INTERVENTIONAL & IMPLANTABLE PAIN TREATMENTS

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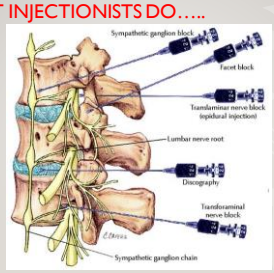
WHAT INJECTIONISTS DO…..



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T2 WEIGHTED MRI
L5-S1 DISC HERNIATION

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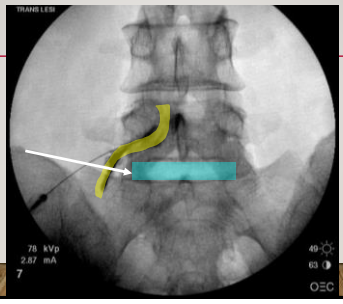
TRANSFORAMINAL ESI



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TRANSFORAMINAL ESI

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INTERLAMINAR ESI

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RADIOFREQUENCY ABLATION

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RADIOFREQUENCY ABLATION

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IMPLANTABLE PAIN CONTROL

- Neurostimulation
  - Tonic (traditional) spinal cord stimulation
  - High frequency (paresthesia-free) spinal cord stimulation
  - Burst spinal cord stimulation
  - Dorsal root ganglion stimulation
  - Peripheral nerve stimulation
- Targeted drug delivery: pain pump

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SCS THERAPY

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SCS THERAPY

- Can try it prior to having it implanted
- Reversible
- No medications (narcotics or otherwise)
- Easy to take care of
- Low risk of adverse events
- With new advancements can be used for neck, arm, pelvic, abdominal low back and lower extremity pain

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TRADITIONAL STIMULATION

- Cover pain with parasthesia
- Use intraoperative mapping to make sure patient has adequate coverage
- Many different options from different manufacturers
- Been proven and used for over 40 years
- Some systems fully MRI compatible at 1.5 T

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HIGH FREQUENCY STIMULATION

- Parasthesia free since it stimulates at 10K hz
- No intraoperative testing needed as has a different mechanism of action
- Better pain control (per studies) for both low back and lower extremity pain
- Not fully MRI compatible yet

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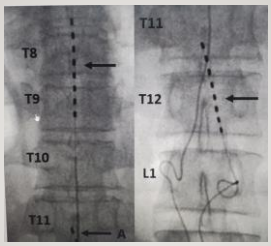

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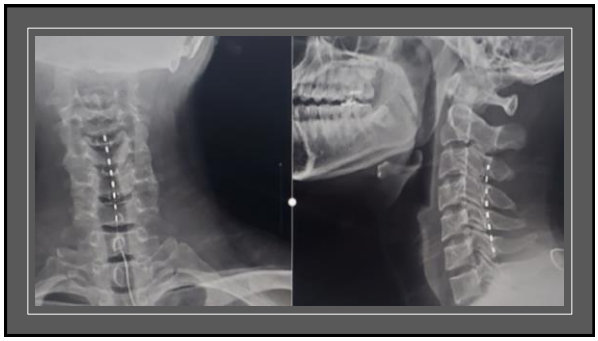

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DORSAL ROOT GANGLION STIMULATION

- More precise stimulation of hard to address area such as foot, groin, pelvic and post total knee replacement
- Harder technically to do and replicate from trial to permanent implant
- Less practitioner are trained in this and the number of people with it is low making this advancement still in its infancy

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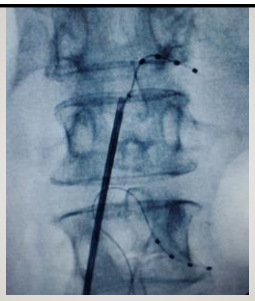

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PERIPHERAL NERVE STIMULATION

- Not really covered by insurance companies
- New products being developed but no traction as of yet
- Lots of issues/side effects in the past due to misuse of product
- Potential in the future

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Implantable Pain Control
for the
Chemically-dependent Patient

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Why might spinal pain relief be better for patients with high risk for abuse and diversion?

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TARGETED DRUG DELIVERY (TDD)

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- Pain relief in the spine, not in the brain
- Intrathecal opioids are powerful analgesics at very low dose
- TDD separates the analgesic properties of opioids from their mental side effects
- No addiction potential with TDD
- 1000x more potent than PO drugs

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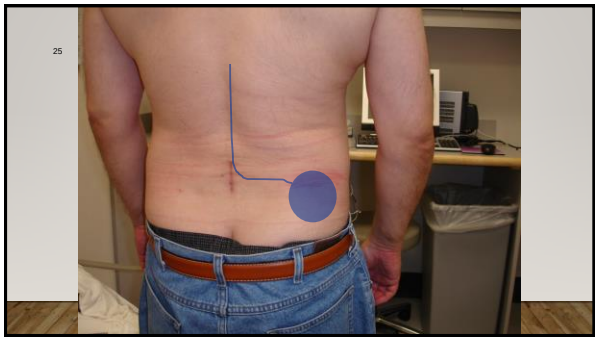

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RECOMMENDATION:

- Consider the interventions and advanced treatment options when dealing with pain.

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