

# Interventional Pain Management Techniques in the Oncology Patient

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## Objectives

- Identify unique issues of concern in performing interventional therapies in the oncology patient.
- Describe considerations in the use of interventional pain management therapies in the oncology pain patient.

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### Pathophysiologic Mechanisms of Cancer Pain

Type	Cause	Characteristics
Somatic	Nociceptor activation	Aching or gnawing, localized
Visceral	Tumor impingement	Aching, vaguely localized, often referred
Deafferentation	Tumors, radiation, or chemotherapy	Severe or dull shooting pain on background of burning, aching sensations

Adapted from Payne

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## **Difficult-to-Control Cancer Pain: The Oncology Perspective**

- **Systemic pharmacological therapy is the mainstay of cancer pain treatment**
- **Need to collaborate with pain medicine and palliative care specialists**
- **Good pain management facilitates good cancer management**
  - example: patient receiving RT therapy (Levy, *Oncology*, 1999)

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## **Abrahm, Janet, M.D. Oncologist**

- **The Oncologist's Expanding Role**  
*Cancer*, 1999
- **A Physician's Guide to Pain and Symptom Management in Cancer Patients**, 2000, 2005.

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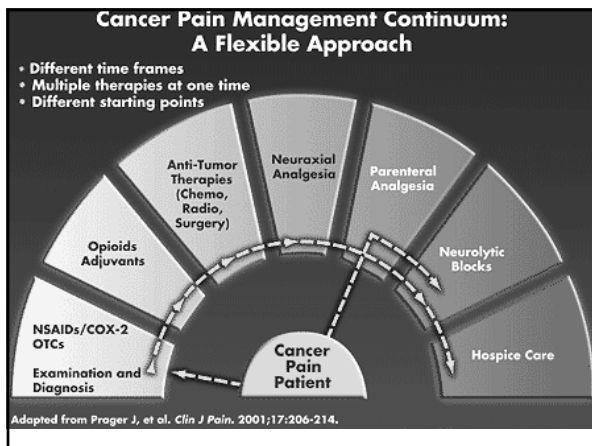
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**Neuraxial Infusion for Pain Control: When, Why & What to do After the Implant**

by

**Peter Staats, MD**

**Chief, Division of Pain Medicine**

**Anesthesiologist**

**Johns Hopkins University**

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**Performance Status *Rules***

- 0 Asymptomatic and fully active
- 1 Symptomatic; fully ambulatory; restricted in physically strenuous activity
- 2 Symptomatic; ambulatory; capable of self care; more than 50% of waking hours are spent out of bed
- 3 Symptomatic; limited self-care; spends more than 50% of time in bed, but not bedridden
- 4 Completely disabled; no self-care; bedridden

ECOG, Oken M.M, et. al, 1982

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***Risky but Necessary Business***

- **Most cancer patients are very complicated**
- **Post Chemo (window of opportunity), timing of nadir ex.**
- **Staying away from the RT field**
- **Code Status Issues**
- **Anesthetic Choice; safety, comfort**
- **Necessary Psyche for additional procedures?!**

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### ***Risky Business, cont.***

- **Hospice**
- **Nutritional status**
- **How low is too low for WBCs & platelet count?**
- **MRI compatibility**
- **VEGF agents, Avastin®**

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### **Peripheral Nerve Blocks for Cancer Pain**

- Typically Somatic pain
  - Readily localized
  - Squeezing, sharp, dull, aching.
- Trigeminal for face
- Brachial plexus for upper extremity
  - Interscalene
  - Supraclavicular
  - Infraclavicular
  - Selective
- Intercostal for chest wall
- Femoral for anterior/lateral proximal lower extremity
- Sciatic for posterior/medial and distal lower extremity
- Selective lower extremity nerve blocks

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### **Stellate Ganglion Block**

- Treatment of pain in the upper extremity, face and neck
- Best for sympathetically mediated pain
- Indications
  - Embolism of the upper extremity
  - Herpes Zoster
  - Complex regional pain syndrome

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## Neurolytic Blocks

- **Diagnostic:**
  - characterize underlying pain mechanisms
  - define anatomic pathways for pain transmission
  - simulate effects of longer-lasting blocks
- **Therapeutic:**
  - chemical neurolysis (alcohol or phenol) to interrupt impulse transmission for prolonged period
- Pathophysiology of pain must be clearly identified

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## Indication for Celiac Plexus Neural Blockade

- Intra abdominal visceral analgesia
- Upper abdominal surgery combining intercostal block and celiac block
- Intra-abdominal malignancy
  - Cancer of stomach
  - Pancreatic cancer
  - Gall bladder ca.
  - Adrenal mass
  - Common bile duct ca.

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## Pre-emptive Measures Celiac

- Fluids, fluids, fluids  
Pre and Post block
- The earlier performed, the better
- Watch out for the anti-coagulated patient
- Local anesthetic with needle pull out
- Education-no change in disease status, difference between diag. and neurolytic, initial pain flair (?), regeneration.
- Loose stool, good or bad!

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## Hypogastric Plexus and Ganglion Impar

- **Indicated for Pelvic and/or Rectal**
  - Perineal pain
  - Sympathetically mediated
  - Does not impair urinary or fecal continence

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## Epidural Nerve Block

- **Cervical**
  - Pain secondary to head, face, neck, shoulder and upper extremity malignancies
  - Bony metastases to head, face, cervical spine, shoulder girdle, and upper extremity
  - Chemotherapy-related peripheral neuropathy
- **Thoracic**
  - Pain chest malignancies or post thoracotomy
  - Bony metastases to chest
  - Chemotherapy-related peripheral neuropathy
- **Lumbar**
  - Pain secondary to abdominal, pelvic and lower extremity malignancies
  - Bony metastases to abdominal, pelvic and lower extremity
  - Chemotherapy-related peripheral neuropathy

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## Intrathecal Pump Therapy: Goals

- **Decrease Pain and Side Effects**
- **Increase Activity and Quality of Life (Performance Status)**
- **Continuation of Cancer Treatment**
- **Weaning of Oral Medications**
- **Decrease Hospitalizations & Procedures**
- **Decrease Medical Dollars Spent**

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## Conclusions

Whether given as part of initial therapy or applied after failure of CMM, IDDS reduced pain scores, significantly relieved most toxicities of pain control drugs, and was associated with improved survival for the length of this 6-month trial. Even the most refractory patients failed by CMM had a 27% reduction in pain scores, a 50% reduction in drug toxicity, and a median survival of 3 months after receiving IDDS.

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