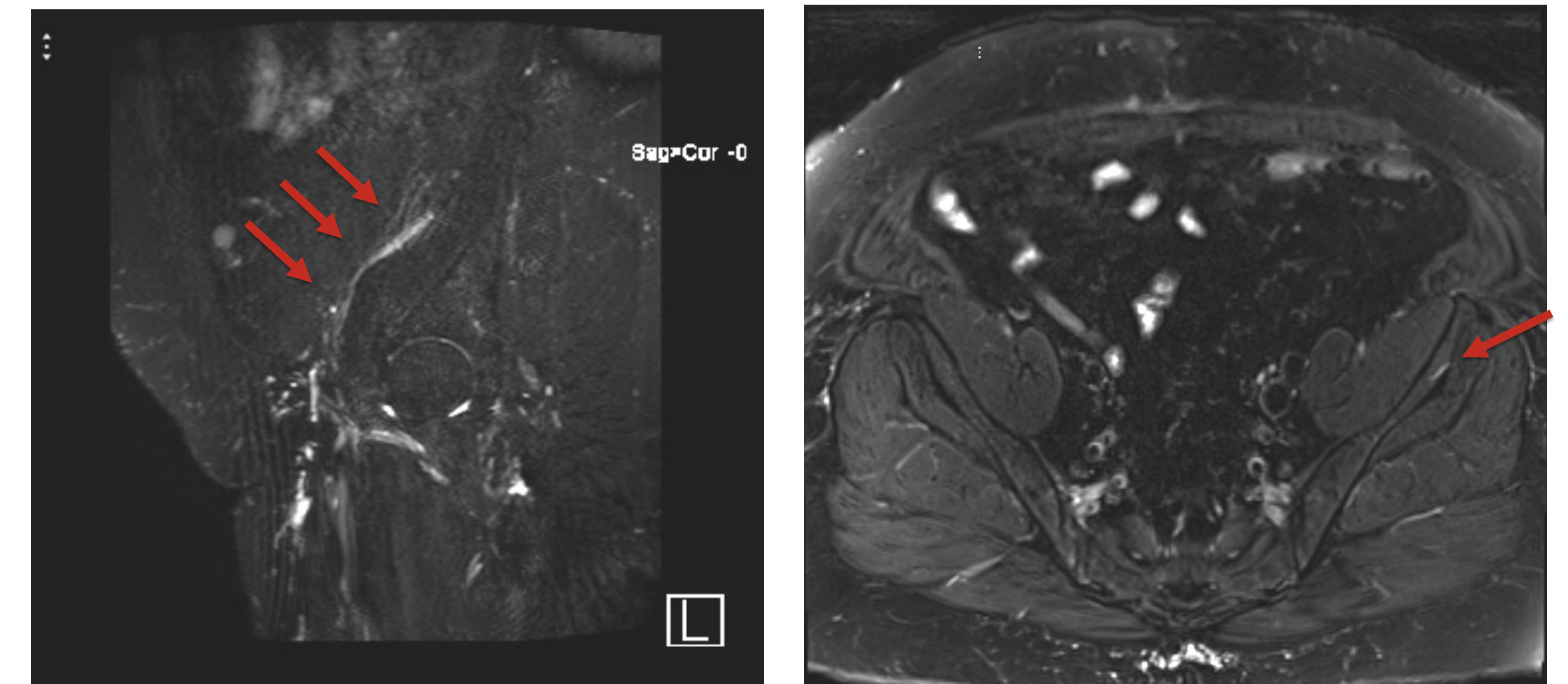


## Case Examples

**K.S. (48M):** after intra-articular hip injections  
Left LFCN compression anterior to the ASIS



**H.W. (60F):** after multiple abdominal surgeries  
Left LFCN compression along entire pelvic crest



## Results

All patients presented with hypersensitivity and burning pain to the LFCN distribution with an average VAS score of 7.8. Of the 7 patients with MRN, 6 patients had complete resolution of symptoms while 1 patient with a history of complex regional pain syndrome (CRPS) had persistent pain but still reported improvement of symptoms. The 6 patients that did not get MRN were treated according to their VAS score, EMG, and clinical assessment. 5 of them had complete resolution of symptoms after surgery with 1 reporting significant improvement but intermittent episodes of burning pain.

## Conclusion

MRN is a tissue-specific imaging technique that provides excellent characterization of nerve anatomy. It evaluates nerve caliber, contour, and fascicular dysfunction to detect pathological changes. More importantly, MRN can help with surgical planning by demonstrating specific sites of injury, segments of discontinuity, and/or the presence of neuromas and other neuropathology. Nevertheless, larger prospective studies are still warranted to further investigate its utilization and accuracy.

## References

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- Delaney H, Bencardino J, Rosenberg ZS. Magnetic resonance neurography of the pelvis and lumbosacral plexus. Neuroimaging Clin N Am. 2014;24(1):127-150. doi:10.1016/j.nic.2013.03.026
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