

# Peripheral Nerve Cases

Jonathan Stone, MD, MSe

Assistant Professor of Neurosurgery,  
Neurology, and Biomedical Engineering



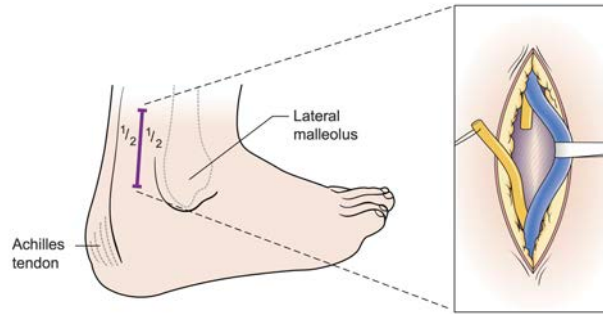
UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE

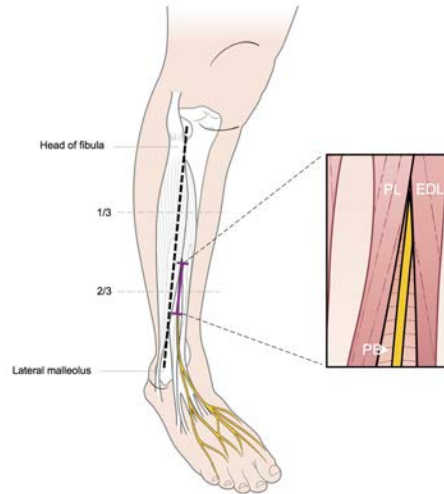
# Peripheral Nerve Surgery Overview

- Nerve Biopsy
- Nerve Trauma and Reconstructive Surgery
- Compression Syndromes
- Nerve Sheath Tumors

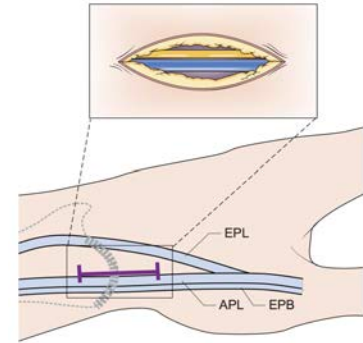
## Sural Nerve



## Superficial Peroneal



## Superficial Radial

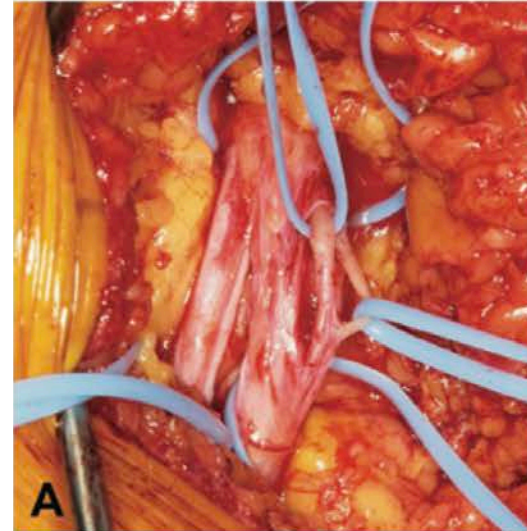
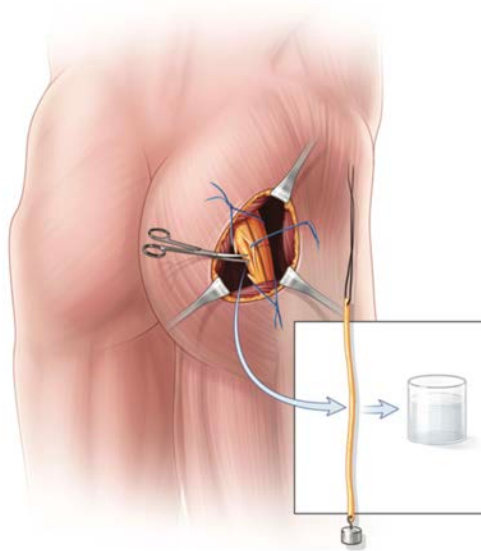




# Targeted fascicular biopsy of the sciatic nerve and its major branches: rationale and operative technique

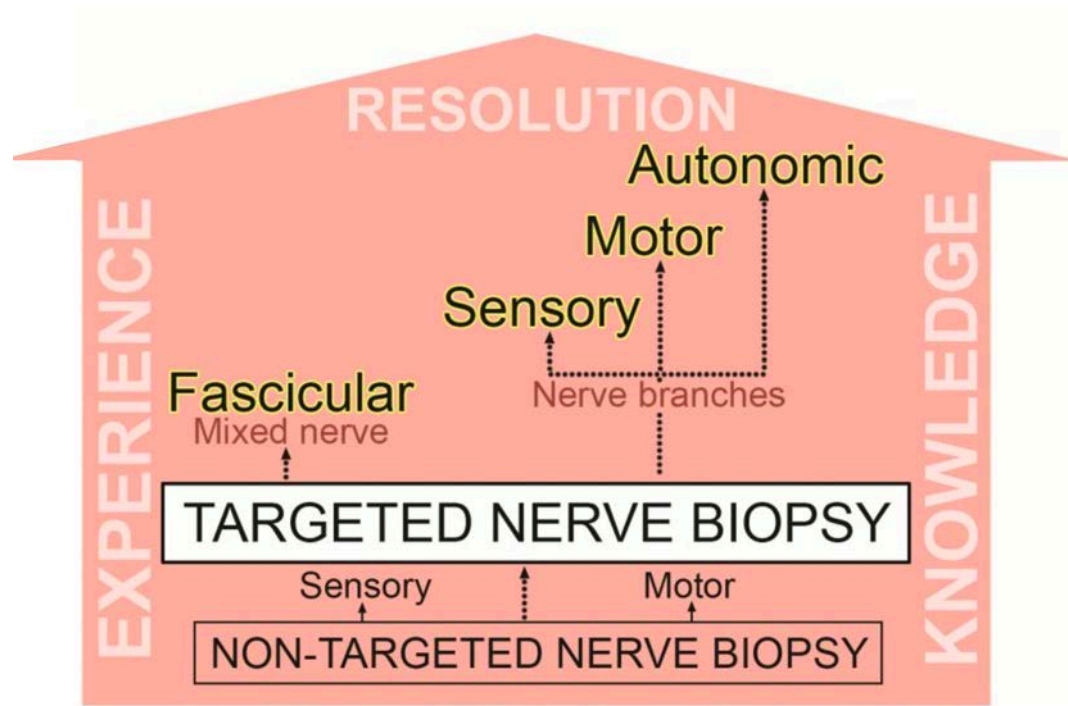
Stepan Capek, MD,<sup>1,2</sup> Kimberly K. Amrami, MD,<sup>3</sup> P. James B. Dyck, MD,<sup>4</sup> and Robert J. Spinner, MD<sup>1</sup>

Departments of <sup>1</sup>Neurosurgery, <sup>3</sup>Radiology, and <sup>4</sup>Neurology, Mayo Clinic, Rochester, Minnesota; and <sup>2</sup>International Clinical Research Center, St. Anne's University Hospital Brno, Brno, Czech Republic



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE

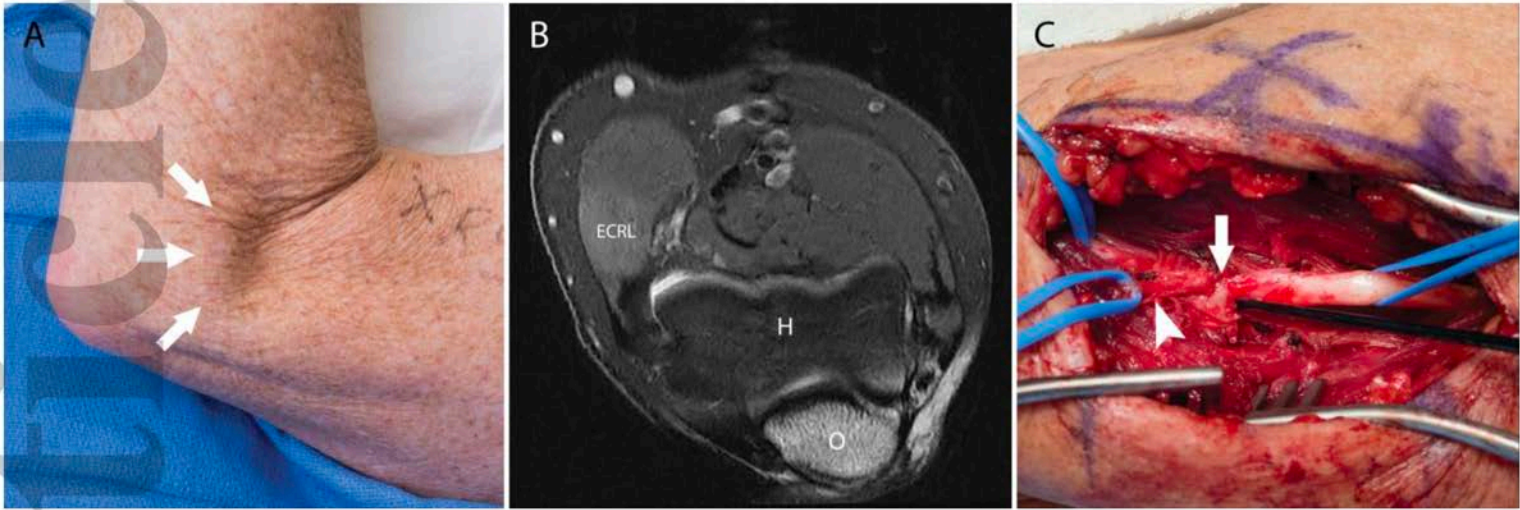


Marek T, Stone JJ, Amrami KK, Spinner RJ. Targeted Nerve Biopsy: A Technique in Evolution. Clin Anat. 2018 Apr 26. doi: 10.1002/ca.23195.



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



69-year-old man with a history of suspected dormant sarcoidosis who presented with left wrist and finger drop

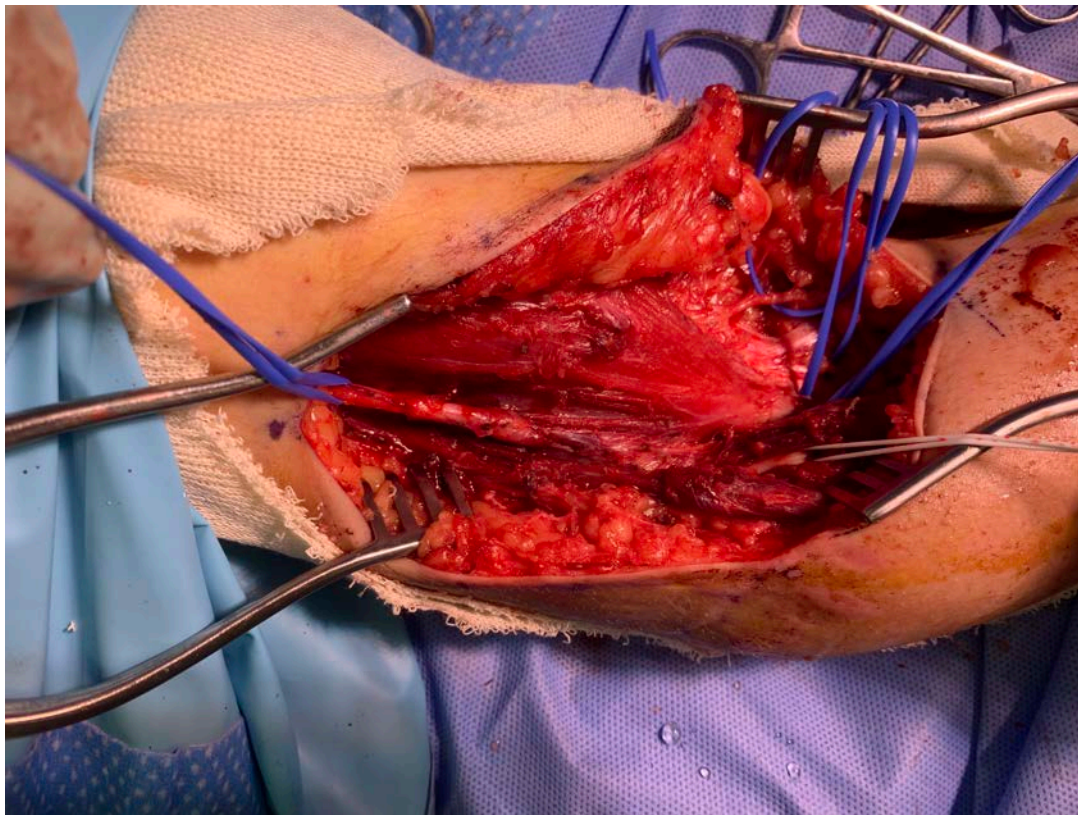
- 11 y.o. female approximately 1.5 months s/p fall from horse resulting in a right radial nerve injury from a supracondylar fracture.



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE

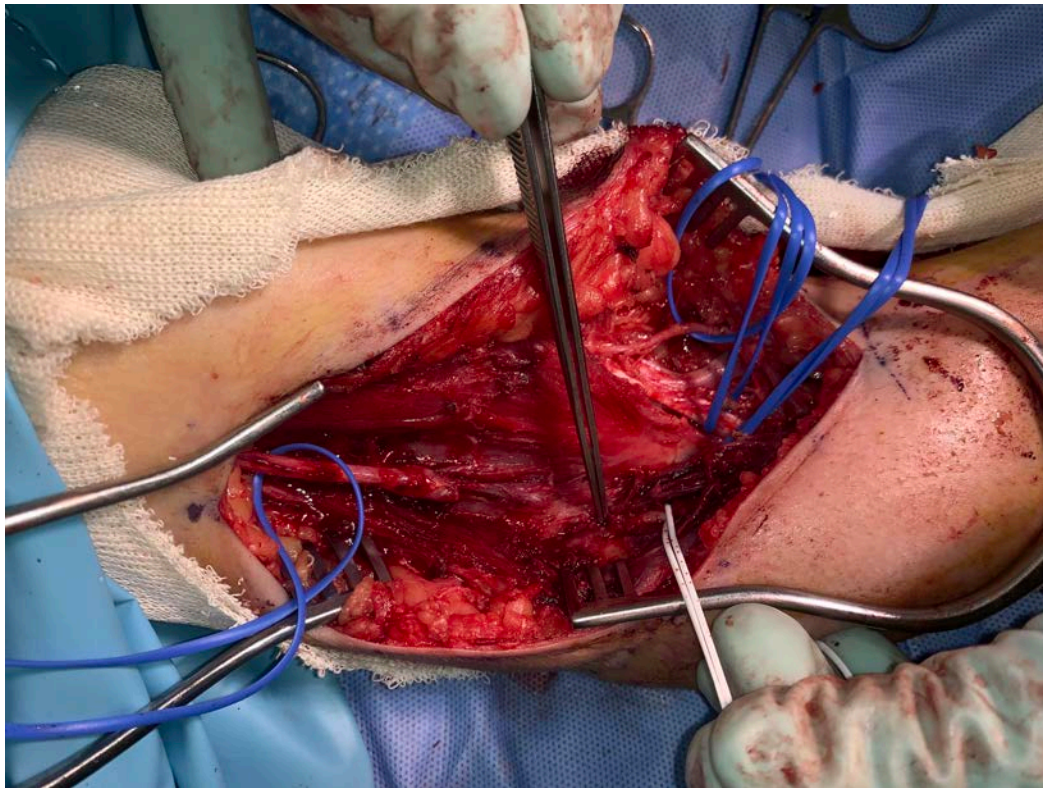




UR  
MEDICINE

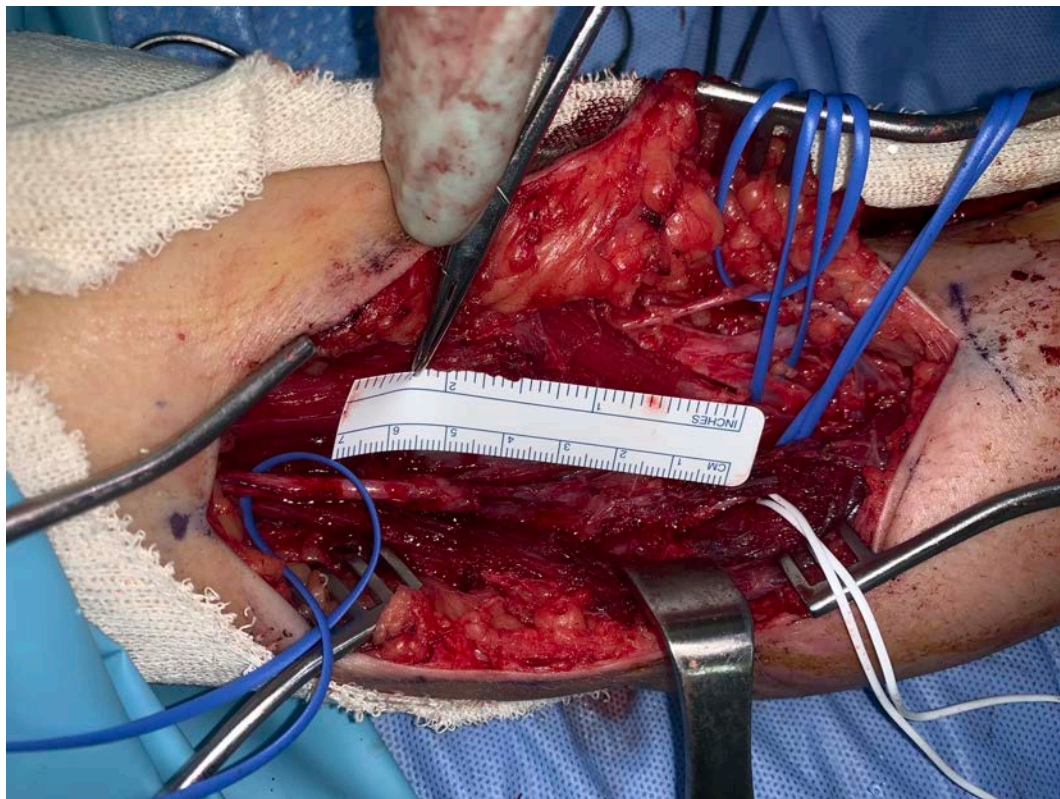
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





UR  
MEDICINE

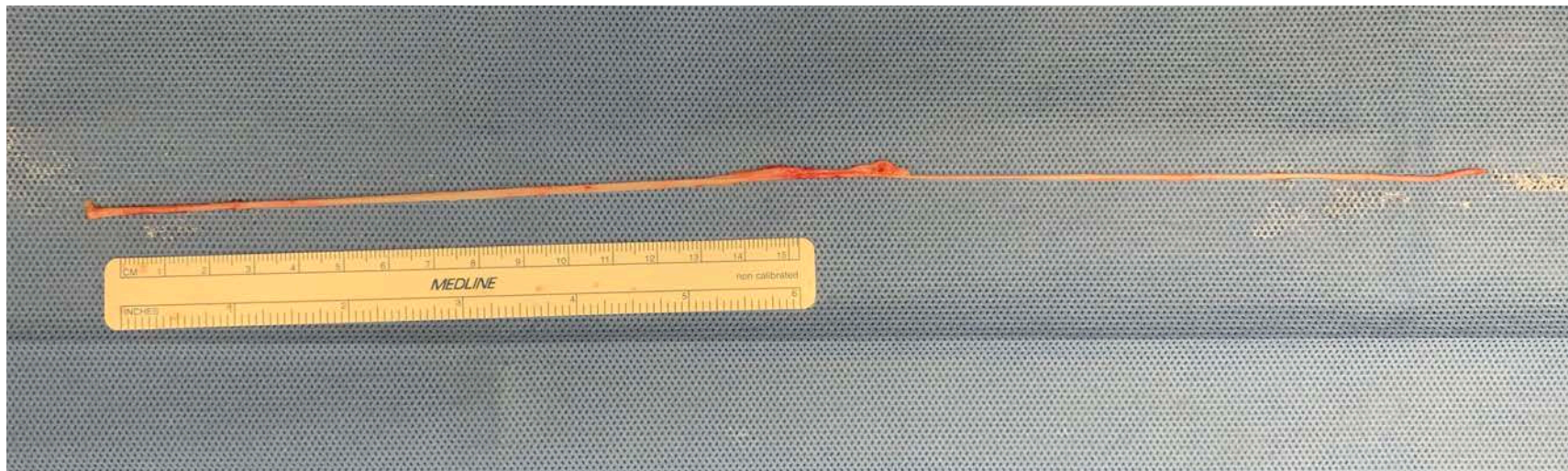
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

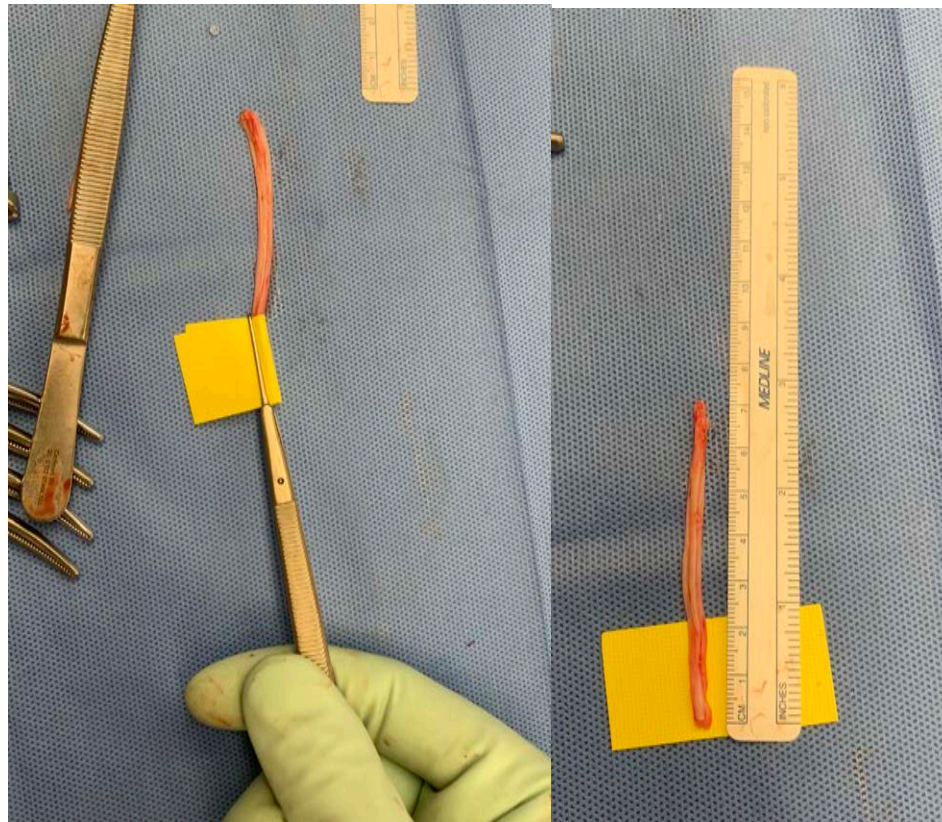
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





UR  
MEDICINE

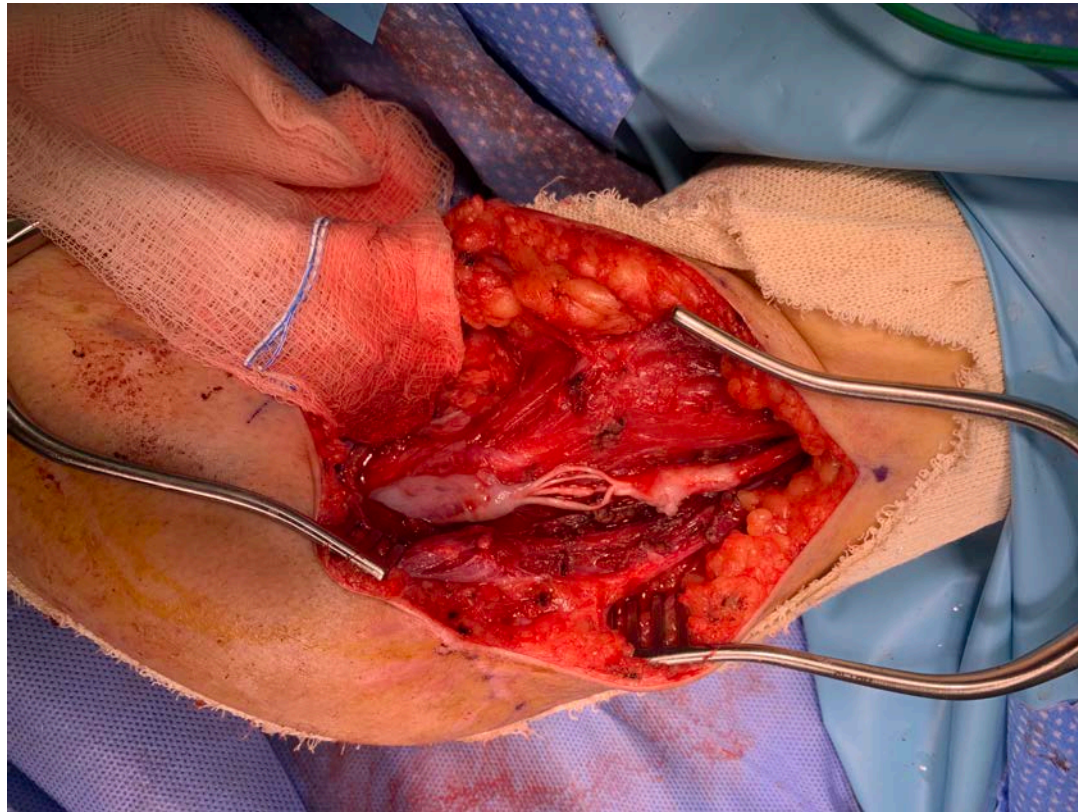
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



- 58 y.o. right-handed male
- 9 months numbness beginning at his elbows and radiating into his bilateral 5th digits
- Aggravated by bending of the elbows, and improves when he straightens his arms.
- Difficulty with dexterity and significant weakness in his left hand.



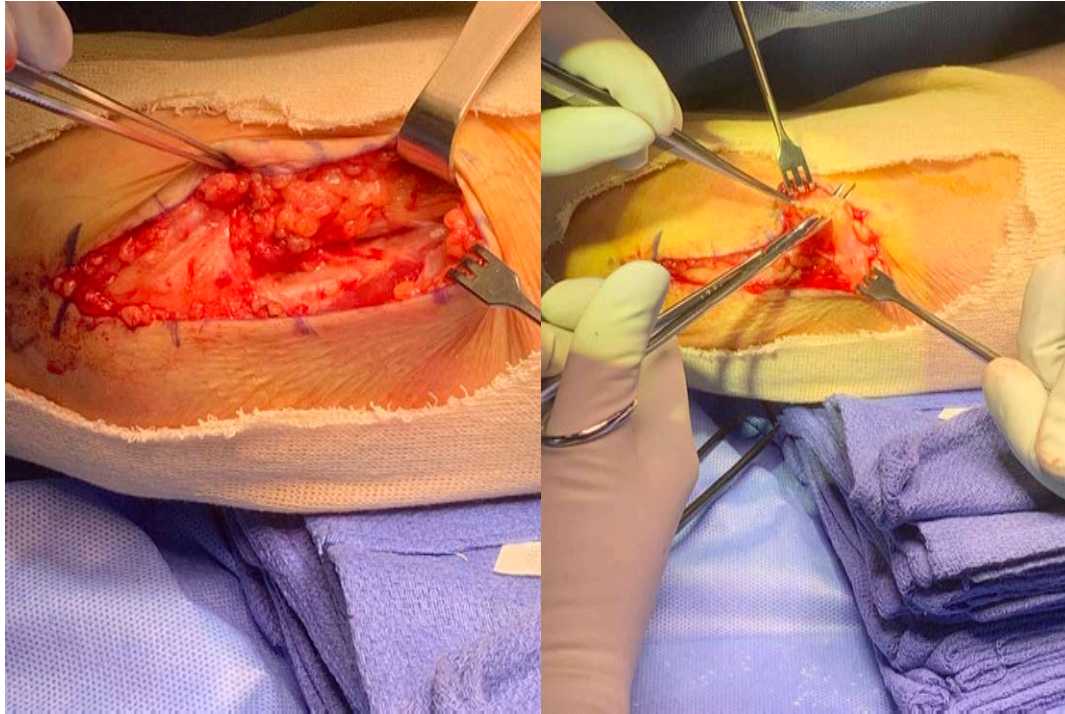
UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



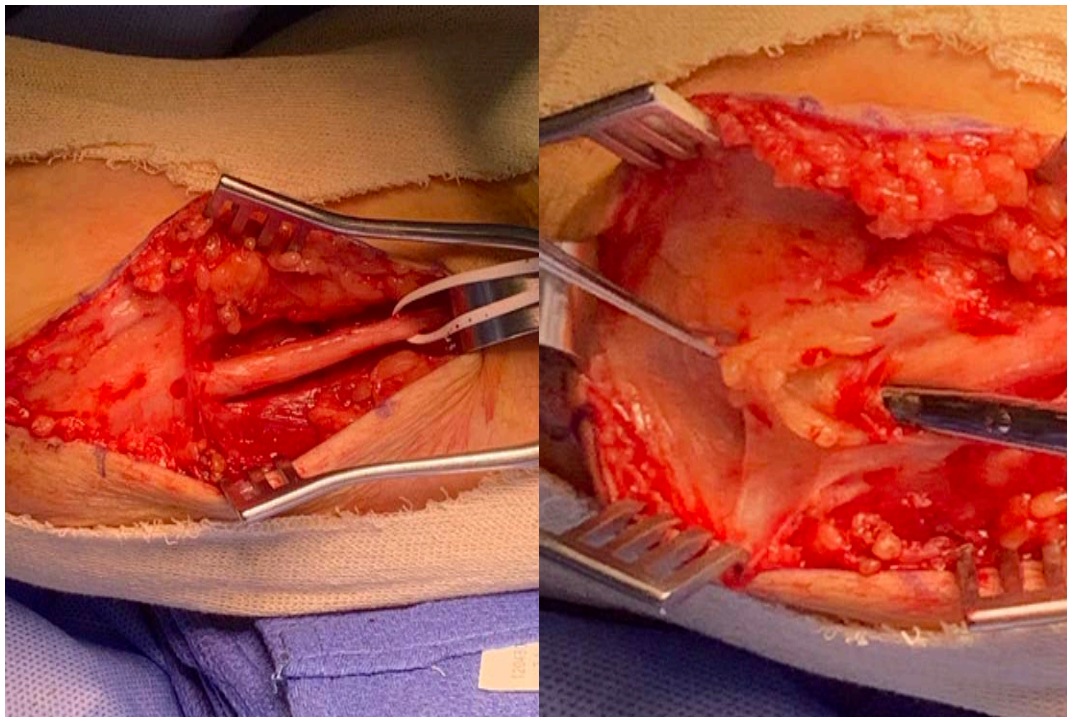
UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

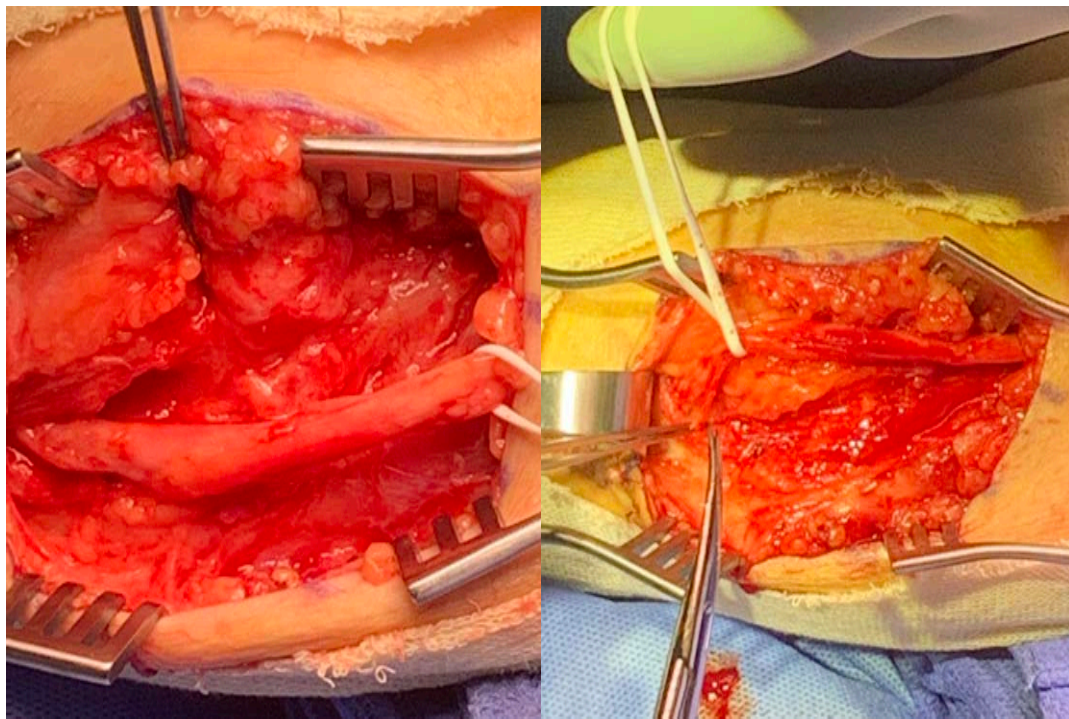
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE

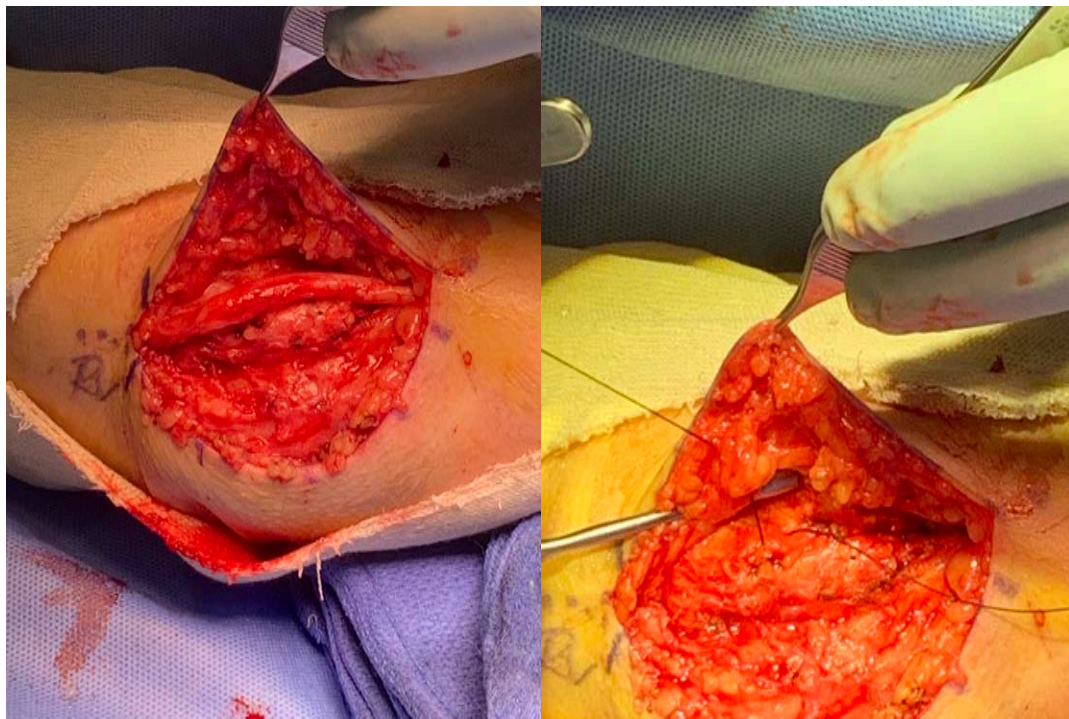




UR  
MEDICINE

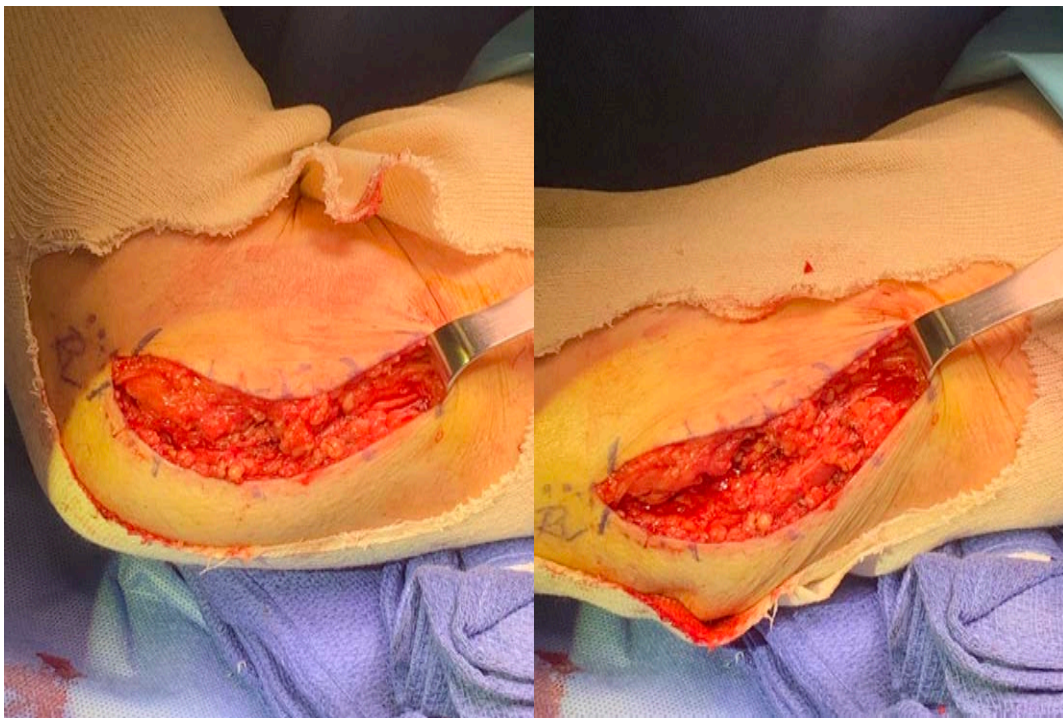
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

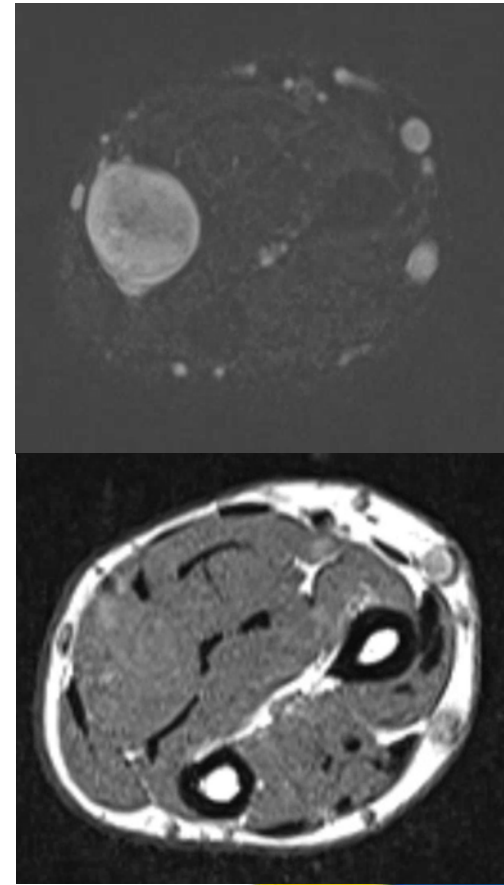
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE

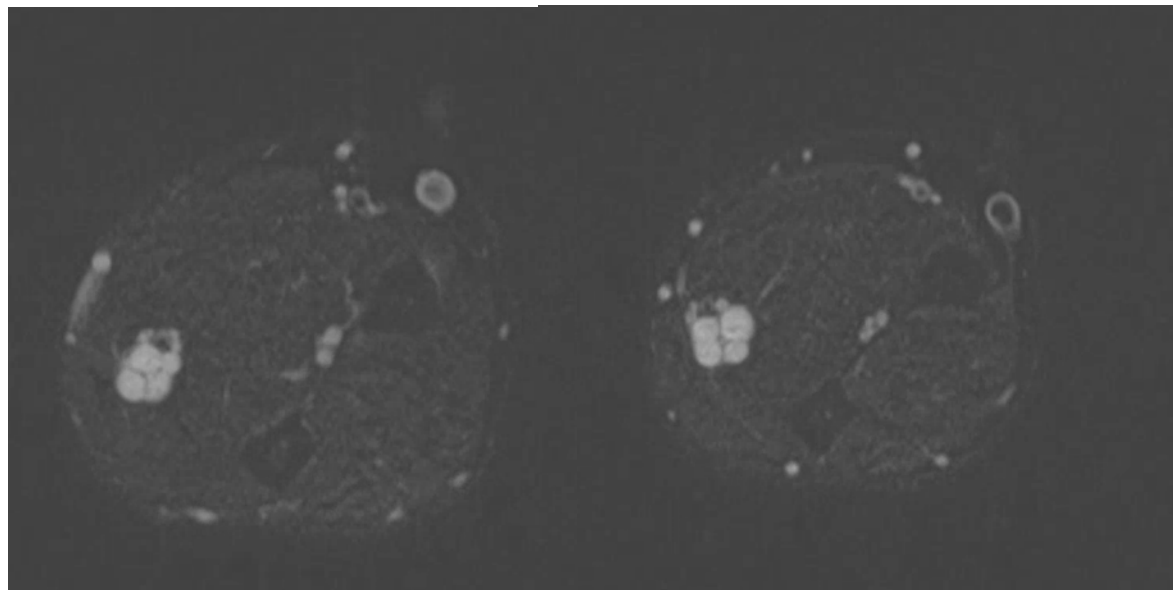
- 53 y.o. male with a “lipoma” in his left forearm which he discovered about 6 months ago.
- Radiating pain into digits 4/5 with any form of pressure.
- Neurologically intact.



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE

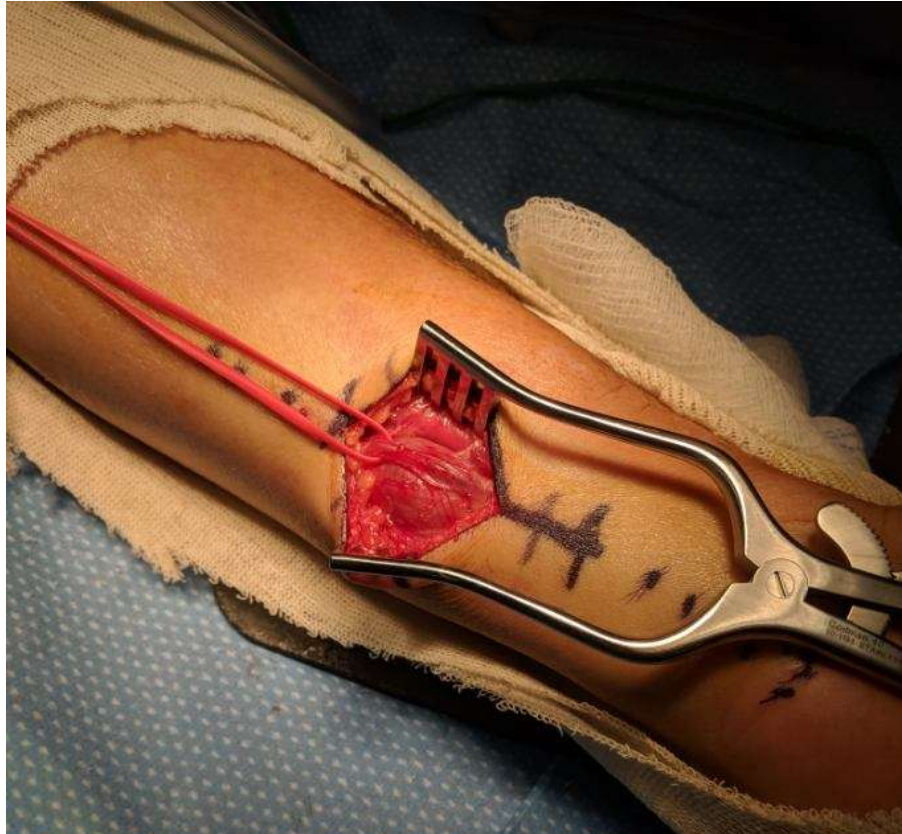




UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





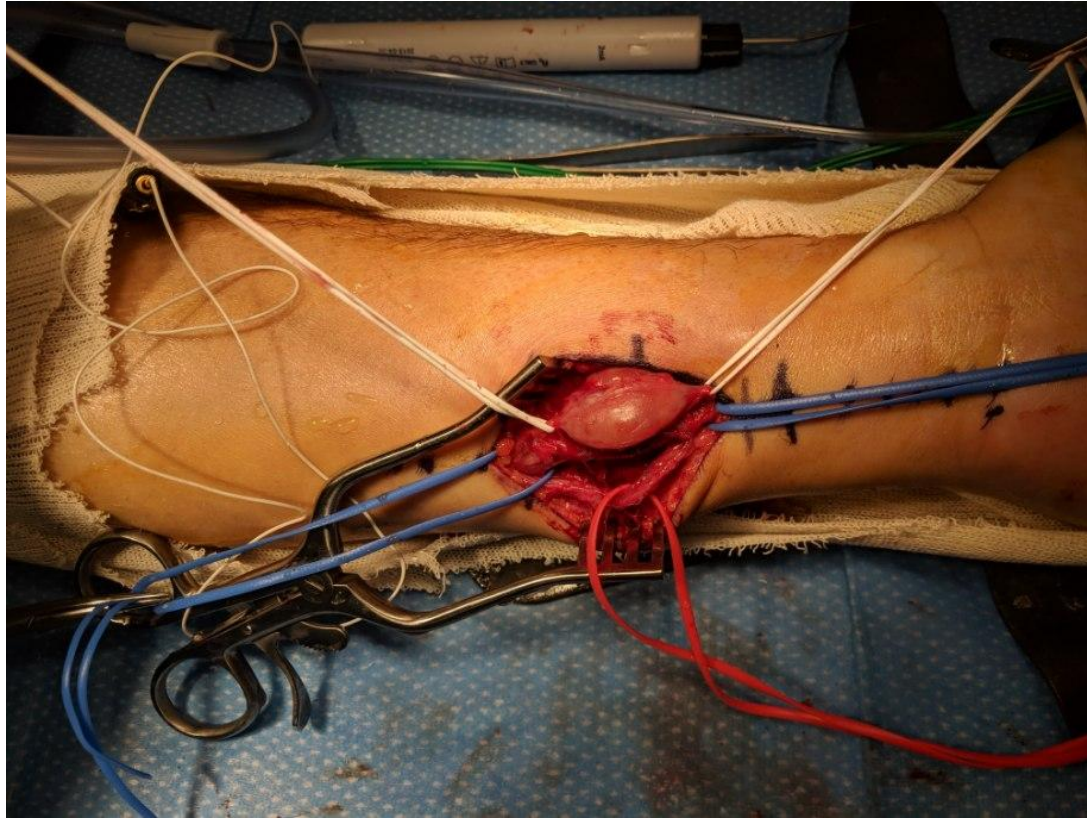
UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

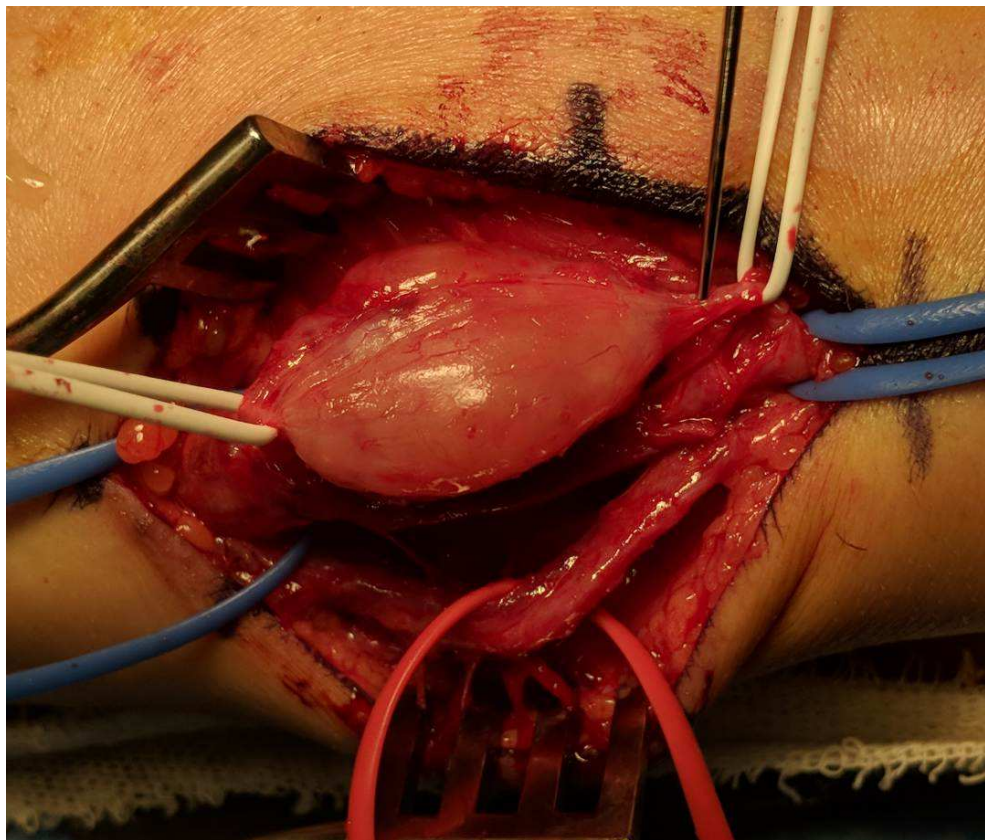
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

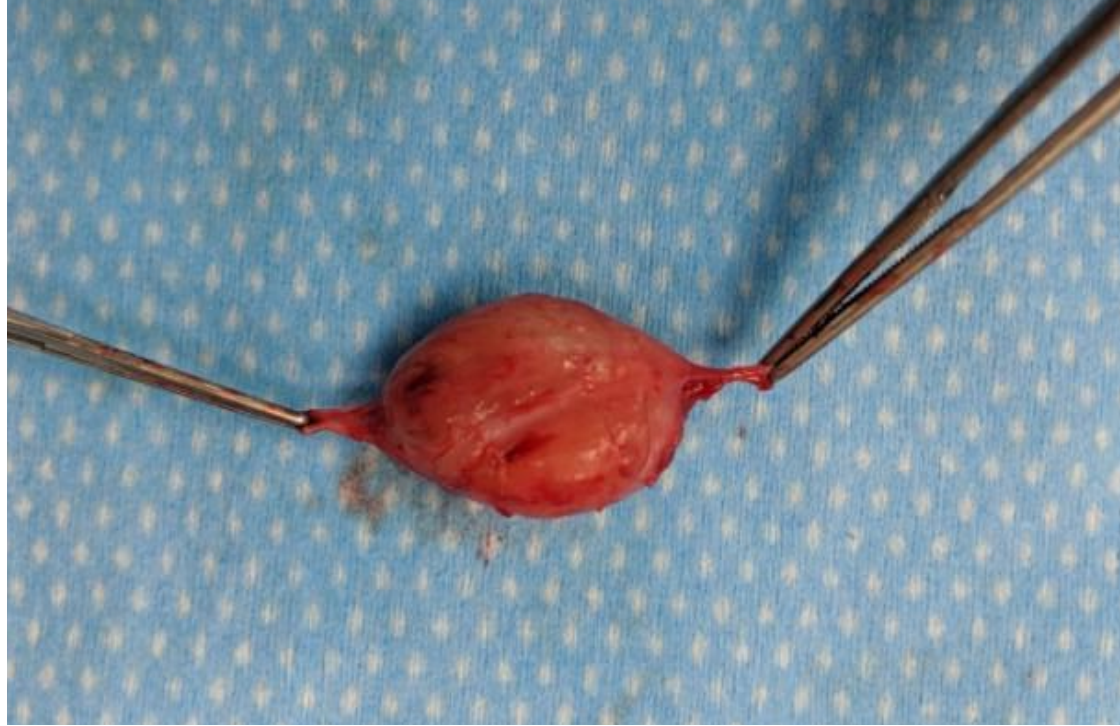
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





UR  
MEDICINE

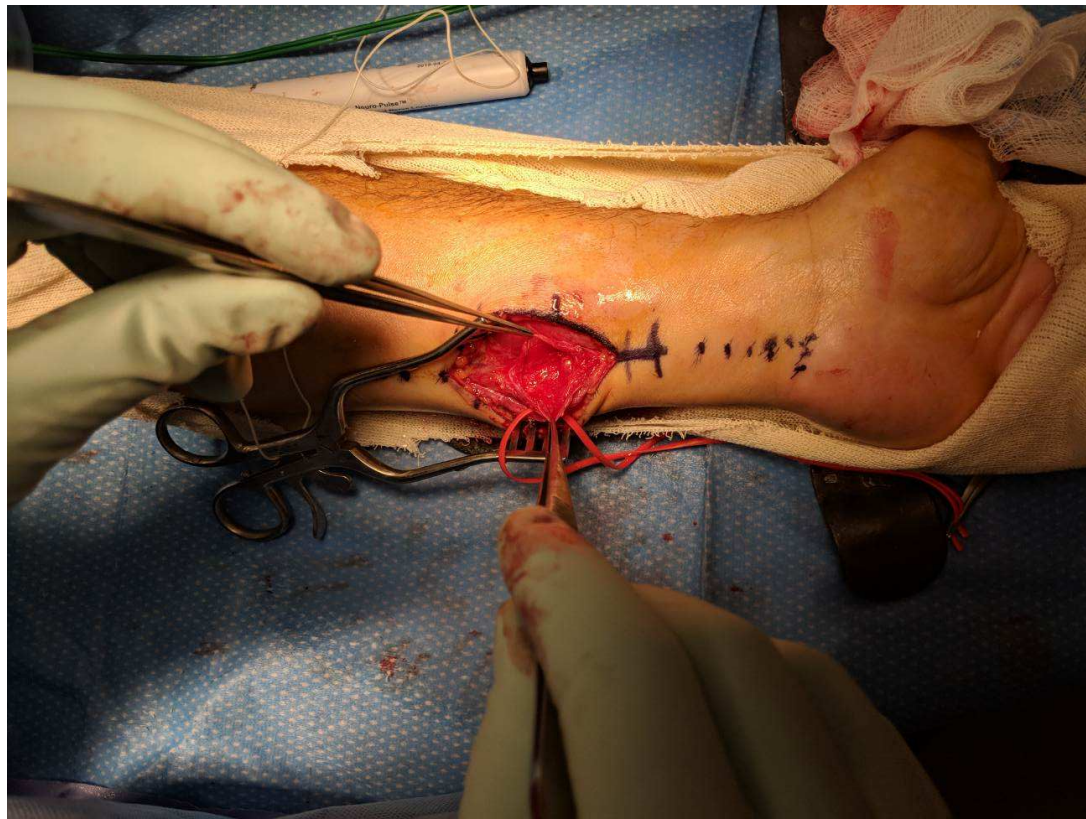
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



UR  
MEDICINE

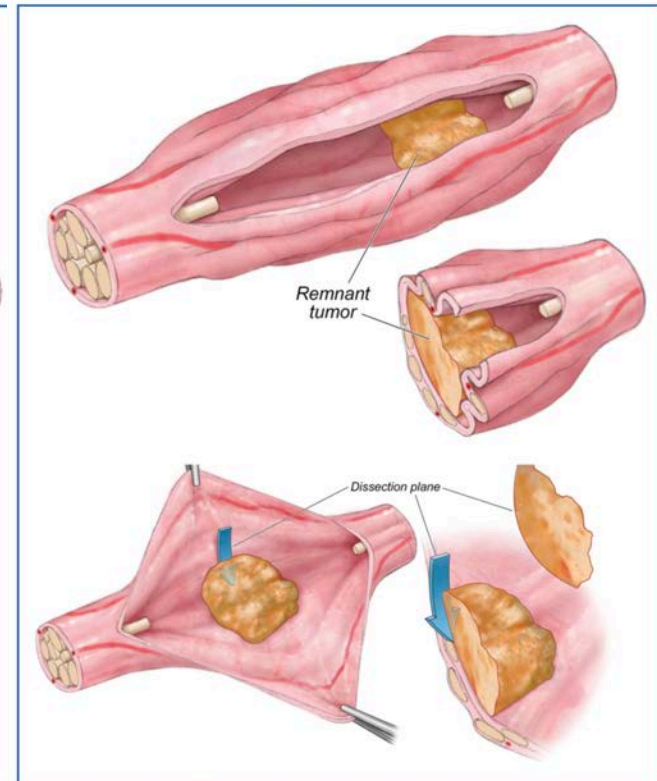
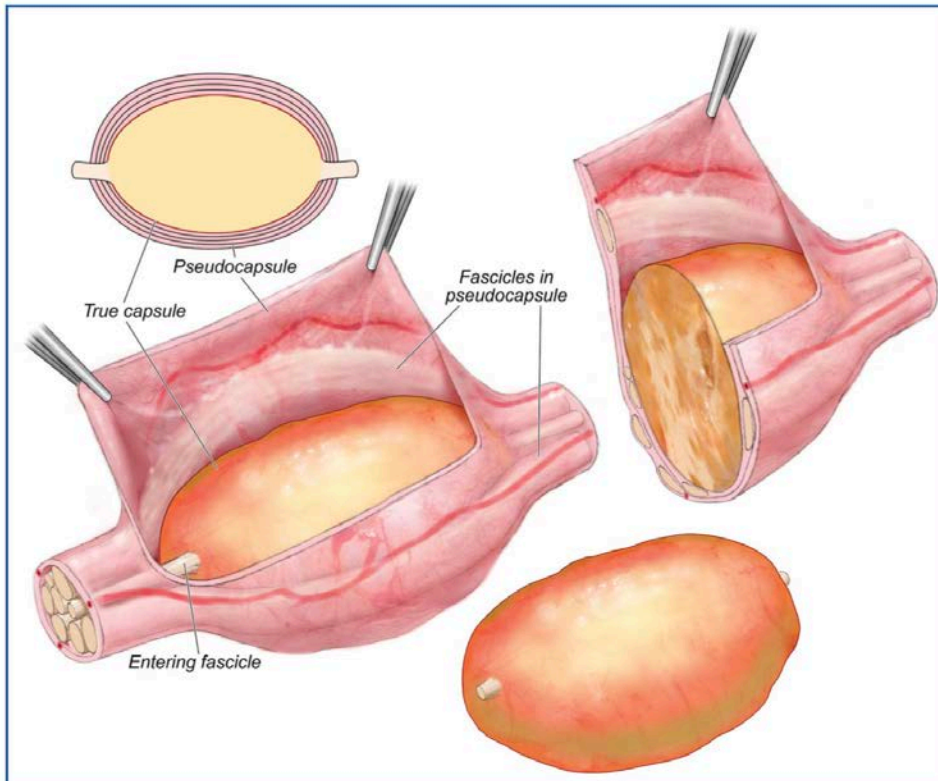
DEL MONTE  
INSTITUTE FOR NEUROSCIENCE





UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE



**FIGURE 5.** Benign nerve sheath tumor illustration demonstrating dissection between the pseudocapsule capsule and the yellow colored true capsule. En passant nerve fascicles and epineurial vessels can be seen within tumor pseudocapsule. Used with the permission of Mayo Foundation for Medical Education and Research, all rights reserved.

# Questions?



UR  
MEDICINE

DEL MONTE  
INSTITUTE FOR NEUROSCIENCE