

Community-Based Primary Palliative Care Community of Practice Series 2

Pain: Beyond the Basics



Facilitator: Dr. Nadine Gebara
Case Presenter: Dr. Haley Draper

Guest Speaker: Dr. Carmen Johnson
Date: November 9th 2022

Territorial Honouring



The Palliative Care ECHO Project

The Palliative Care ECHO Project is a 5-year national initiative to cultivate communities of practice and establish continuous professional development among health care providers across Canada who care for patients with life-limiting illness and their families.

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The Palliative Care ECHO Project is supported by a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada.



LEAP Core

- Interprofessional course that focuses on the essential competencies to provide a palliative care approach.
- Taught by local experts who are experienced palliative care clinicians and educators.
- Delivered online or in-person.
- Ideal for any health care professional (e.g., physician, nurse, pharmacist, social worker, etc.) who provides care for patients with life-threatening and progressive life-limiting illnesses.
- Accredited by the CFPC and Royal College.



Learn more about the course and topics covered by visiting

www.pallium.ca/course/leap-core

Objectives of this Series

After participating in this series, participants will be able to:

- Augment their primary-level palliative care skills with additional knowledge and expertise related to providing a palliative care approach.
- Connect with and learn from colleagues on how they are providing a palliative care approach.

Overview of Sessions

Session #	Session Title	Date/ Time
Session 1	Pain: Beyond the Basics	Nov 9, 2022 from 1-2pm ET
Session 2	Communication: Part 1	Nov 23, 2022 from 1-2pm ET
Session 3	Communication: Part 2	Dec.7, 2022 from 1-2pm ET
Session 4	Palliative Care and Substance Use Disorders	Jan 18, 2023 from 1-2pm ET
Session 5	GI Symptoms in Palliative Care	Feb 1, 2023 from 1-2pm ET
Session 6	Delirium	Feb 15, 2023 from 1-2pm ET
Session 7	Spiritual Care and Rituals around Death and Dying	Mar 1, 2023 from 1-2pm ET
Session 8	Palliative Sedation	Mar 15, 2023 from 1-2pm ET
Session 9	What's in store for Palliative Care in Canada: Policy, Advocacy and Implementation	Mar 29, 2023 from 1-2pm ET
Session 10	Grief and Bereavement: Beyond the Basics	Apr 12, 2023 from 1-2pm ET
Session 11	Practical Tips: Lessons from the Front Line	Apr 26, 2023 from 1-2pm ET

Welcome & Reminders

- Please introduce yourself in the chat! Let us know what province you are joining us from, your role and your work setting
- Your microphones are muted. There will be time during this session when you can unmute yourself for questions and discussion.
- You are welcome to use the chat function to ask questions and add comments throughout the session
- This session is being recorded and will be emailed to registrants within the next week.
- Remember not to disclose any Personal Health Information (PHI) during the session
- This 1-credit-per-hour Group Learning program has been certified by the College of Family Physicians of Canada for up to **11 Mainpro+** credits.

Disclosure

Relationship with Financial Sponsors:

Pallium Canada

- Not-for-profit
- Funded by Health Canada

Disclosure

This program has received financial support from:

- Health Canada in the form of a contribution program
- Generates funds to support operations and R&D from Pallium Pocketbook sales and course registration Fees

Facilitator/ Presenter:

- Dr. Nadine Gebara: Nothing to disclose
- Dr. Carmen Johnson: Nothing to disclose

Disclosure

Mitigating Potential Biases:

- The scientific planning committee had complete independent control over the development of course content

Introductions

Facilitator:

Dr. Nadine Gebara, MD CCFP- PC

Clinical co-lead of this ECHO series

Palliative Care Physician at Toronto Western Hospital, University Health Network

Family Physician at Gold Standard Health, Annex

Panelists:

Dr. Haley Draper, MD CCFP- PC

Clinical co-lead of this ECHO series

Palliative Care Physician at Toronto Western Hospital, University Health Network

Family Physician at Gold Standard Health, Annex

Dr. Roger Ghoche, MDCM CCFP-PC, MTS

Palliative Care and Rehabilitation Medicine, Mount Sinai Hospital- Montreal

Introductions

Panelists (continued):

Elisabeth Antifeau, RN, MScN, CHPCN(C), GNC(C)

Regional Clinical Nurse Specialist (CNS-C), Palliative End of Life Care

IH Regional Palliative End of Life Care Program

Pallium Canada Master Facilitator & Coach, Scientific Consultant

Thandi Briggs, RSW MSW

Care Coordinator, Integrated Palliative Care Program
Home and Community Care Support Services Toronto Central

Claudia Brown, RN BSN

Care Coordinator, Integrated Palliative Care Program
Home and Community Care Support Services Toronto Central

Rev. Jennifer Holtslander, SCP-Associate, MRE, BTh

Spiritual Care Provider

Support Team

Aliya Mamdeen

Program Delivery Officer, Pallium Canada

Diana Vincze

Palliative Care ECHO Project Manager, Pallium Canada

Introductions

Dr. Carmen Johnson

- In 1991, Dr. Johnson obtained her medical degree from University of Saskatchewan, College of Medicine
- Receiver of numerous awards early in her career including:
 - o Dr. Ernest McBrien Award for Family Medicine.
 - o Dr. Murray Stalker Memorial Award.
- In 1993, Dr. Johnson immigrated to the United States where she worked in Sidney, Montana to provide family and emergency care in rural communities.
 - In this time, she served as:
 - o Medical Director of Sidney Health Center Hospice Program.
 - o Medical Director of Mondak Family Clinic in Fairview, Montana.
- In 2003, Associate Director of Saint Mary's/Duluth Clinic Pain Management Program.
- Moved back to Saskatchewan (2008) to become medical director of Palliative Services in the RQHR and Interim medical Director of Sheridan Memorial Hospital and Rural Health Clinic.

Pain: Beyond the Basics

Session Learning Objectives

Upon completing the session, participants will be able to:

- Describe the role of opioids in the management of pain.
- Discuss management of complex pain including methadone and other third line adjuvants.
- List a brief overview of interventional procedures for pain (ie epidural, intrathecal and peripheral blocks).

Cancer Pain

Cancer Pain

- 85% of cancer patients experience pain
- 90% of cancer pain can be managed well

Total Pain

- Be sensitive to the “whole of that person” – “total suffering”
- Spiritual, physical symptoms
- Cultural, social, psychological
- Physical source
- Patient’s emotional status
- Patient’s personality
- Family, patient family context

Medication Categories for Pain

Opioid Analgesics:

- Codeine, morphine, hydromorphone, oxycodone, buprenorphine, methadone, fentanyl, tapentadol, tramadol

Non-opioid Analgesics:

- Acetaminophen, NSAIDS

Specific for bone pain:

- Bisphosphonates, calcitonin, radiopharmaceuticals

Bowel obstruction:

- Anticholinergics, somatostatin analogue

Medication Categories for Pain

Adjuvant Analgesics:

- **Glucocorticoids:** dexamethasone, prednisone
- **Antidepressants:** TCAs, SSRIs, SNRIs, bupropion
- **Alpha-2 adrenergic agonists:** clonidine, tizanidine
- **Cannabinoids**
- **Compounded topicals:** many options
- **Anticonvulsants:** gabapentinoids, carbamazepine, others
- **Sodium channel drugs:** mexiletine, iv lidocaine
- **GABA agonists:** Clonazepam, baclofen
- **N-methyl-D-aspartate inhibitors:** ketamine, memantine, others

Non-pharmacological Analgesic Approaches

Interventional Approaches:

- Large and varied groups of injections
- Neural blockade (block vs neurolysis)
- Spinal analgesics (epidural vs intrathecal)
- Neurosurgical neuroablation (surgical destruction)
- Implant therapies
- Trigger point and joint injections
- Local anaesthesia infiltration (painful scars)

Non-pharmacological Analgesic Approaches

Psychological:

Psychoeducational interventions

Cognitive-behavioral therapy

Relaxation therapy, guided imagery, other stress management

Hypnotherapy

Others

Rehabilitative:

Physical modalities (ultrasound)

Therapeutic exercise

Occupational therapy

Hydrotherapy

Heat/cold therapies

Lymphedema therapy

Non-pharmacological Analgesic Approaches

Neurostimulation:

- Transcutaneous
- Transcranial
- Implanted (spinal or peripheral nerve)

Complementary/Integrative:

- Acupuncture
- Massage
- Physical/movement
- Music Therapy
- Art Therapy

Opioids for Cancer Pain

Opioid Analgesics:

- Codeine, morphine, hydromorphone, oxycodone, buprenorphine, methadone, fentanyl, tapentadol, tramadol
- Methadone
- Buprenorphine

Methadone

Methadone myths/concerns:

1) Methadone doesn't work for 3 days!

Busted!

- Methadone provides analgesic onset at 30 min
- Methadone peak analgesic effect 2.5 – 4 hours
- Analgesia for 4-8 hours with first few doses
- Duration of analgesia increases with repeated doses

Methadone

Methadone myths/concerns:

2) You can't use methadone on opioid naïve patients!

Busted!

- Morphine equivalents of 10 mg/day or less available
- Dyspnea – methadone 0.5 mg po or buccal twice daily
- Pain – methadone 0.5 mg po or buccal q 8 h (morphine equivalent 15mg/day)

Methadone

Methadone myths/concerns:

3) Can't use it with liver failure because it is metabolized in the liver!

Busted!

- Aren't all drugs are metabolized in the liver?
- Use the usual mantra – start low and go slow!

Methadone

Methadone myths/concerns:

4) Methadone causes QTc prolongation

Facts:

- Many drugs used in medicine cause QTc prolongation. Methadone may cause QTc prolongation especially at “higher doses”.
(Harm reduction clinics in Regina do ECGs at methadone 80 mg daily)
- There are a lot of potential drug and Cytochrome P450 enzyme interactions with methadone.
(How many are clinically relevant?)
- There is no known incidence of QTc prolongation with methadone

Monitor closely - Get an ECG!

Methadone

Routes: PO, buccal, peg tube, rectal, topical.
Commercially available tablets 1, 5, 10, 25 mg
Liquid 1mg/ml, 10 mg/ml
Higher concentrations (50 mg/ml, 100 mg/ml) through compounding pharmacy

Topical: Compounding Pharmacy
Lipoderm, other analgesics often added (gabapentin, amitriptyline, diclofenac, ketoprophen, etc.)
Stomahesive powder for wounds that cannot use cream base

Methadone

Metabolism and excretion:

No neurotoxic metabolites!

Metabolism

- liver – inactive metabolites

Normal excretion

- urine (20-50%)
- feces (10-45%)

Methadone

No dose adjustment needed in renal failure!

Renal failure excretion

- Feces (100%)
- Useful of patients on dialysis
- Not dialysed

Buprenorphine

Butrans patch – buprenorphine

- 5mcg/hr, 7.5 mcg/hr, 10 mcg/hr, 15 mcg/hr, 20 mcg/hr
- Not on formulary in Saskatchewan

Suboxone - buprenorphine/naloxone

- 2 mg/0.5 mg, 8 mg/2 mg On Saskatchewan Formulary
- “Partial agonist” at mu-opioid receptor (MOR)
- High binding affinity for MOR
- Antagonist at kappa-opioid receptor (anti-depressant effect)
- Ceiling effect on respiratory depression and constipation.
- There is no ceiling effect for analgesia

N-Methyl-D-aspartate inhibitors

Ketamine

- Neuropathic pain
- Pain crisis
- IV infusions – small loading bolus then infused at low sub-anaesthetic dose. Titrate as needed.
- Intermittent boluses – chronic pain
- Oral – bioavailability 6 – 17%
- Analgesic on its own. Sometimes long term use. Bladder irritant
- Reset opioid receptor sensitivity via complete blockade of NMDA activity. 5 - 7 days treatment.
-

N-Methyl-D-aspartate inhibitors

Memantine

- Marketed for Alzheimer's Disease
- Partial antagonist at NMDA receptor
- Slows down firing of NMDA receptor
- Some studies – benefits in fibromyalgia/chronic pain
- Complex regional pain syndrome (CRPS) – reduces pain through NMDA inhibition and neuroplasticity of the brain.
- One study – curative of CRPS 60 mg daily for 6 months

Lidocaine

Class IB Antiarrhythmic drug

- Administered by iv infusion
- Low risk procedure
- Infusions done at home in some jurisdictions
- In hospital
 - Anesthesiology
- Lasting pain relief – days to weeks
- In Saskatchewan – lack of resources

Mexiletine

Class 1B anti-arrhythmic drug

- Oral route – metabolized to a molecule with similar structure to lidocaine.
- Na⁺ channel blocker
- Minimal reduction on QT interval
- Good results at lower doses (100 mg po bid – tid)
- May titrate to 1200 mg daily (400 mg tid)
- GI intolerance – take with food, sit upright for ½ hour after administration

Neurolytic Blockade/Ablation Techniques

Plexus blocks/ablations:

- **Stellate Ganglion** – head, neck, upper arm, upper chest
- **Cervical Plexus** – surgical anaesthesia
- **Brachial Plexus** – arm, shoulder
- **Celiac Plexus** - liver, gallbladder, stomach, pancreas, spleen, omentum, kidneys, the entire small bowel, first two-thirds of the large bowel. Pain, nausea
- **Superior Hypogastric Plexus** – pelvic pain
- **Inferior Hypogastric Plexus** – pelvic pain
- **Ganglion Impar** – perineal pain

Neurolytic Blockade/Ablation Techniques

Block

- Temporary
- Marcaine – long acting (72 hours)
- Sometimes test of efficacy before ablation

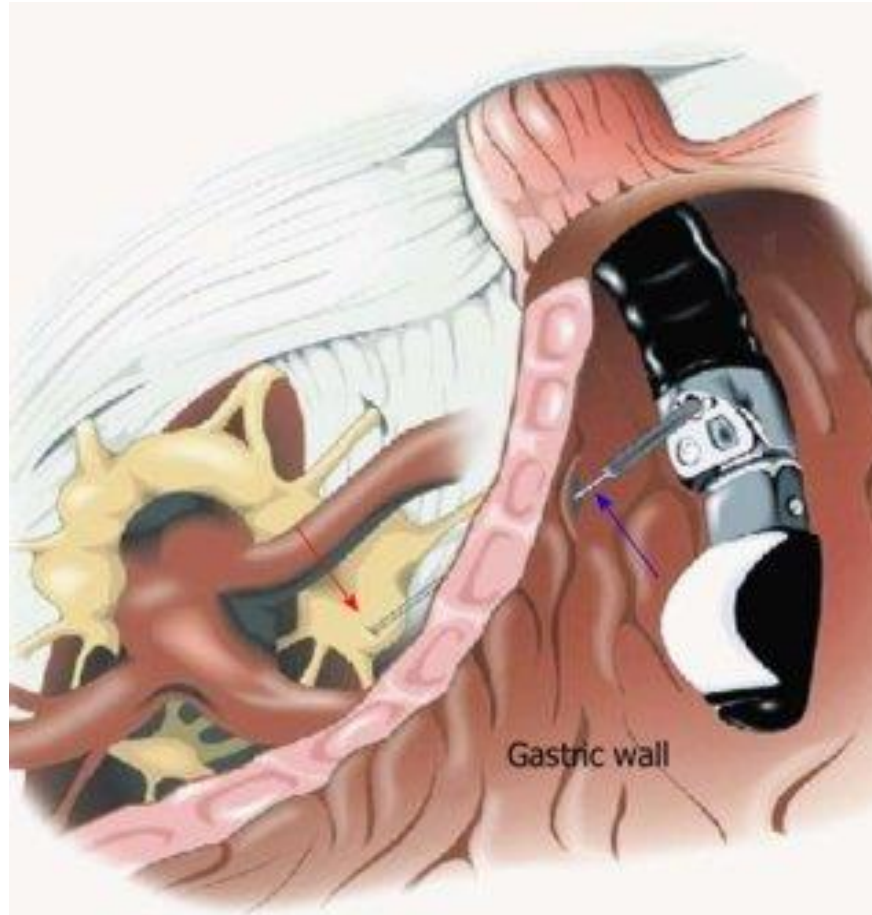
Ablation

- Longer lasting
- Radiofrequency – ultrasound (heat)
- Lysis of the nerve plexus:
 - Absolute Alcohol, Phenol
 - May be repeated every 2 – 3 months if needed

Celiac Plexus

Endoscopic approach

- celiac plexus at red arrow



Celiac Plexus

Posterior Approach

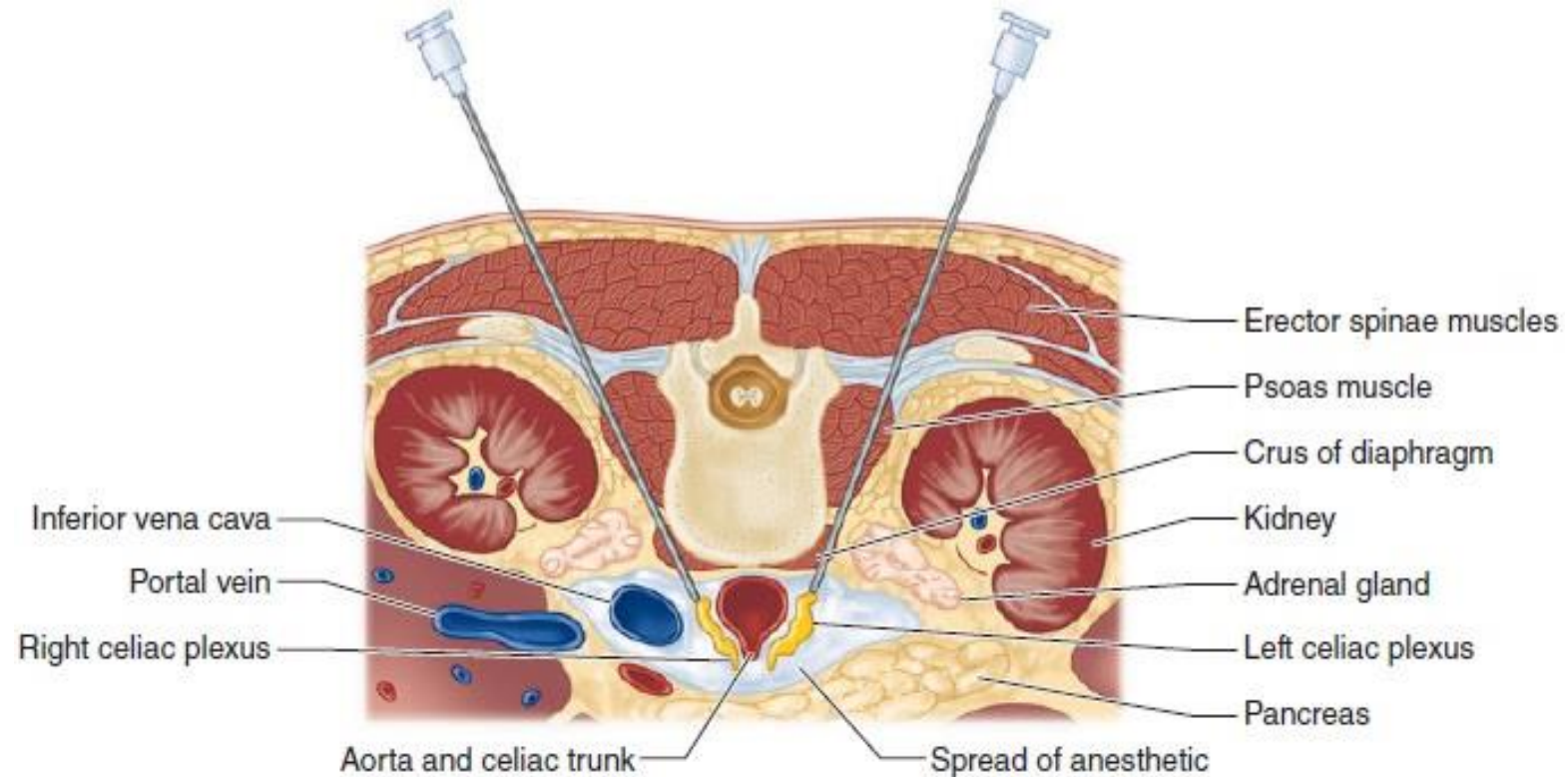
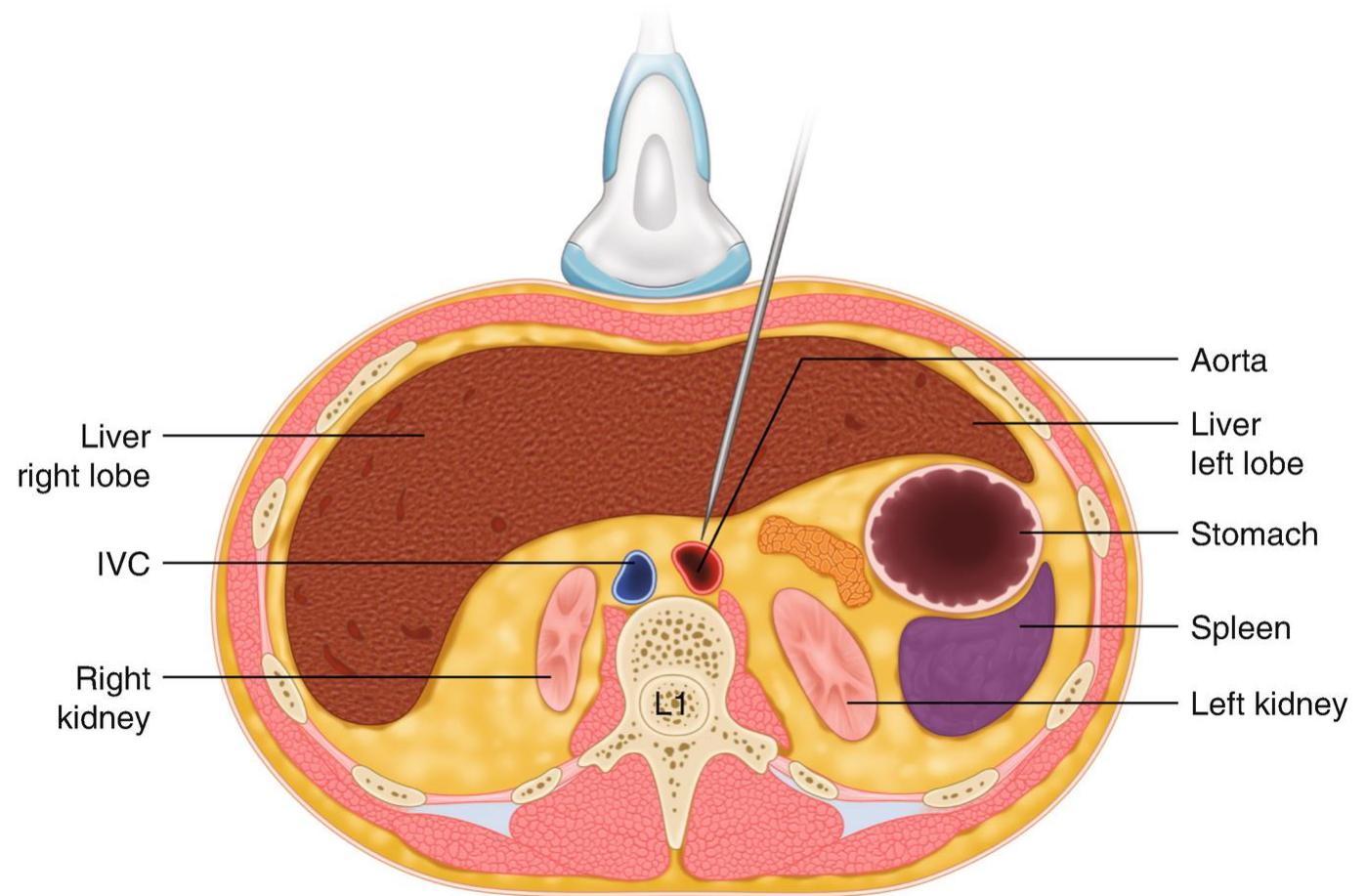


FIGURE 47-21 Celiac plexus block.

Celiac Plexus

**Anterior
Approach**

**Ultrasound
guidance**



Ganglion Impar

First described in 1990 for treatment of intractable perineal pain

Positions for procedure:

- Prone – lithotomy position, needle introduced through perinium
- Lateral – needle introduced through buttock
- Supine – needle introduced just anterior to the coccyx
- Terminal ganglion of the sympathetic chain
- Sits at sacrococcygeal junction (tailbone)

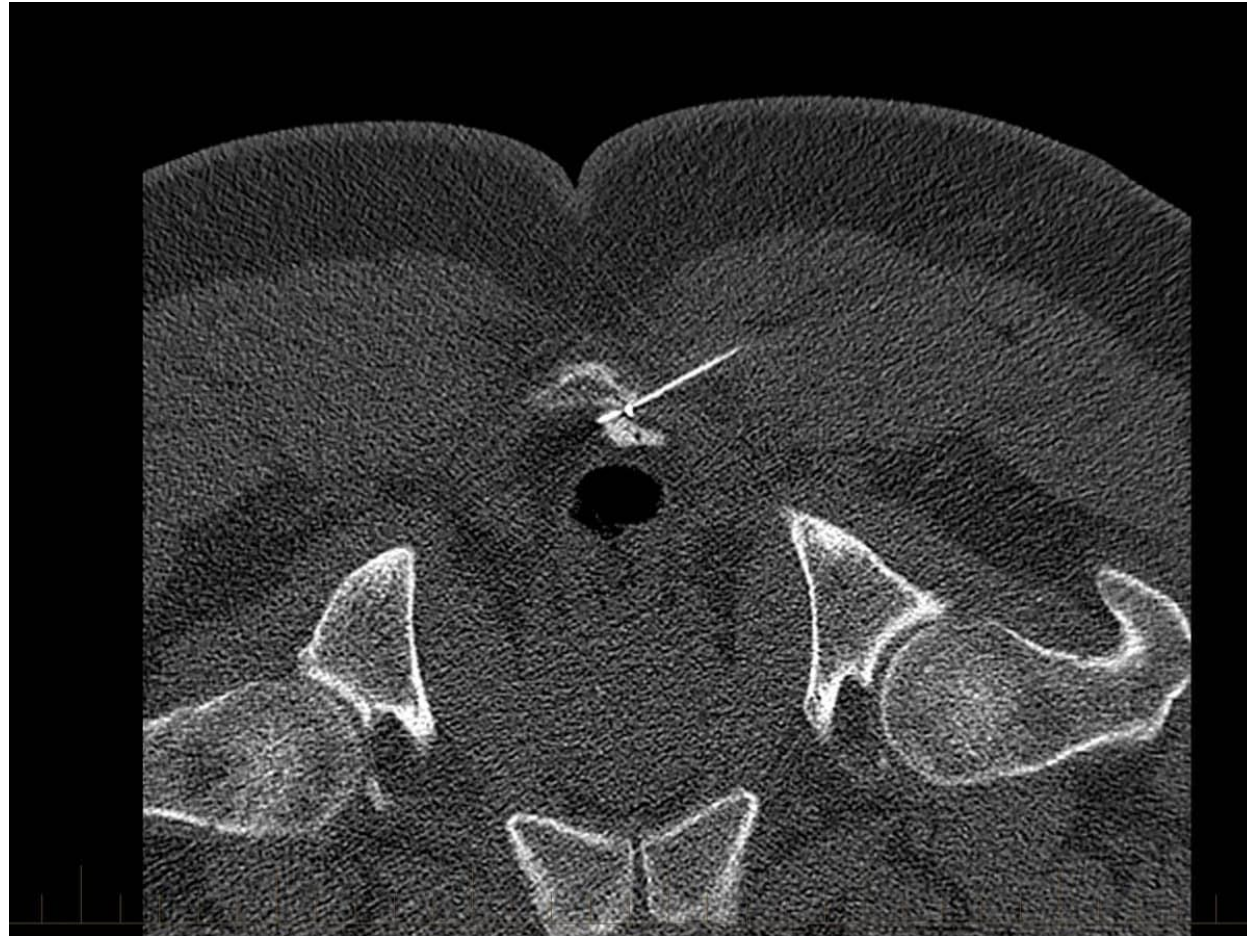
Ganglion Impar

Visceral afferents from perineum including:

- Vulva
- Distal rectum
- Anus
- Distal urethra
- Distal 1/3 of vagina

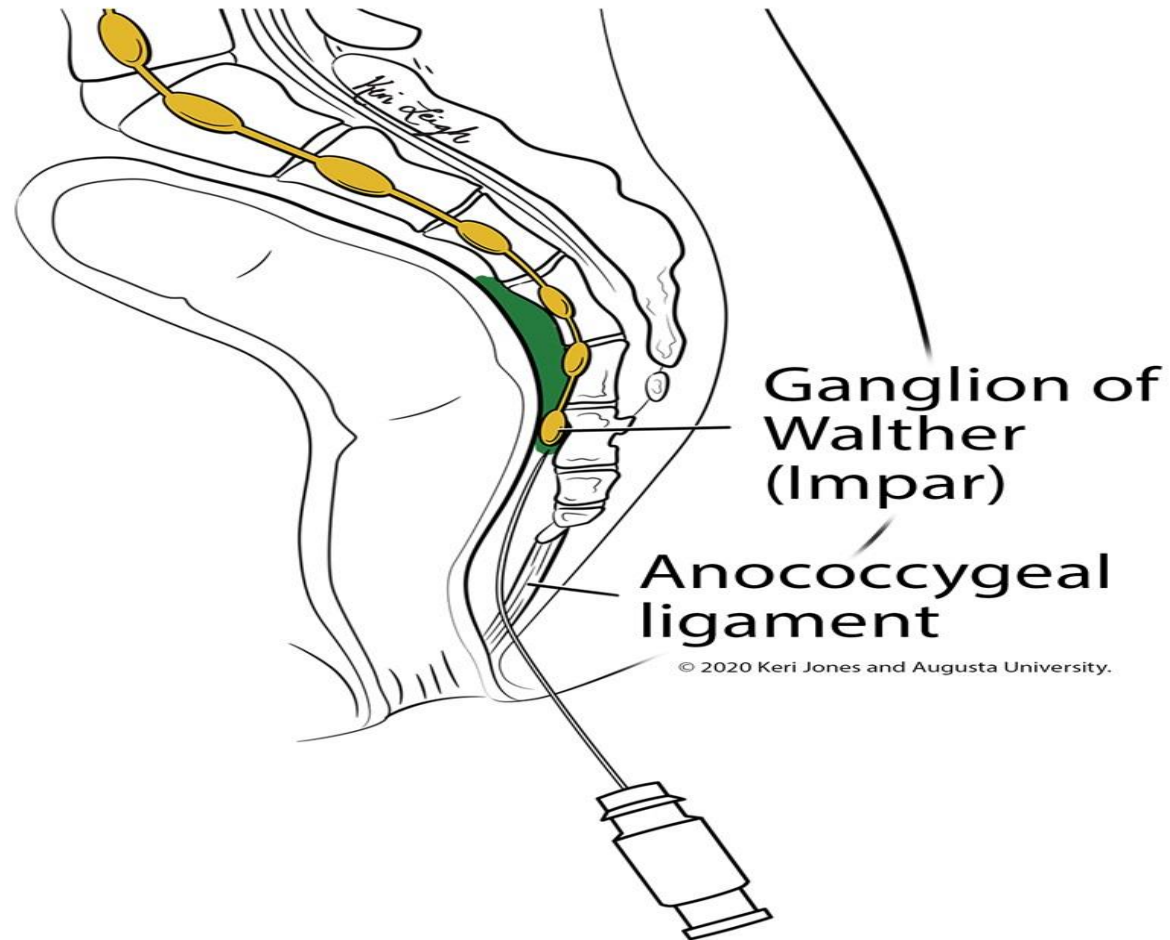
Ganglion Impar

Lateral approach
CT guided



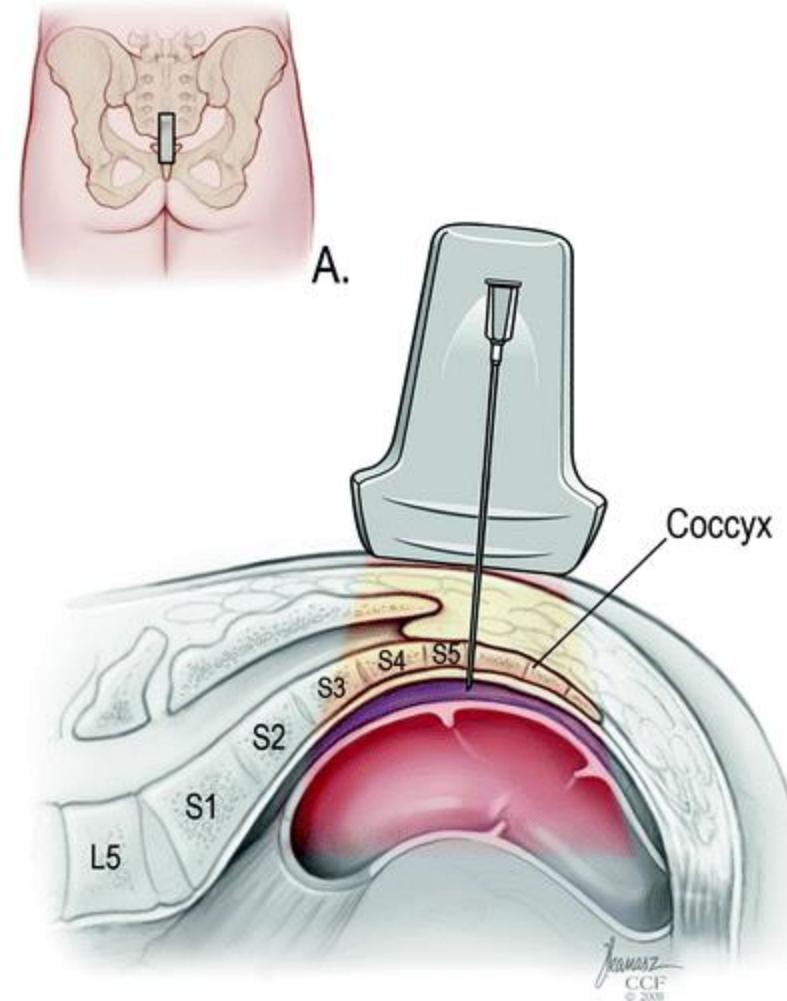
Ganglion Impar

**Supine position
(Laying on back)**



Ganglion Impar

Prone/Posterior approach
Ultrasound guidance



Neuraxial Spinal Analgesia/Anaesthesia

Epidural analgesia:

- Opioids and/or local anesthetics into the epidural space
- Bolus injection, continuous infusion or patient-controlled
- Long or short term therapy, all age groups
- Catheter tip placement close to spinal nerves (dermatomes)
- Analgesia in the dermatomes supplied by specific spinal nerve

Epidural anaesthesia:

- Higher doses of same medications
- Loss of sensation and motor function

Neuraxial Spinal Analgesia/Anaesthesia

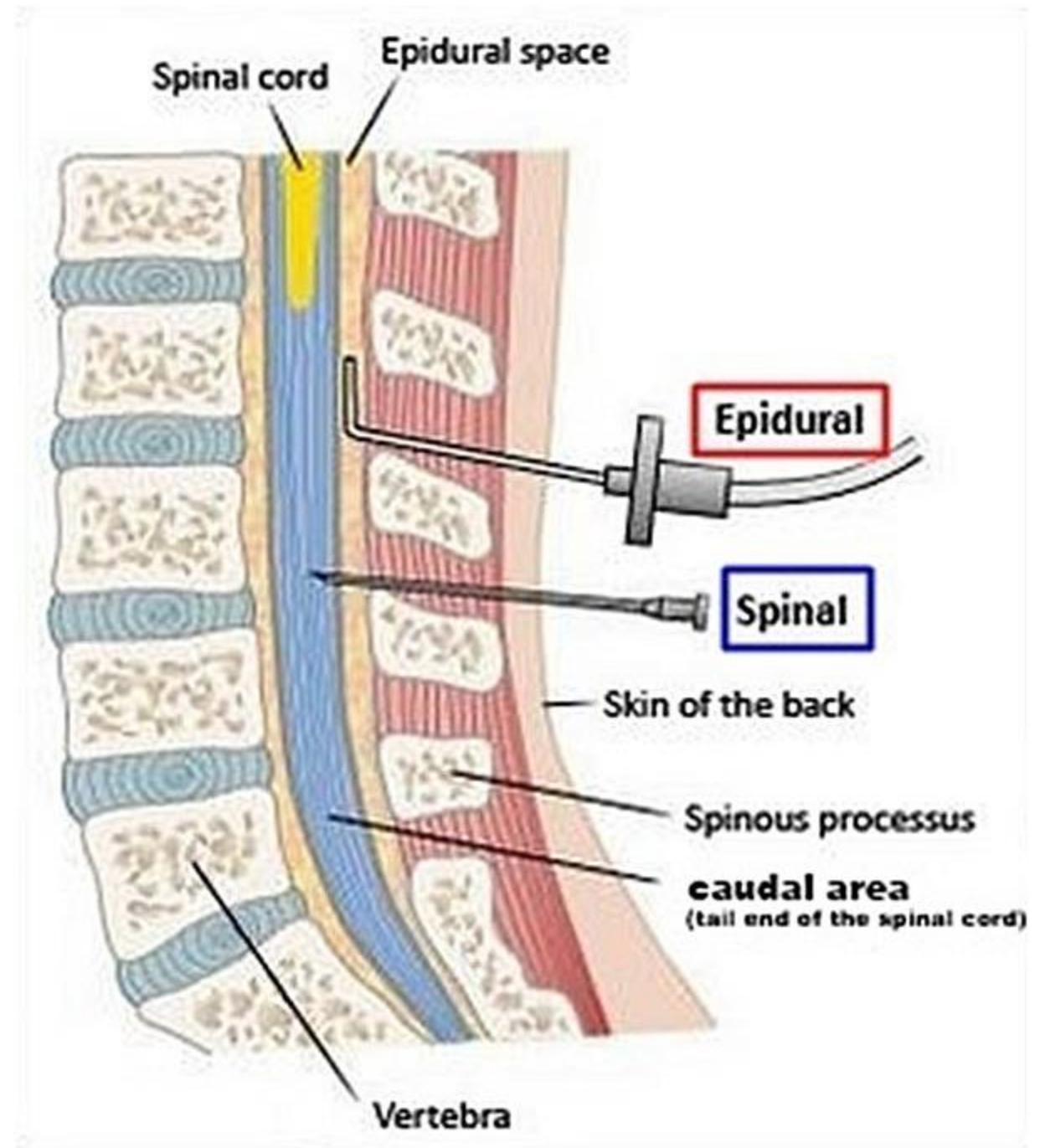
Spinal anaesthesia

Other names:

- Spinal block
 - Subarachnoid block
 - Intradural block
 - Intrathecal block
-
- Local anaesthetic and/or opioid into the subarachnoid space

Epidural Intrathecal (spinal)

Epidural and Intrathecal Spaces



Neuraxial Spinal Analgesia/Anaesthesia

Spinal vs. Epidural

	<u>Spinal</u>	<u>Epidural</u>
• Location:	lumbar only	anywhere
• Duration of Block:	brief	prolonged
• Procedure Time:	brief	longer
• Quality of Block:	high	not as good as spinal
• Disadvantages:	increased risk of hypotension, dural puncture headache	
• Advantages:	produces segmental block, greater control over analgesia, possibility of long term analgesia	
• Profound muscular blockade occurs with neuraxial anesthesia		

Resources

Essential Practices in Hospice and Palliative Medicine. Unipack 3. Pain Assessment and Management;. American Academy of Hospice & Palliative Medicine

Operative Neurosurgery. https://operativeneurosurgery.com/doku.php?id=neuroablative_procedure

Epidural analgesia: What nurses need to know:

- Sawhney, Mona PhD, RN, NP: [August 2012 - Volume 42 - Issue 8 - p 36-41.](#)
- doi: 10.1097/01.NURSE.0000415833.28619.a1

[Neural blockade in chronic and cancer pain – PubMed](#)

- <https://pubmed.ncbi.nlm.nih.gov/9246585>

Resources

Spinal Anesthesia - StatPearls - NCBI Bookshelf

- <https://www.ncbi.nlm.nih.gov/books/NBK537299>

Image Epidural and Spinal spaces.

- <https://anesthesiam.blogspot.com/2019/08/total-spinal.html>

Image Anterior Celiac Plexus Ablation

- https://link.springer.com/chapter/10.1007/978-1-4939-7754-3_16

Image Posterior Celiac Plexus Ablation

- http://www.brainkart.com/article/Celiac-Plexus-Block_27285/

Resources

Image Endoscopic Celiac Plexus Neurolysis

- https://www.researchgate.net/figure/Endoscopic-ultrasound-guided-celiac-plexus-neurolysis-Red-arrow-celiac-ganglion-Blue_fig1_263514850

Image Ganglion Impar Supine

- http://www.medillsb.com/illustration_image_details.aspx?AID=14719&IID=309207

Image Ganglion Impar Lateral

- <https://www.melbournradiology.com.au/interventional-radiology/spine-back-injections-pain-management/>

Resources

Image Posterior Ganglion Impar

- https://link.springer.com/chapter/10.1007/978-1-4419-1681-5_13

Wall & Melzack's Textbook of Pain

Practical Management of Pain (PRACTICAL MANAGEMENT OF PAIN (RAJ))

Bonica's Management of Pain

Facts & Comparisons

- <https://www.wolterskluwer.com/en/solutions/lexicomp/facts-and-comparisons>

Case based discussion

Case Presentation - Ms. C

- 52-year-old
- **Dx:** Metastatic cervical cancer
- **Social**
 - Single mother, 2 adult children
 - Supportive siblings
- **Function**
 - PPS 40%
 - Recent falls



Question

Is there anything else you would like to know about Ms. C?

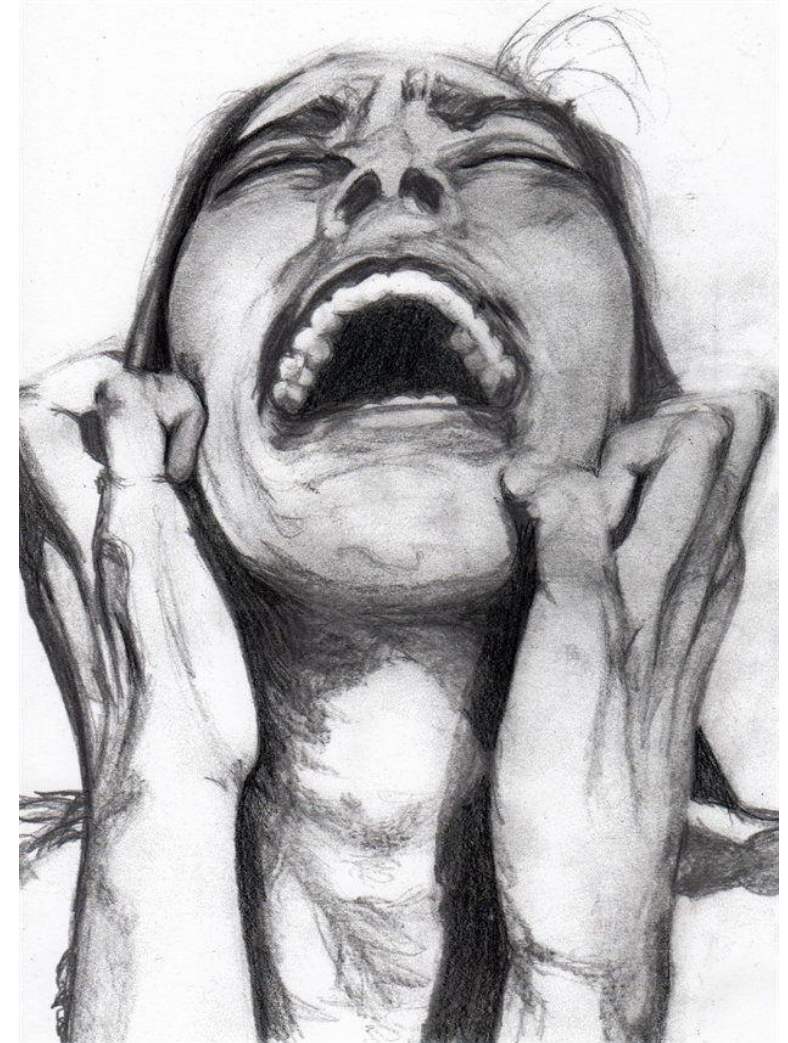
Case Presentation

Pain history:

- Pain: lower abdomen /pelvis and bilateral legs
- Both neuropathic and nociceptive pain
- Rating pain 8/10 with rest and 10/10 with movement

Current medications:

- Morphine ER 30 mg BID and morphine IR 5 mg q1h PRN
- Using 10+ PRNs over the past 48 hours
- Gabapentin 300 mg BID for neuropathic pain
- Senna 2 tabs BID
- PEG OD



Case Presentation

Day 1

- Morphine ER increased to 50 mg BID
- Gabapentin increased to 300 mg AM and 600 mg HS
- Used Morphine IR x 6
- Describing Pain 8-9/10
- No signs of opioid toxicity

Day 2

- Morphine changed to SC morphine with a 30% dose increase
- 11 mg morphine SC q4h and 5 mg morphine sc q1h prn
- New myoclonus and somnolence
- Ongoing report of pain- stabbing sensation to pelvic and shooting/burning pain in bilateral legs

Question

What is happening?

What suggestions do you have for pain control?

Case presentation

Day 3:

- Opioid rotation to hydromorphone
- 25% dose reduction (pain, opioid toxicity)
- Started hydromorphone 1.5 mg sc q4h

Day 4-7:

- Improved symptoms of neurotoxicity, ongoing poor pain control
- Hydromorphone increased to 4 mg sc q4h
- Started on CADD pump at 1 mg /hr with 1.5 mg q30 min PRN
- Gabapentin increased to 600 mg AM and 900 mg HS.

Question

- Which adjuvants would you be thinking about?
- In your community, have you seen used for intractable pain?

Session Wrap Up

- Please fill out our feedback survey, a link has been added into the chat.
- A recording of this session will be emailed to registrants within the next week.
- Thank you for your participation during our second series!

Thank You



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