



CENTER FOR
WELLNESS & PAIN CARE
OF LAS VEGAS



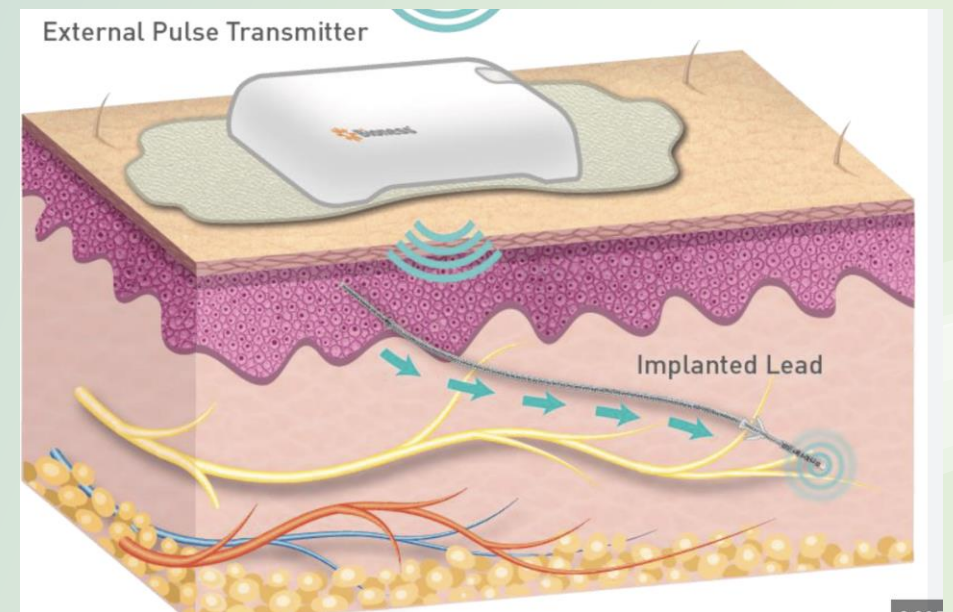
Peripheral Nerve Stimulation (PNS)

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PERIPHERAL NERVE STIMULATION (PNS)

Implanted Electrode

freedom-8A



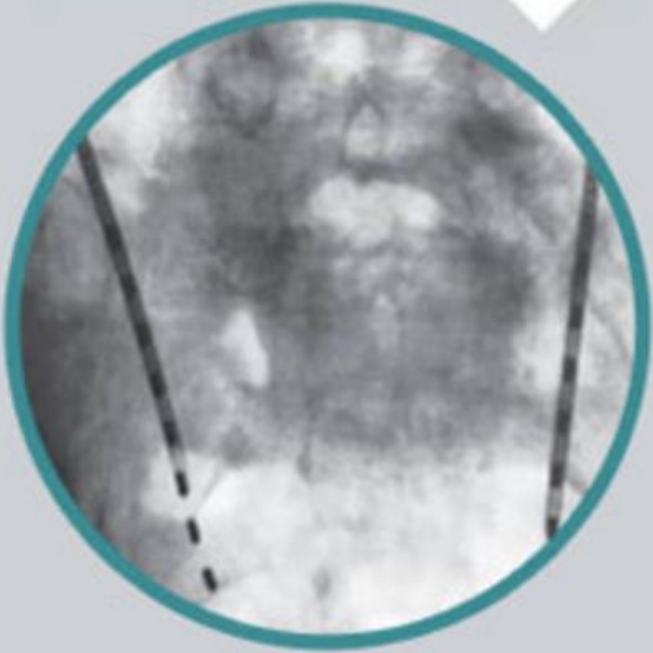
PERIPHERAL NERVE STIMULATION (PNS)

1. Electrode and Receiver
2. Transmitter Assembly

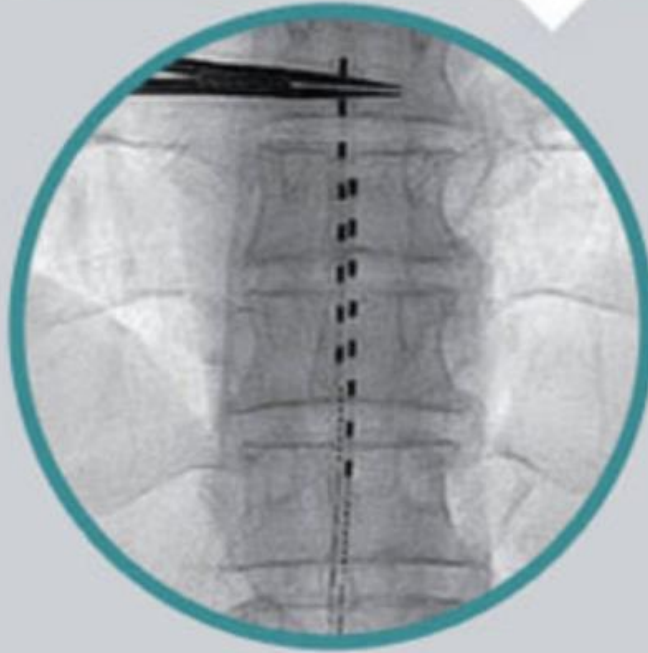
freedom-8A



SI JOINT PAIN
MED. CLUNEAL N.



BACK PAIN (SCS)
T8-T9

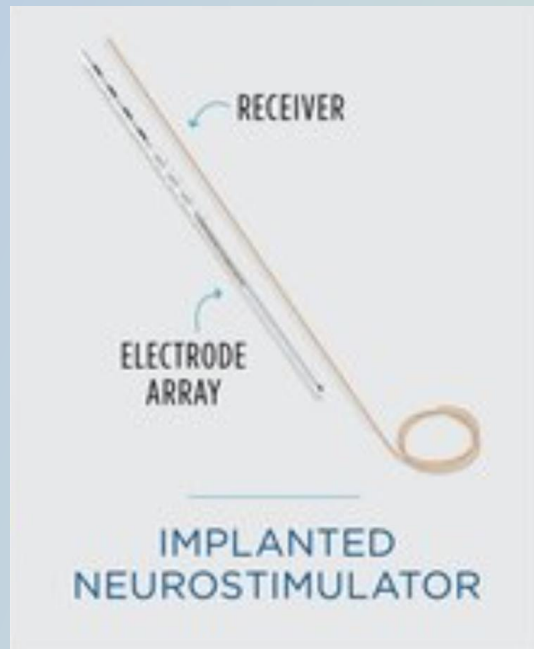


BACK PAIN (PNS)
SUP. CLUNEAL N.



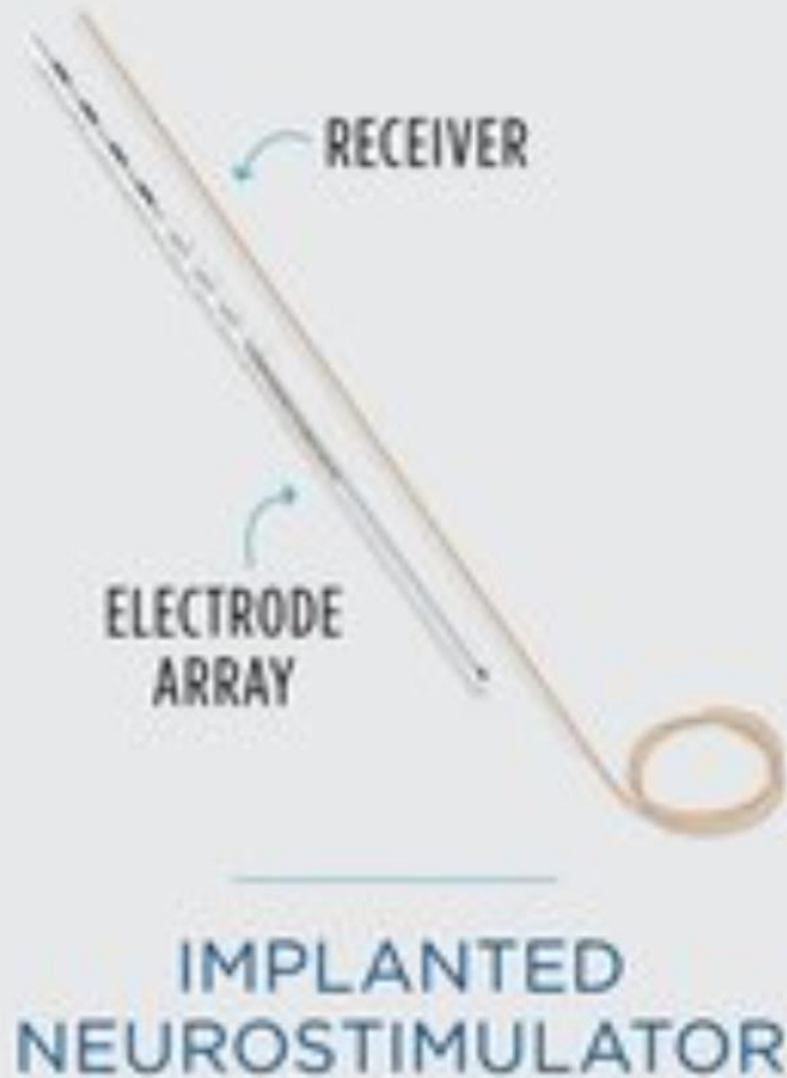
2 components PNS

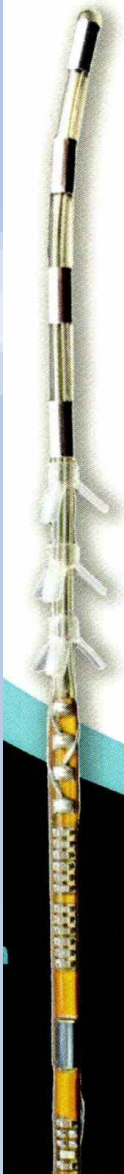
1. Electrode and Receiver
2. Transmitter Assembly



Electrode and Receiver

- neurostimulator with electrodes
- receiver to utilize wireless RF power
- placed near a peripheral nerve in your body
- to treat your chronic pain.
- minimally invasive at ASC

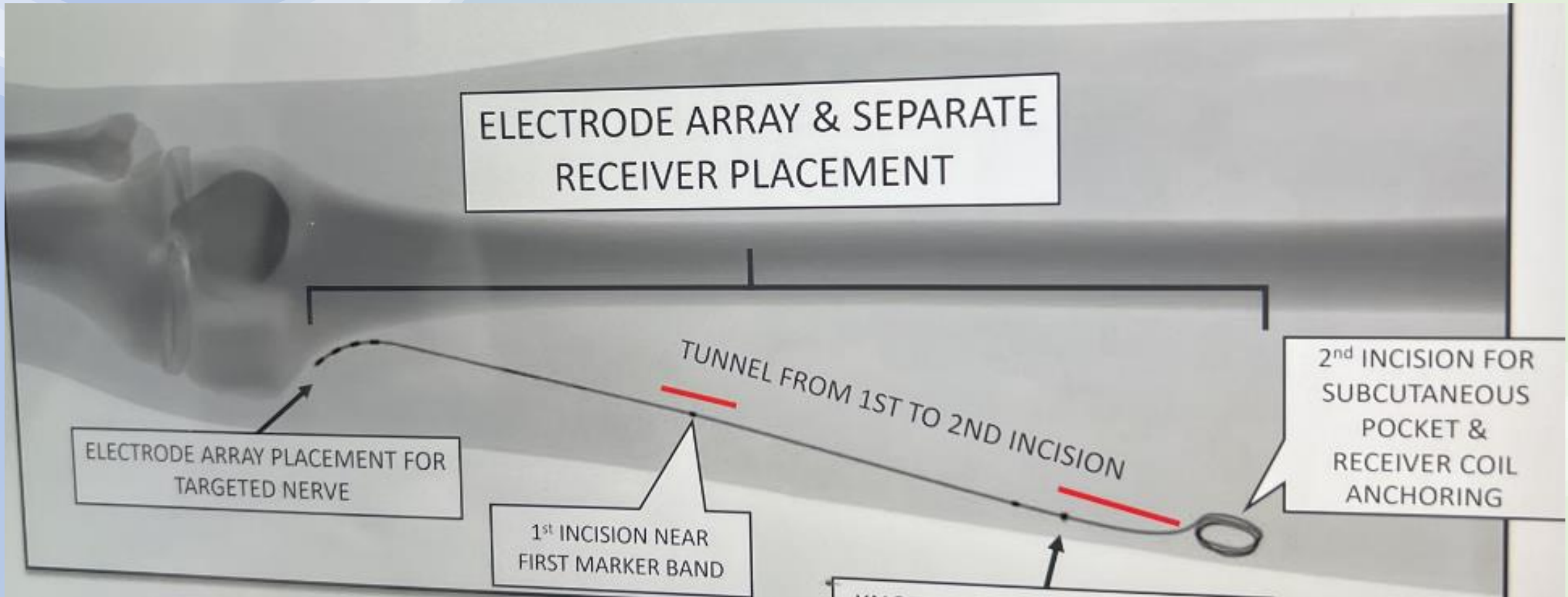




Stimulators

- implanted neurostimulator and a receiver
- metal electrodes near the tip that create an electrical field
- This electrical energy aids in blocking the pain signals coming from target nerves.
- Energy is transmitted to the receiver by an external, non-implanted transmitter

Electrode

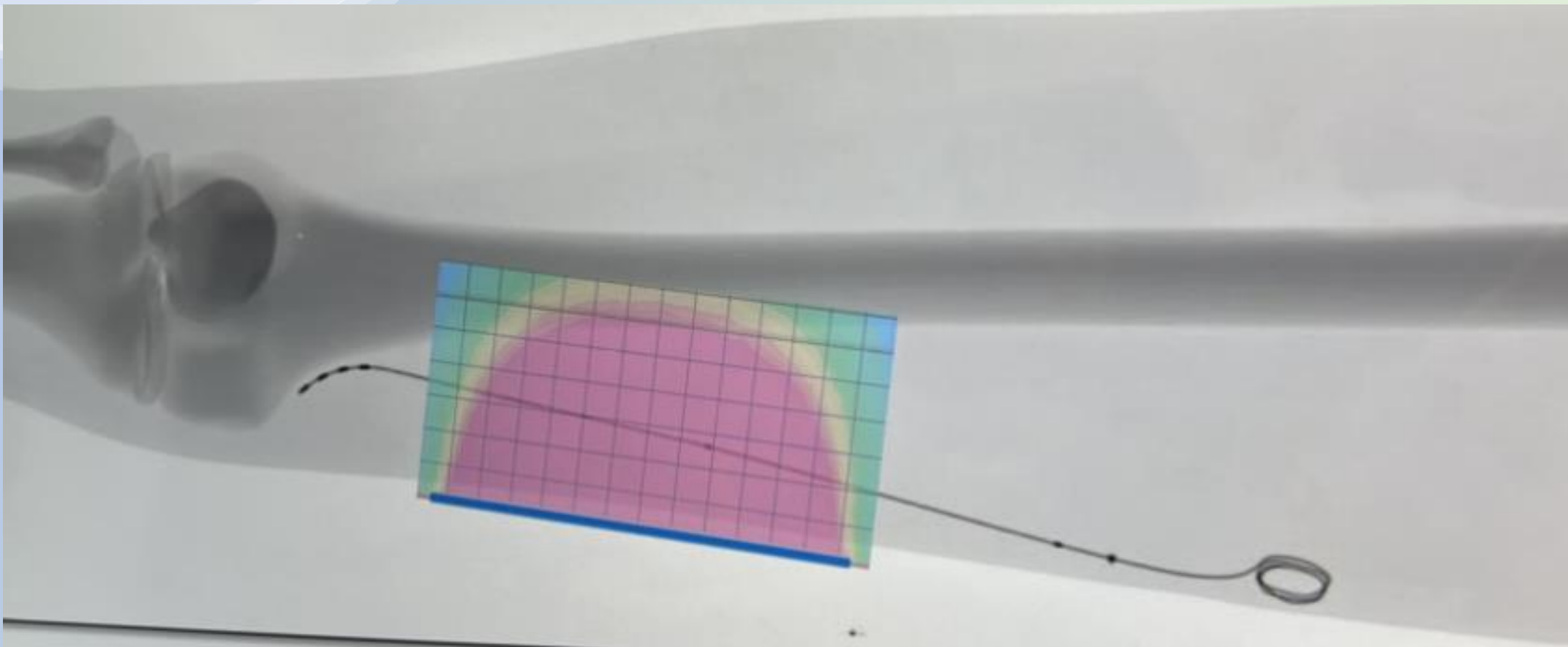


Transmitter Assembly



- Transmitter and antenna
- Worn externally and wirelessly powers the Stimulator.
- Wireless power is sent from the transmitter to the implanted receiver.
- charged daily
- last up to 24 hours on a single charge
- 4 hours to recharge

Electrode



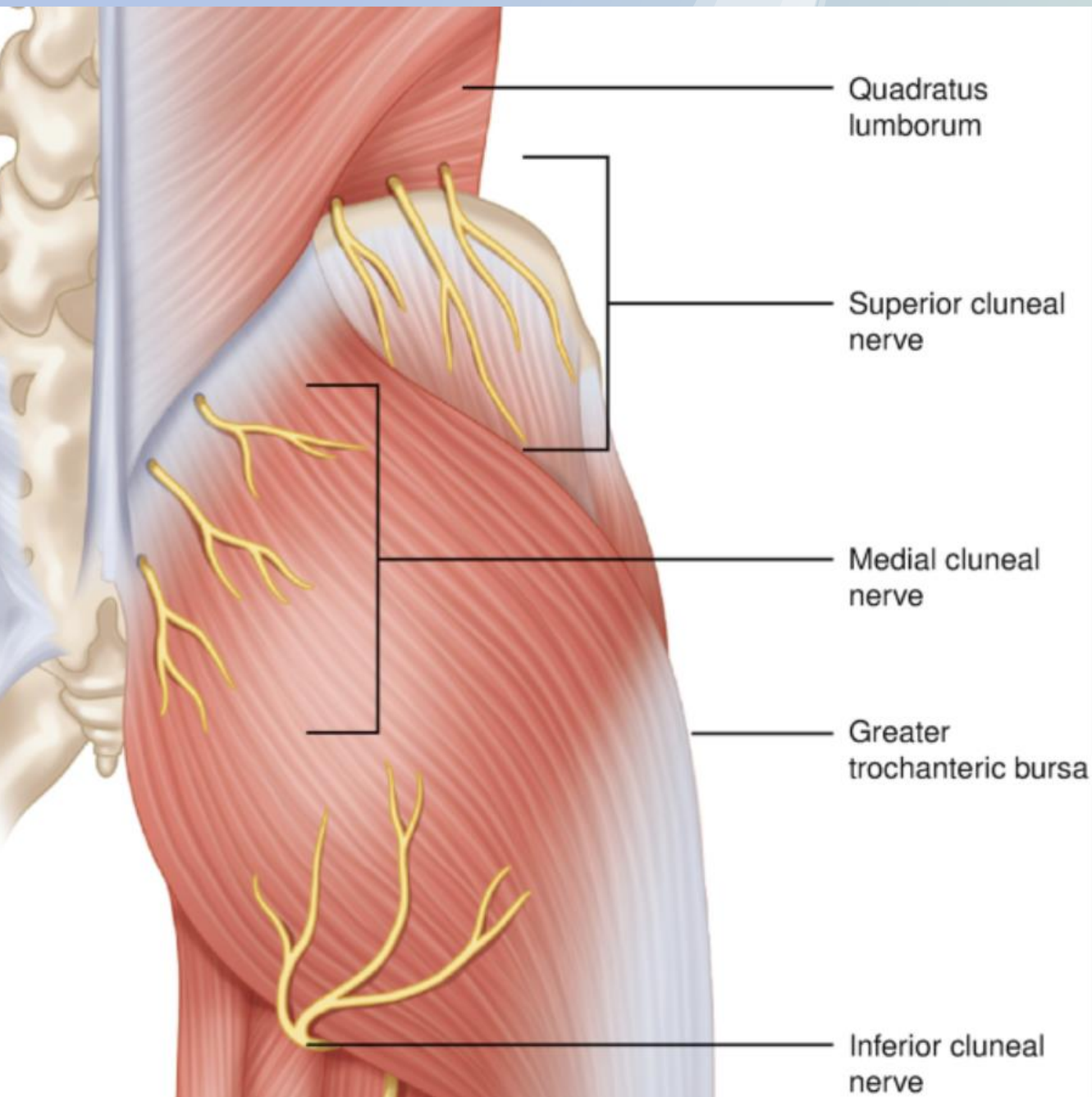


Transmitter Assembly



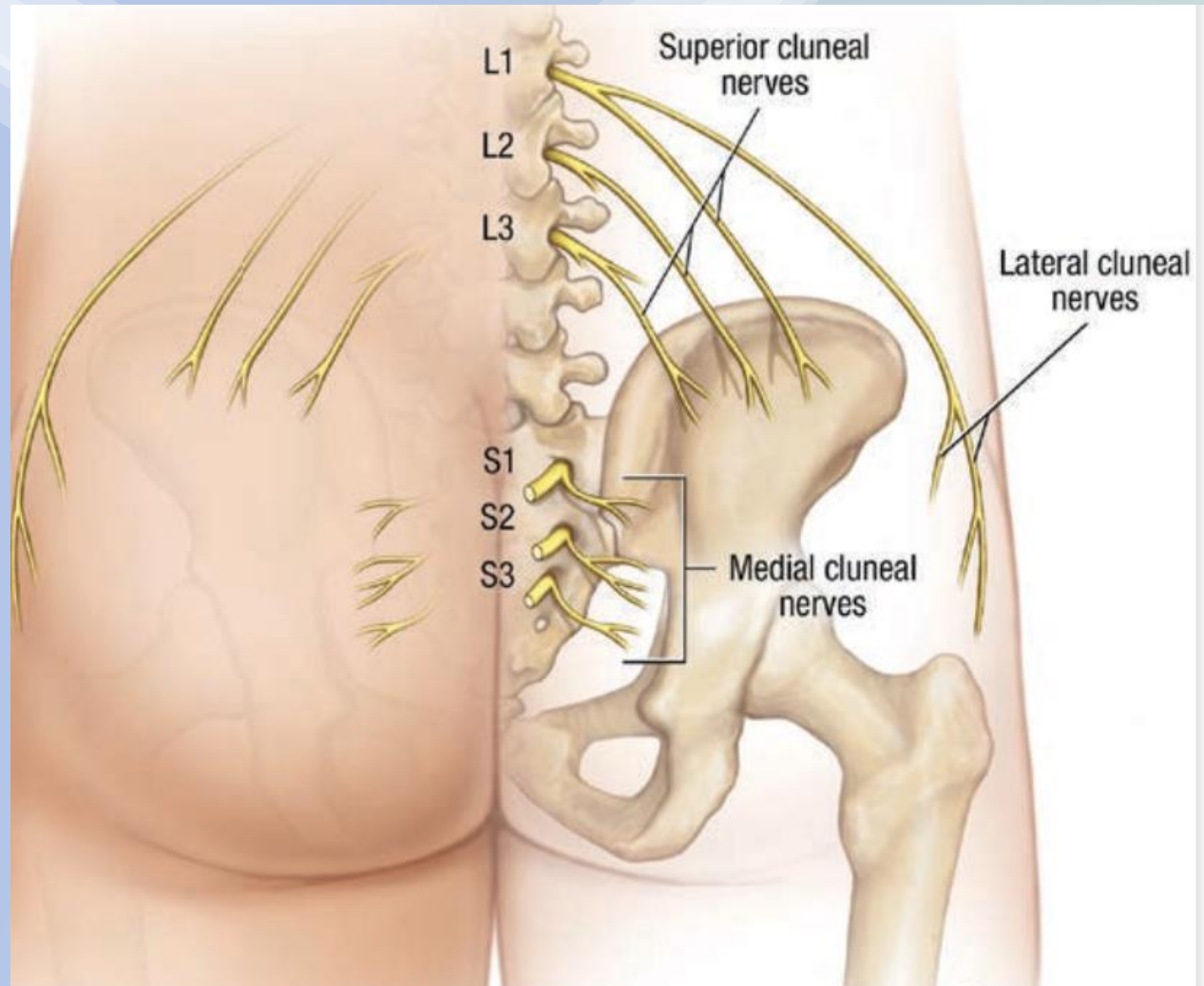
Lower Back and SI area Pain

Superior and Medial Cluneal Nerves



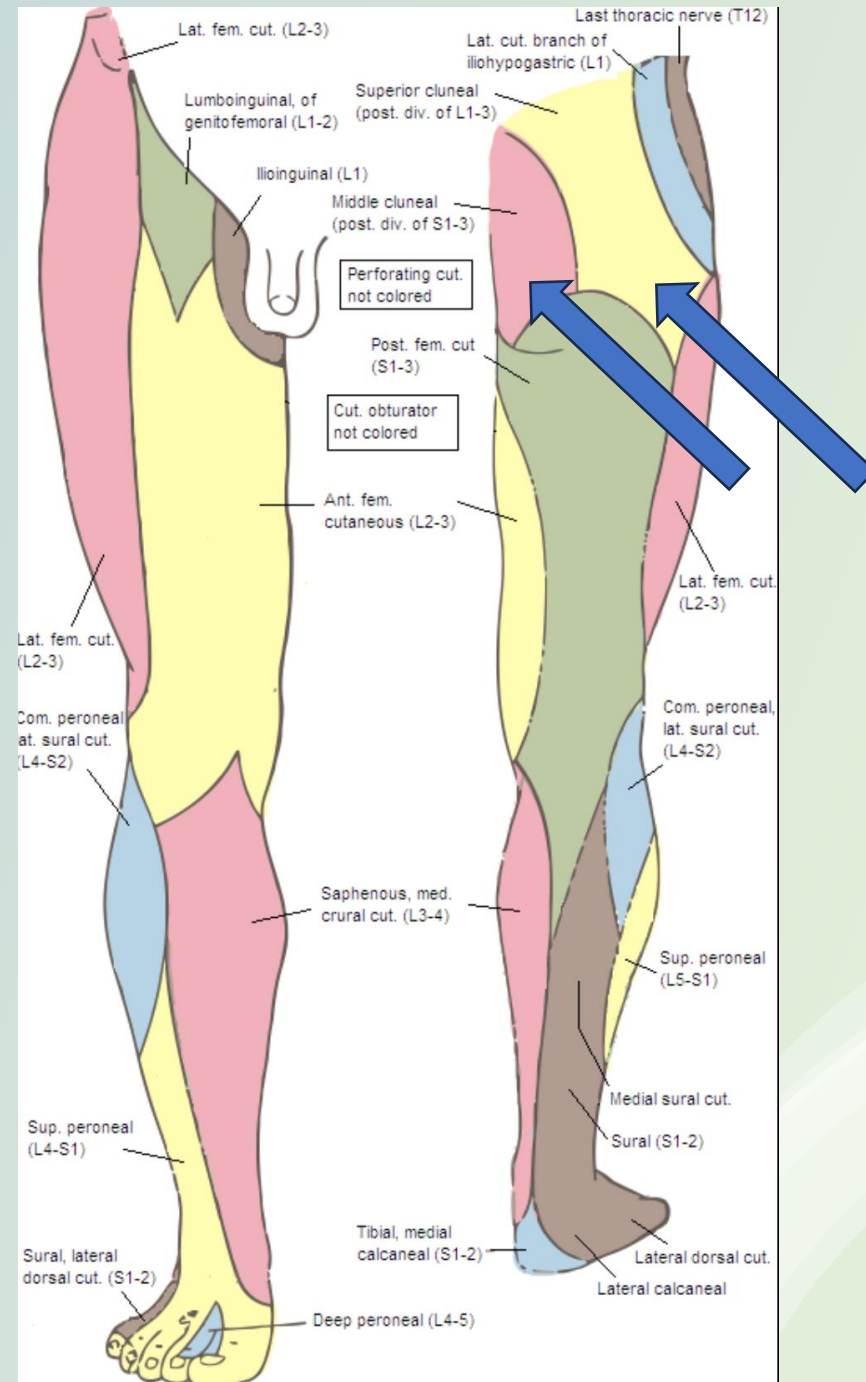
- Superior cluneal nerves (SCNs)
- Posterior cutaneous branches (from the lateral branch) of the dorsal ramus,
- Arising from the upper 3 lumbar spinal nerves.
- Can produce “pseudosciatica.”
- Compression of the nerves by an osteofibrous tunnel of the iliac crest could be the cause of SCN entrapment and one reason for the development of low back pain

Superior Cluneal Nerve Dysfunction

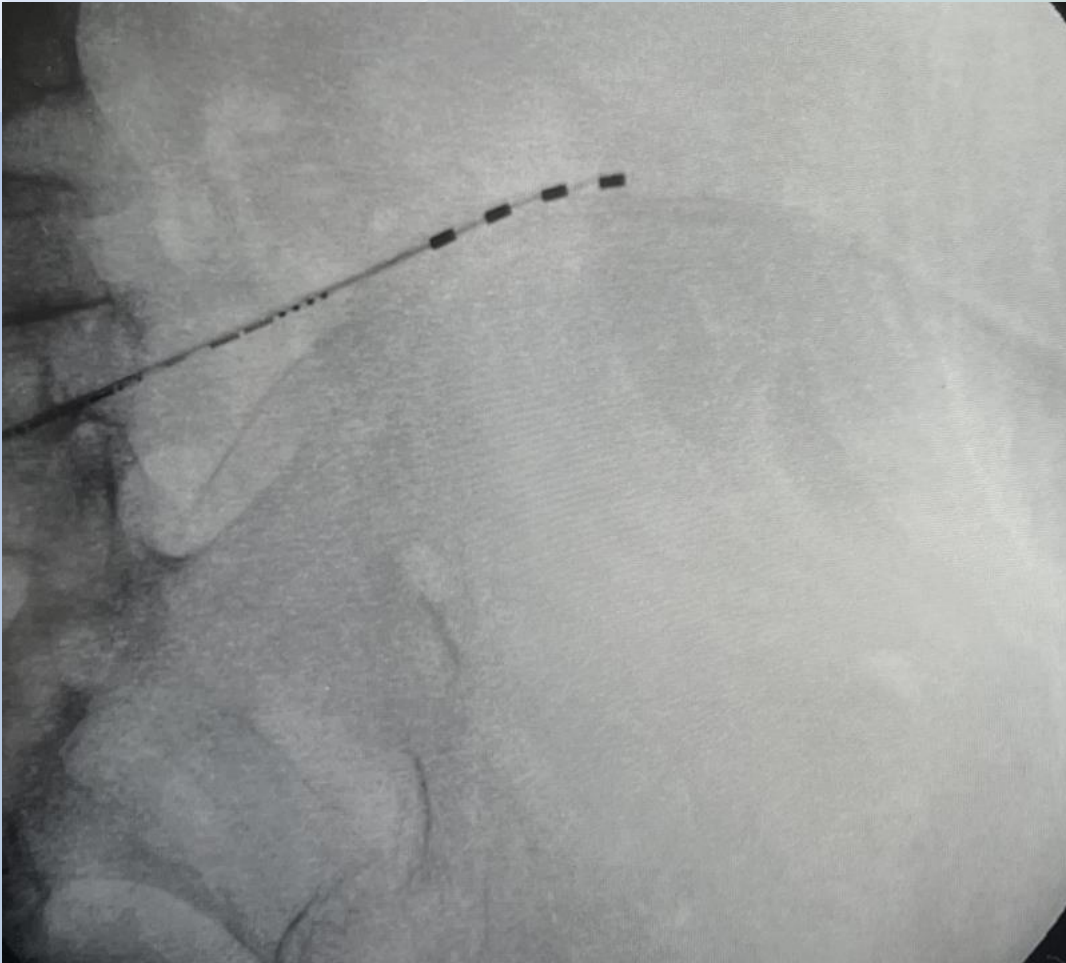


- burning pain, numbness, tingling, lower back and upper gluteal area.
- unilateral low back pain
- 40 and 82% of patients may complain of leg symptoms
- exacerbated flexion, extension, and rotation.
- Wearing tight clothing and belts, can also reproduce symptoms.

- Lower Buttock
- SI joint Pain

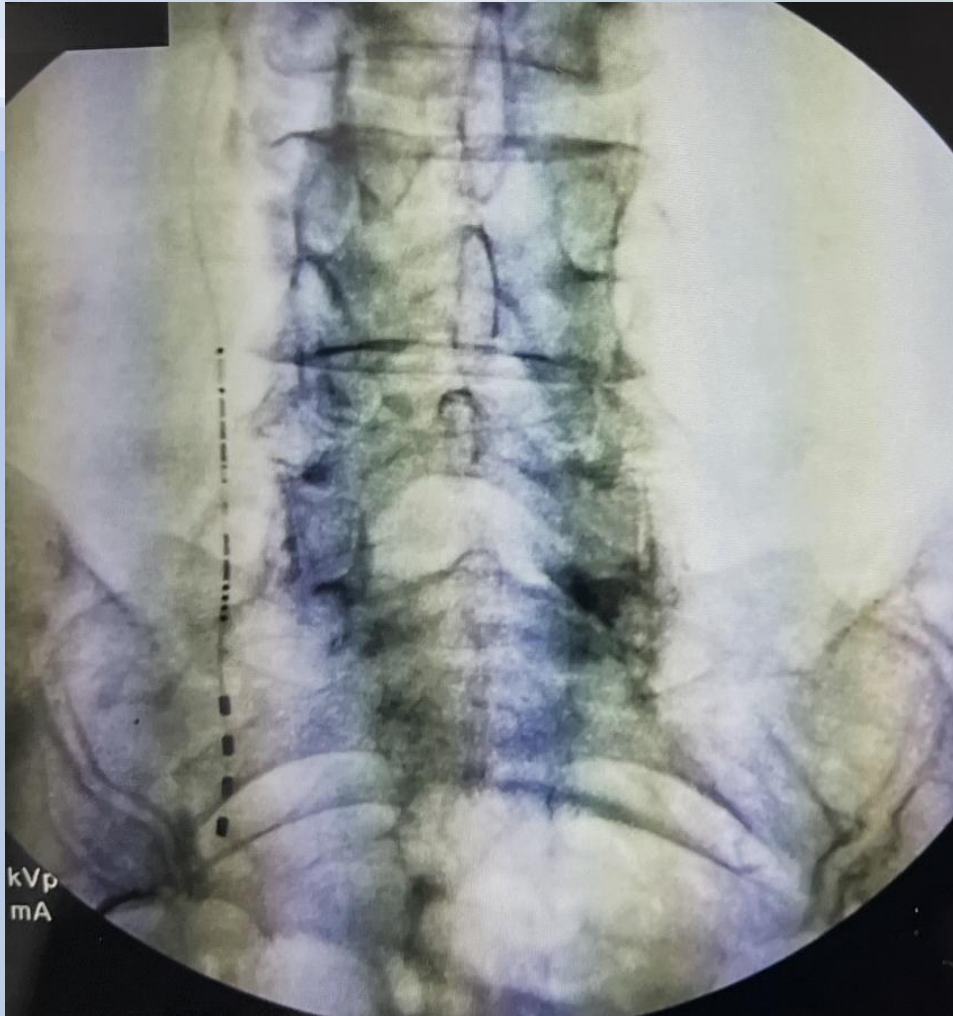


Superior Cluneal



- Low Back Pain – Surgical or Non-surgical
- SCS patients with inadequate Back pain coverage
- Patient not wanting SCS
- Patient with hardware

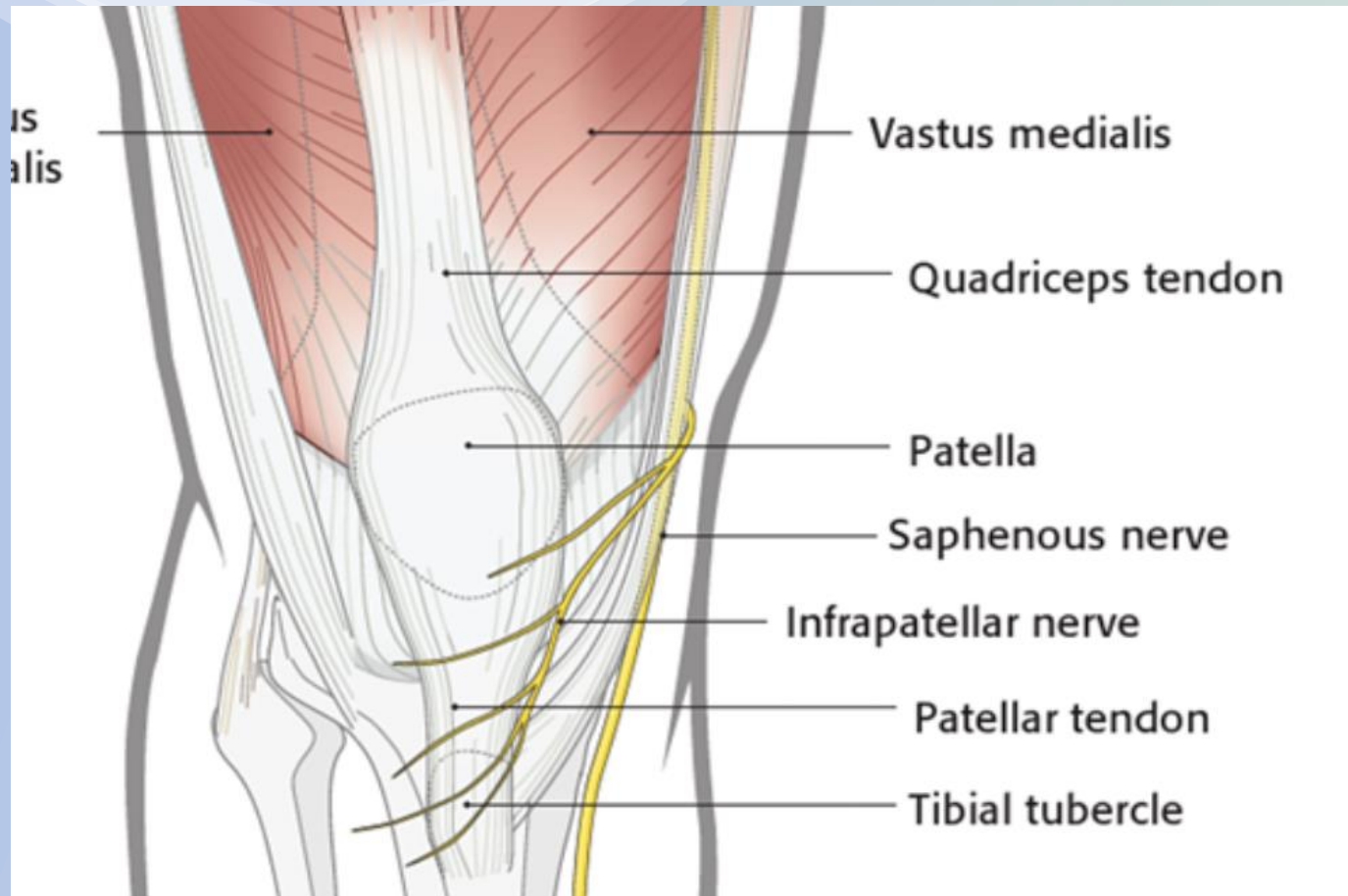
Medial Cluneal



- SI joint Fusion
- SI Joint Stabilization
- Lumbar Fusions

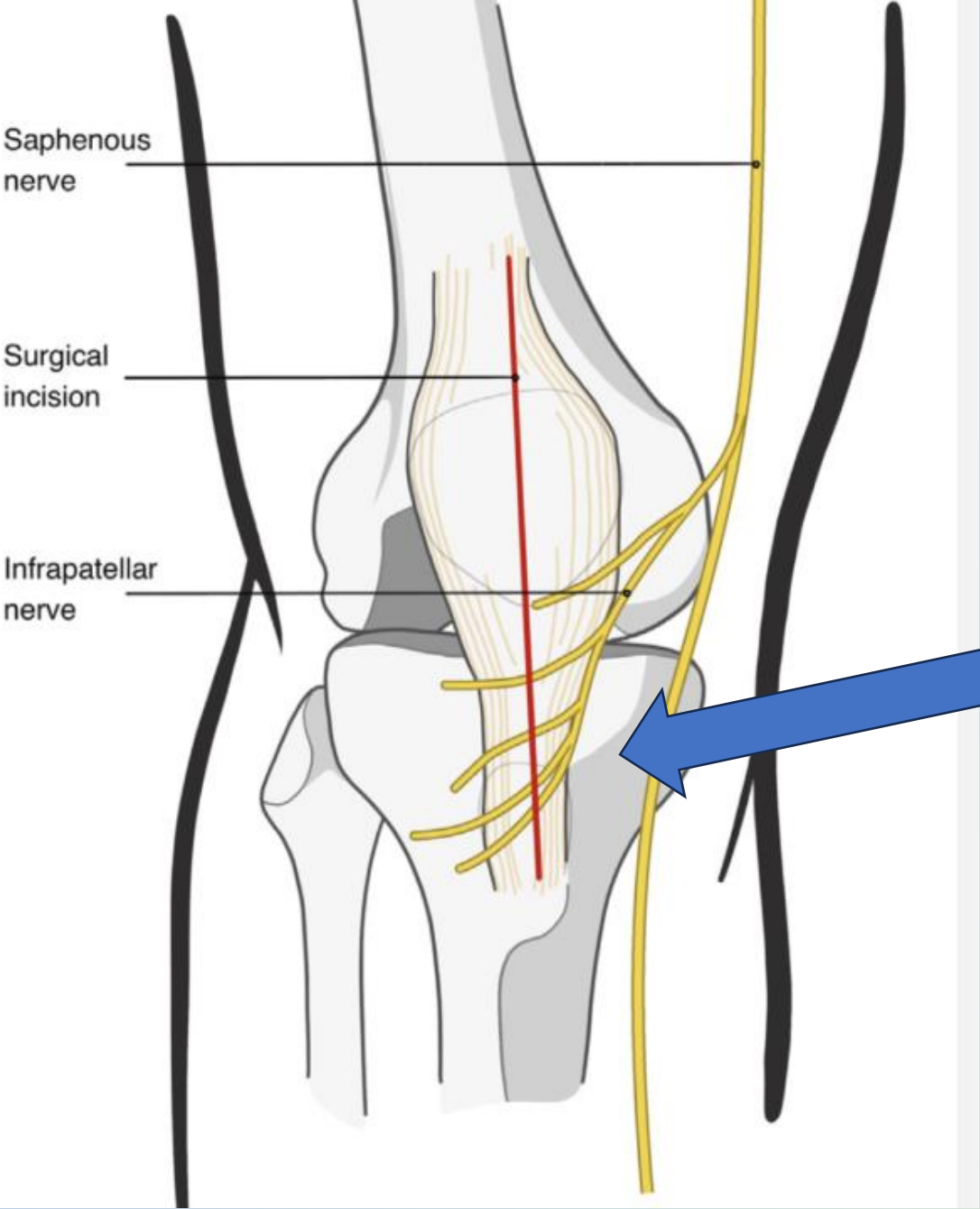
Knee Pain

Infrapatellar / Saphenous Nerve



- Total Knee Arthroplasty
- Tibial Nail
- Arthroscopy
- ACL repair
- Tendon Harvest

Infrapatellar Branch of Saphenous Nerve



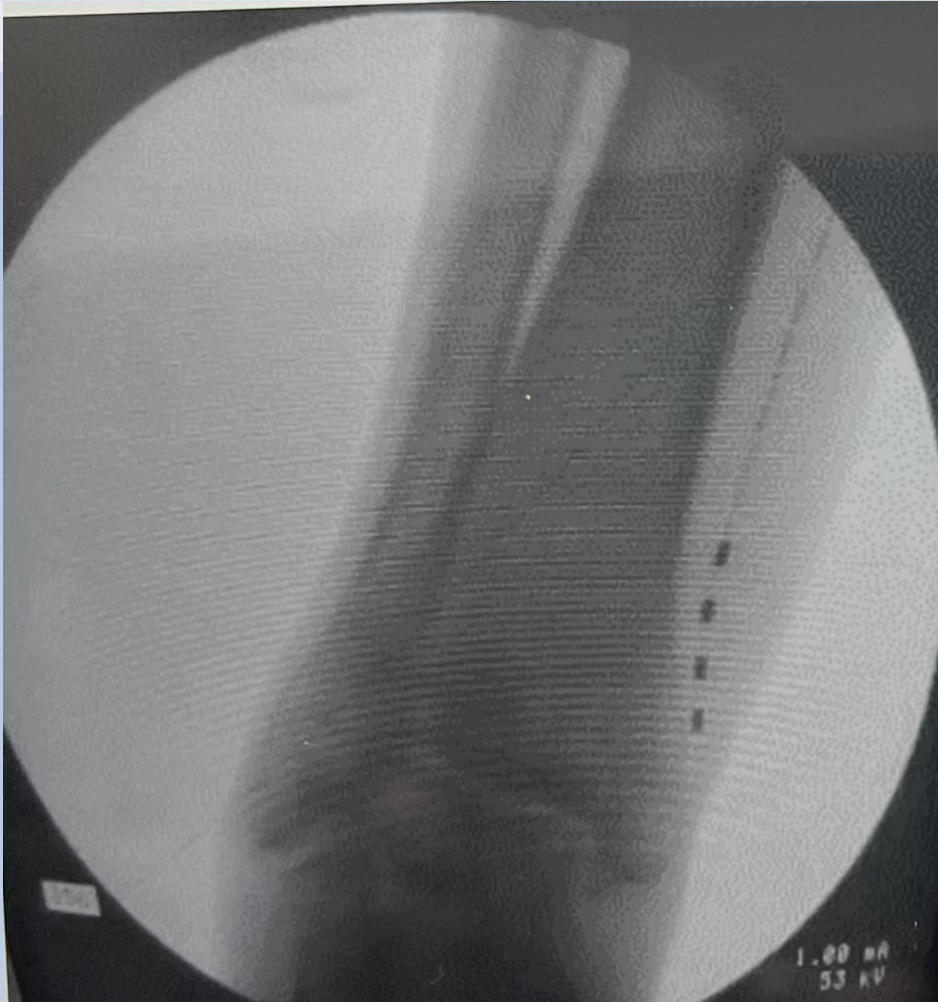
Infrapatellar Branch of Saphenous Nerve



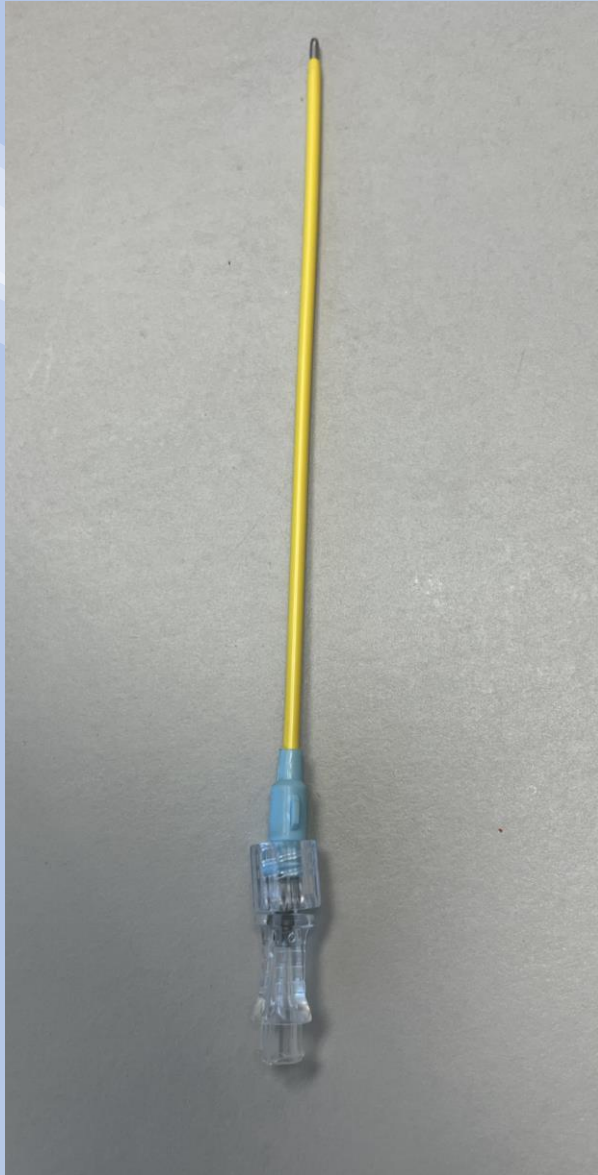
- Total Knee Arthroplasty
- Tibial Nail
- Arthroscopy
- ACL repair
- Tendon Harvest

Foot and Ankle Pain

Posterior Tibial Nerve



- Neuropathic Pain – Lower extremity
- Mononeuropathy
- CRPS type 2
- Post Tarsal Tunnel Repair
- Post Surgical Pain
- Foot and Ankle Trauma



Trial Implant (7days later)

- Leads are percutaneous placed at the surgery center
- No incision
- Electrodes taped
- Operate unit with remote control
- Leads removed in-office about 7 days
- If obtain pain reduction $>50\%$ may proceed to implantation.
 - 2 weeks later



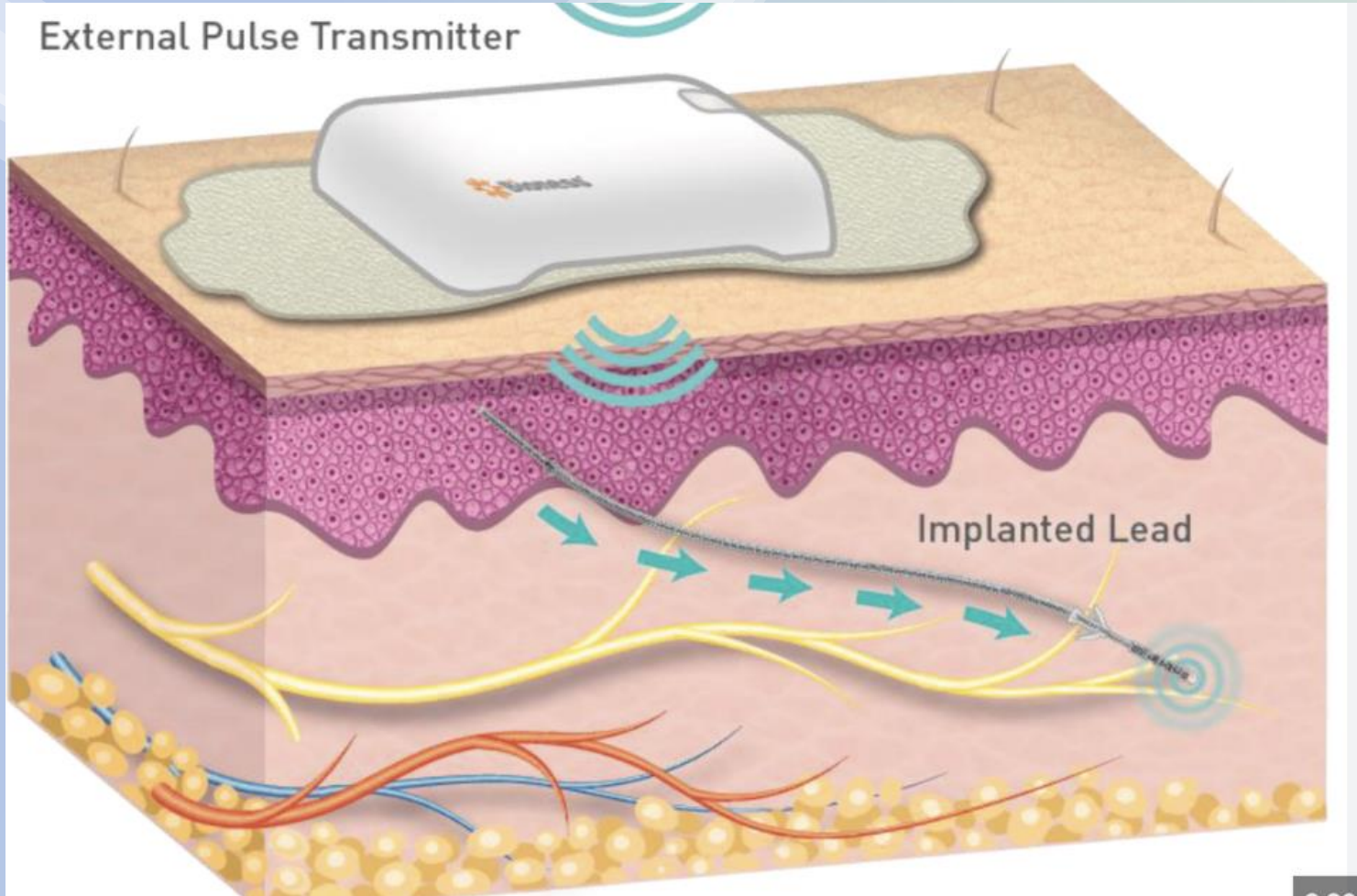
Contraindications for SCS

- Failed psychiatric evaluation
- Systemic infection or local infection
- Anticoagulation (unable to stop)
- Coagulopathies
- Cognitive concerns
- Medically not cleared for surgical implantation

RISKS (PNS)

- **As with any procedure, there may be certain risks and complications associated with peripheral nerve stimulation which include:**
- Nerve damage
- Pain
- Scar tissue formation
- Infection
- Bleeding
- Muscle cramps
- Malfunctioning of the stimulator or damage to the leads

PNS Summary



- Minimally invasive surgical procedure
- Can provide great relief to patients when there are no other options
- Help decrease medication use, increased function, improvement in quality of life.
- Trial then Implantation

Benefits

- FDA cleared systems for chronic intractable pain
- A non-drug therapy option
- Minimally-invasive technology
- Out-patient procedure
- No battery implanted inside of your body
- External power transmitter eliminates sitting while charging
- Systems that are full-body 3T and 1.5T MRI Conditional



Thank you