



Non-CME Webinar Series
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second Tuesdays of odd-numbered months

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PAIN PROGRAM DIRECTORS
ADVANCING RESEARCH IN MULTIDISCIPLINARY PAIN MEDICINE

Patient Selection for SCS: Optimizing Outcomes

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- Patient selection is both an art and a science.
- FDA: Approved to manage chronic intractable pain of the trunk an/or limbs.
- Most crucial factor in therapy success.
- Long-term patient-physician relationship.
- Learning from explant reports.
- Physician:
 - Adequate training, skills, setting.



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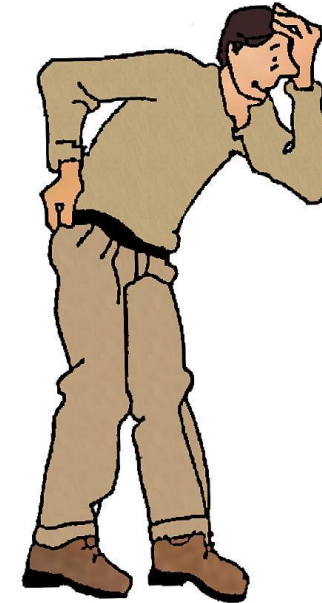
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FACTORS

1. Patient
2. Pain Condition





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PATIENT RELATED FACTORS:

- Psychological:
 - Most commonly related with explants due to loss of efficacy.
 - Anxiety, depression, PTSD and substance abuse
 - Borderline or antisocial personality disorders
 - Untreated psychotic illness
 - Psychological evaluation (Determine candidates and success of therapy)
- Cognitive impairment: consider non-rechargeable.
- Realistic expectations
 - Patient education



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- Health status:
 - Smoking:
 - Impede wound healing and decrease regeneration.
 - Alteration of tissue blood flow, oxygenation and neovascularization
 - Decrease synthesis and deposition of collagen, and induce myofibroblast dysfunction.
 - Nicotine associated with increased levels of musculoskeletal pain in limbs.
 - De la Cruz et al: Smokers composed 80% of the failure group, related with revision due to migration and new pain symptoms.
 - Glucose control: A1C and blood sugar levels
 - Immunosuppression: Consider consultation to ID specialists or Rheumatology.
 - Active infection (systemic or at the surgical site)



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- Higher rate of perioperative opioid use
 - Hormonal and immune system dysfunction, depression, weight gain, tolerance and hyperalgesia
- Spinal anatomy: Spine MRI.
- Anticoagulation
 - Medications: ASRA guidelines
 - Platelet count >100k





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PAIN CONDITION FACTORS:

- Type of pain:
 - Works best for pain syndromes with neuropathic component.
 - Nociceptive pain, when related to FBSS.
- Higher efficacy if performed within 2 years of pain onset.
- Adequate waveform/device selection would be important for the response rate of a specific pathology/anatomical location.



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- Failed Back Surgical Syndrome:
 - Combination of nociceptive and neuropathic features.
 - Very effective with radicular component
 - New waveforms: increased efficacy in axial pain
 - Absence of neurologic progression
- Complex Regional Pain Syndrome CRPS I and II:
 - Improvements in pain reduction and functional ability is enhanced on early stages and when pain is focal and unilateral.
 - Allow patient to perform PT to avoid atrophy.
- Upper extremity neuropathic pain syndrome



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- Chronic refractory angina:
 - Not controllable with maximal medical therapy, angioplasty or cardiac surgery
 - Reduction of sympathetic outflow with reduction in myocardial demand of oxygen
- Ischemic peripheral neuropathic pain from peripheral artery disease
 - Improvement in limb survival rate vs surgical sympathectomy
 - Increased capillary density and increased red blood cell velocity through capillary beds.
 - Ulcers <3 cm



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- Others:
 - Painful diabetic neuropathy
 - HIV related neuropathy
 - Post herpetic neuralgia
 - Inversely related to the level of deafferentation
 - Phantom limb pain
 - Spinal cord injury
 - Visceral pain
 - Cancer related pain
 - Expected long term remission
 - Slow disease progression
 - Resolution of the disease



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- Miscellaneous:
 - SCS Trial
 - Explants <6m (infection, bleeding, lead migration)
 - MRI compatibility.
 - Among the top reasons for explant (Dupré et al, 10%)



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