

Cancer Pain Management: When Pills Don't Work

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DISCLOSURES



No Disclosures

Objectives



- ❖ List the Etiologies of Cancer Pain
- ❖ Name and discuss interventional procedures as options for Cancer Pain Control
- ❖ List Changes in the Paradigm for the Future

Why treat pain?

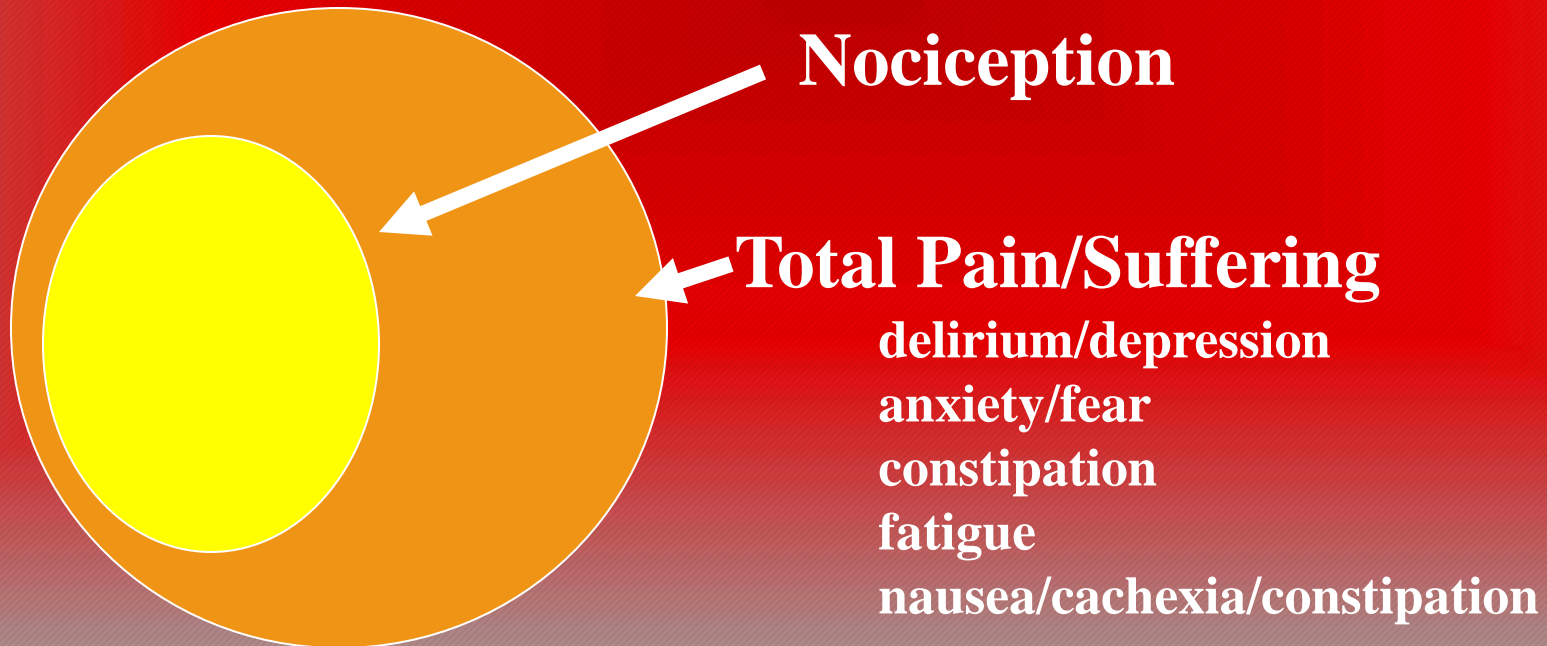


- ❖ **Control of pain is important for**
 - ❖ Compliance with guidelines and standards (JCAHO)
 - ❖ Moral and Ethical reasons
 - ❖ Hippocratic Oath / *primum non nocere*
 - ❖ Improving patient outcomes and satisfaction – *Quality of Life*

Components of Pain



- ❖ Sensory: Intensity, quality, location, severity
- ❖ Reactive: Affective, Concept of total pain-suffering, Interference w/activities, fatigue, etc.

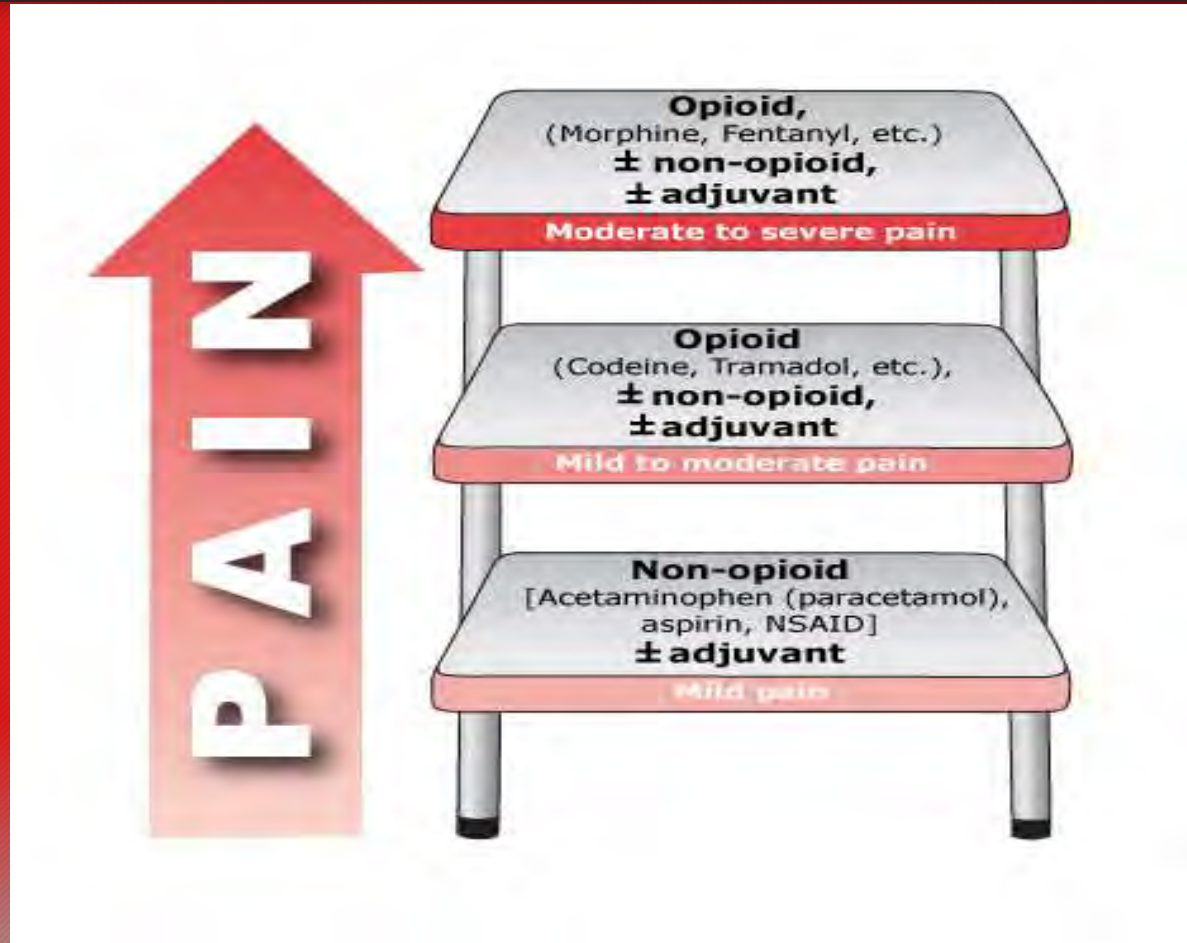


Cancer Pain Etiology

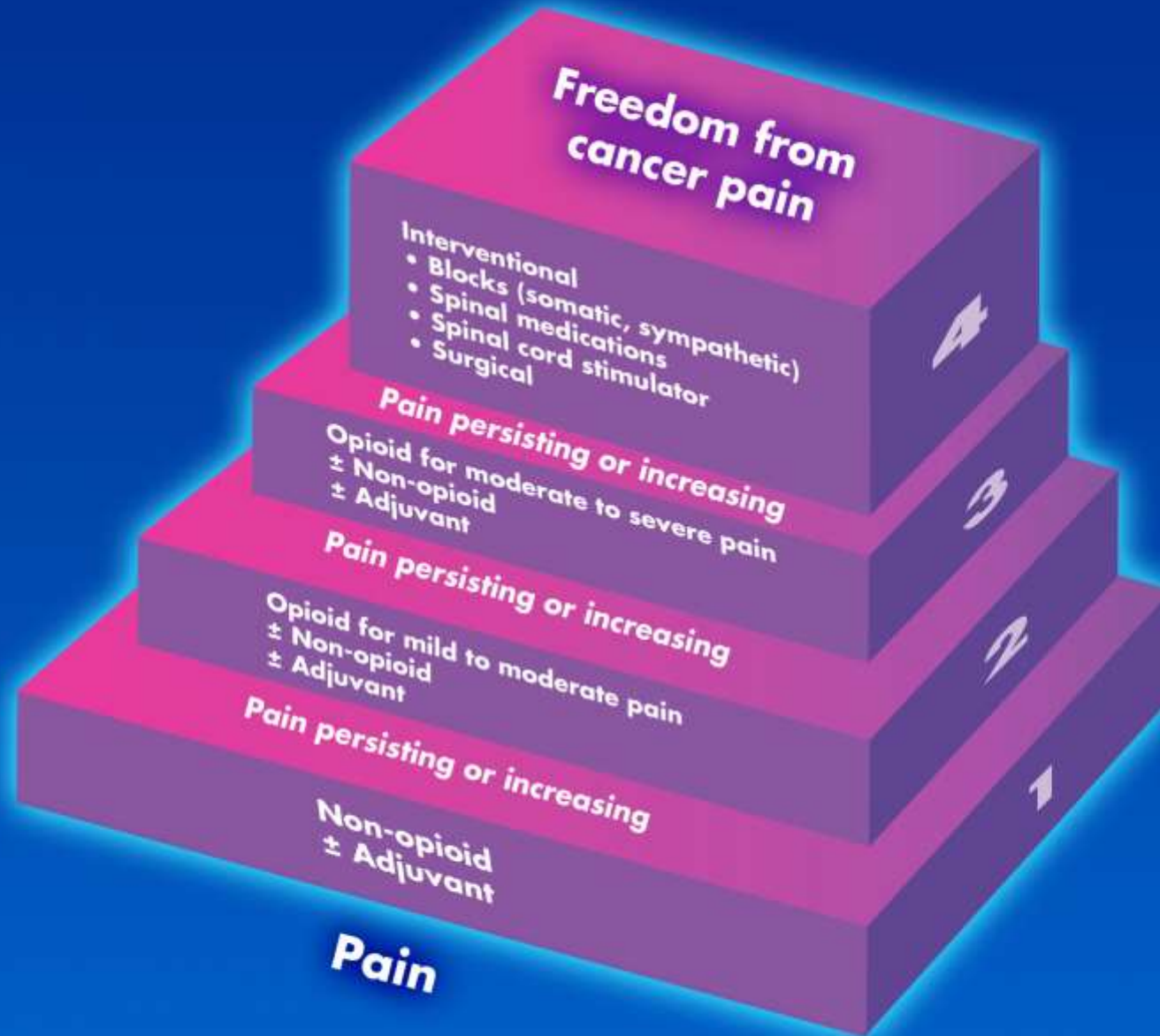


- ❖ Cancer disease
 - ❖ Invasion of bone, soft tissues, involvement of vessels, hollow organs, nerves and nervous system structures
- ❖ Cancer treatment
 - ❖ Chemotherapy-induced peripheral neuropathy
 - ❖ Radiation-induced tissue damage
 - ❖ Surgery-induced nerve damage and pain syndromes

Pain ladder: Recommendations



Treatment of Cancer Pain



Cancer Pain Interventions



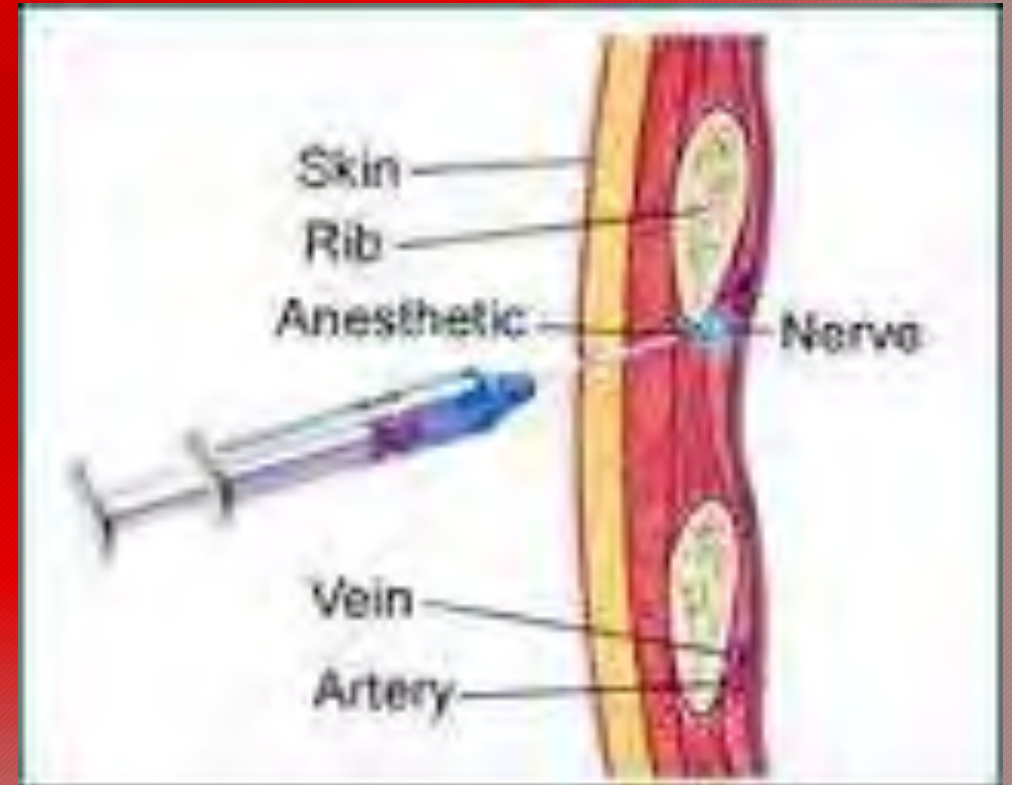
- ❖ Neurolytic Blockade
 - ❖ Celiac blockade (neurolytic)
 - ❖ Motor/sensory separation (intercostal; trigeminal)
 - ❖ Intrathecal (opioid & neurolytic)
- ❖ Neuromodulation
 - ❖ Neuraxial analgesia (epidural/intrathecal)
 - ❖ Neurostimulation
- ❖ Disease modifying
 - ❖ Vertebroplasty
 - ❖ Radiofrequency ablation
- ❖ Surgical
 - ❖ ORIF/Stabilization
 - ❖ Vertebrectomy
- ❖ Neurosurgical Ablative
 - ❖ Myelotomy
 - ❖ Cordotomy

Intercostal Nerve Block

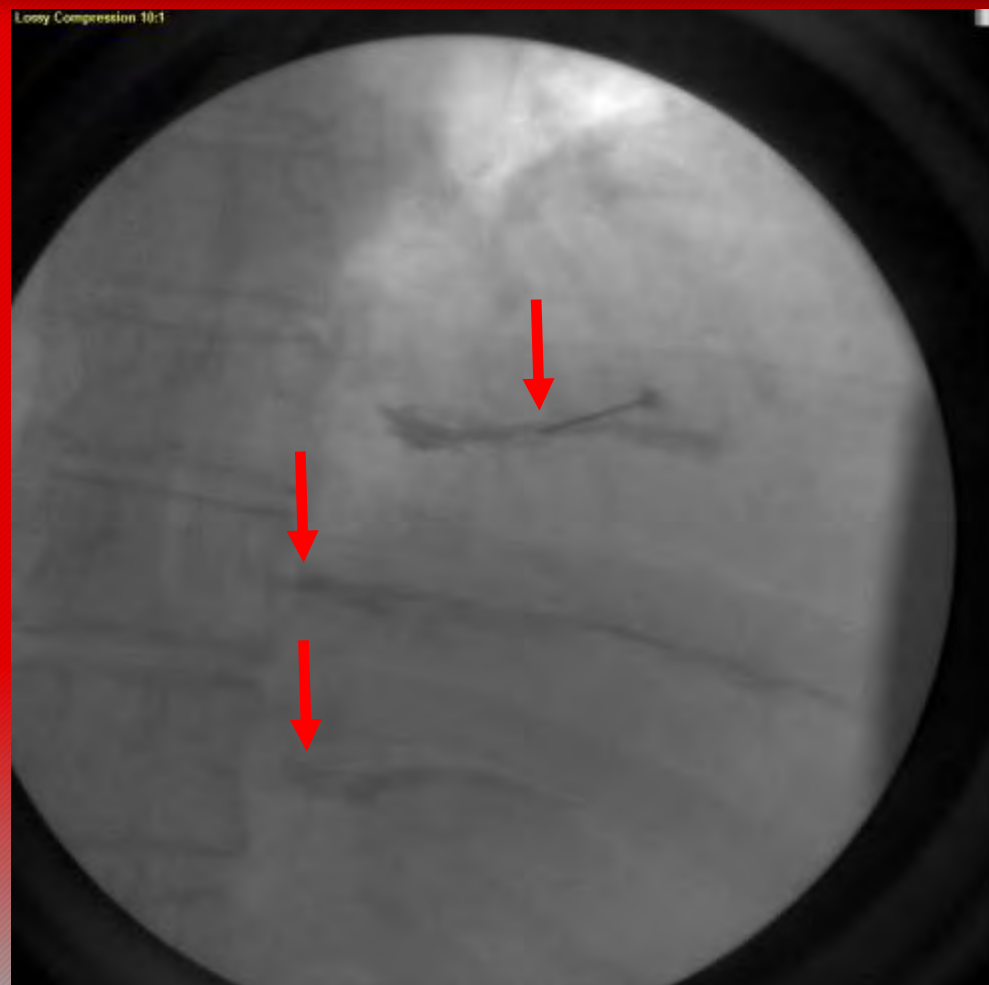


Indications:

- ❖ Chest wall pain
- ❖ Upper abdominal pain
- ❖ Herpes zoster
- ❖ Post-thoracotomy pain syndrome
- ❖ Rib fractures
- ❖ Metastatic lesions of the liver
- ❖ Post-herpetic neuralgia



Intercostal Nerve Block

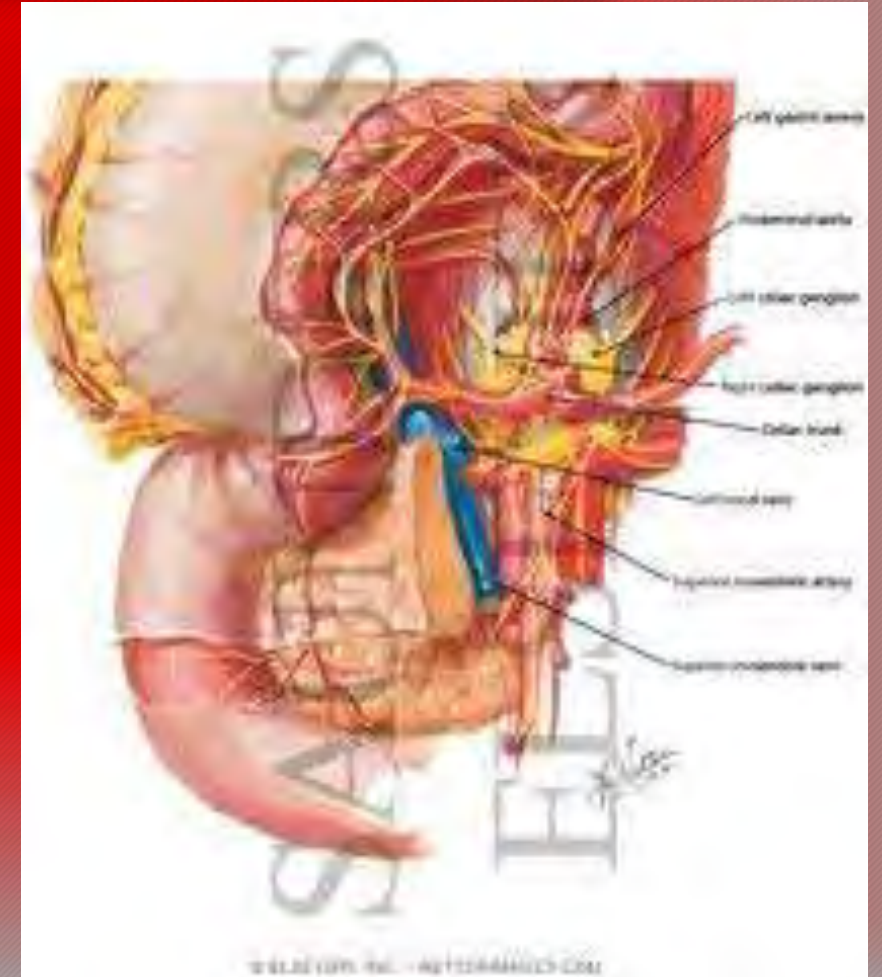


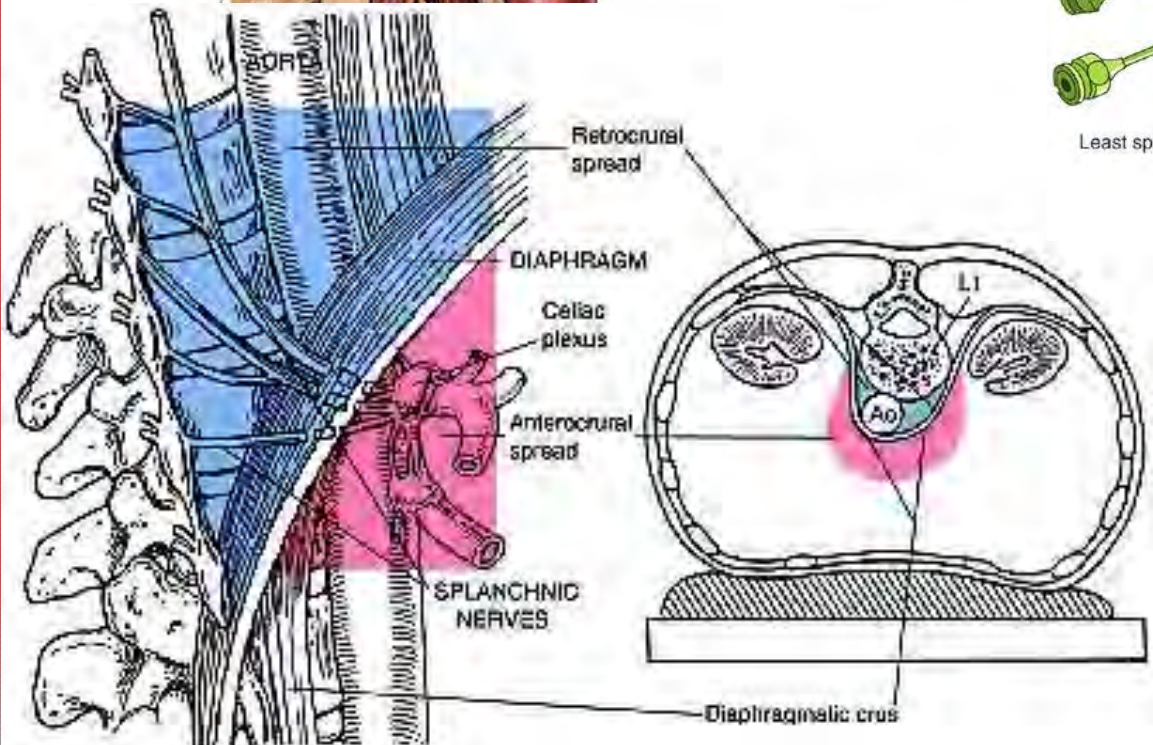
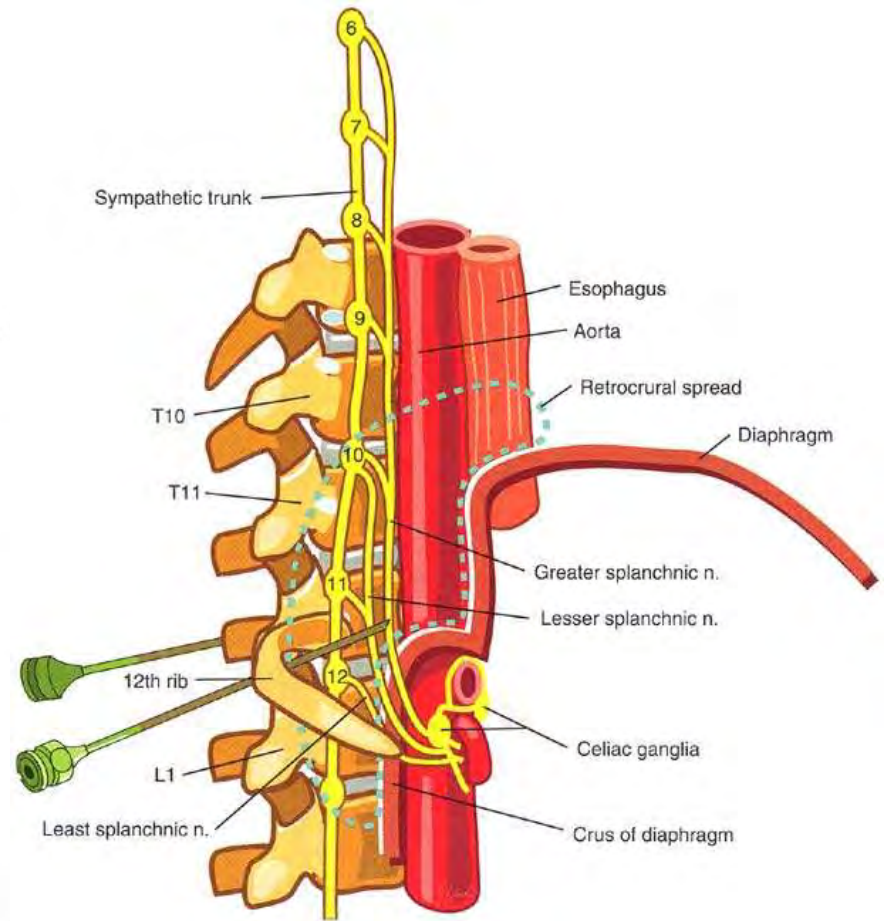
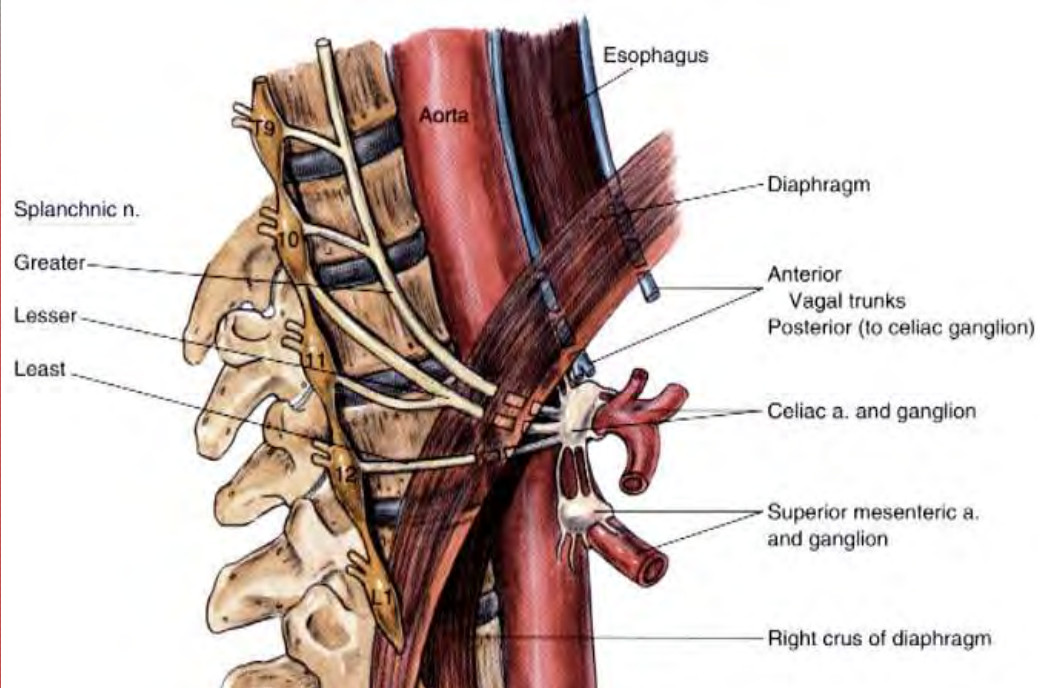
Splanchnic Nerve /Celiac Block



Indications:

- ❖ Flank pain
- ❖ Retroperitoneal pain
- ❖ Epigastric pain, upper abdominal pain
malignancy,
visceral arterial insufficiency,
pancreatitis





-From Brown DL & Waldman S

Splanchnic Nerve /Celiac Block



- ❖ Meta-analysis for cancer pain

- ❖ **24 papers (2 RCT's)**

- ❖ n=1145

- ❖ 63% pancreatic/37% non-pancreatic

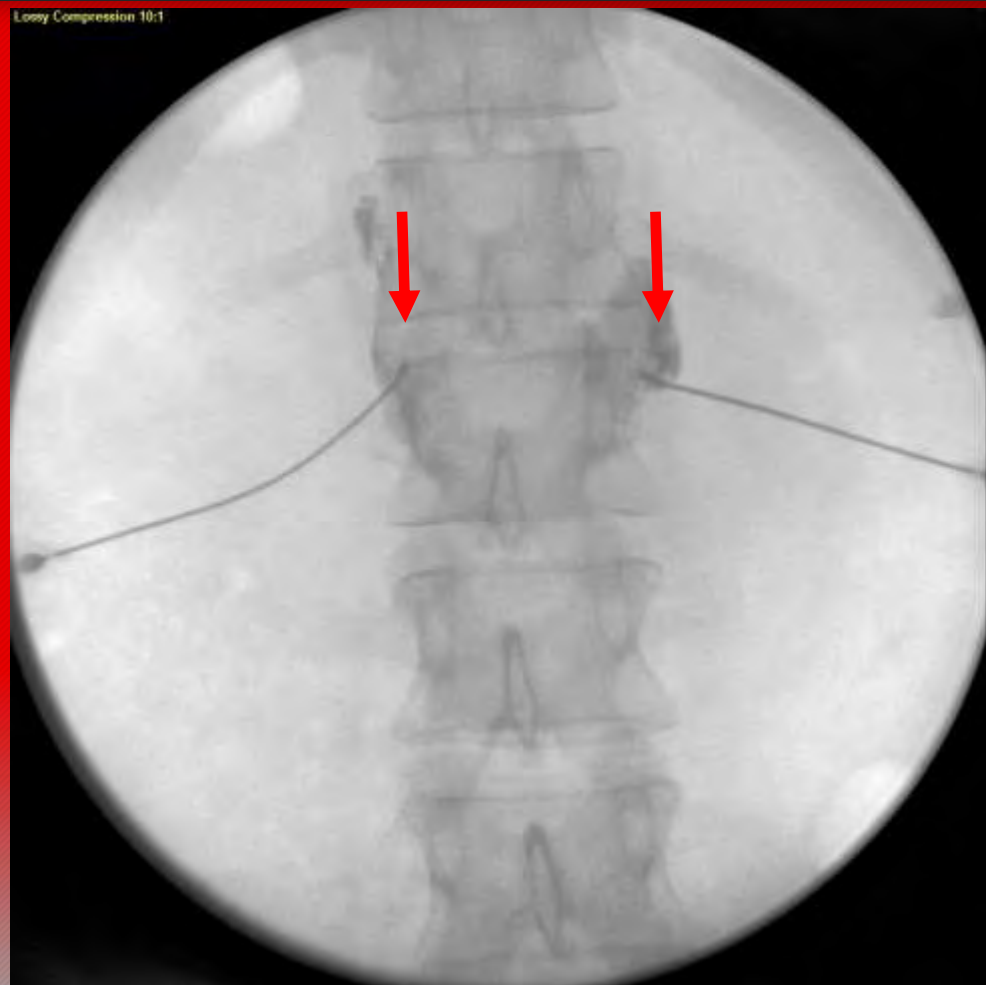
- ❖ 50-100% alcohol=15 to 50 ml

- ❖ Bilateral posterior approach- most common

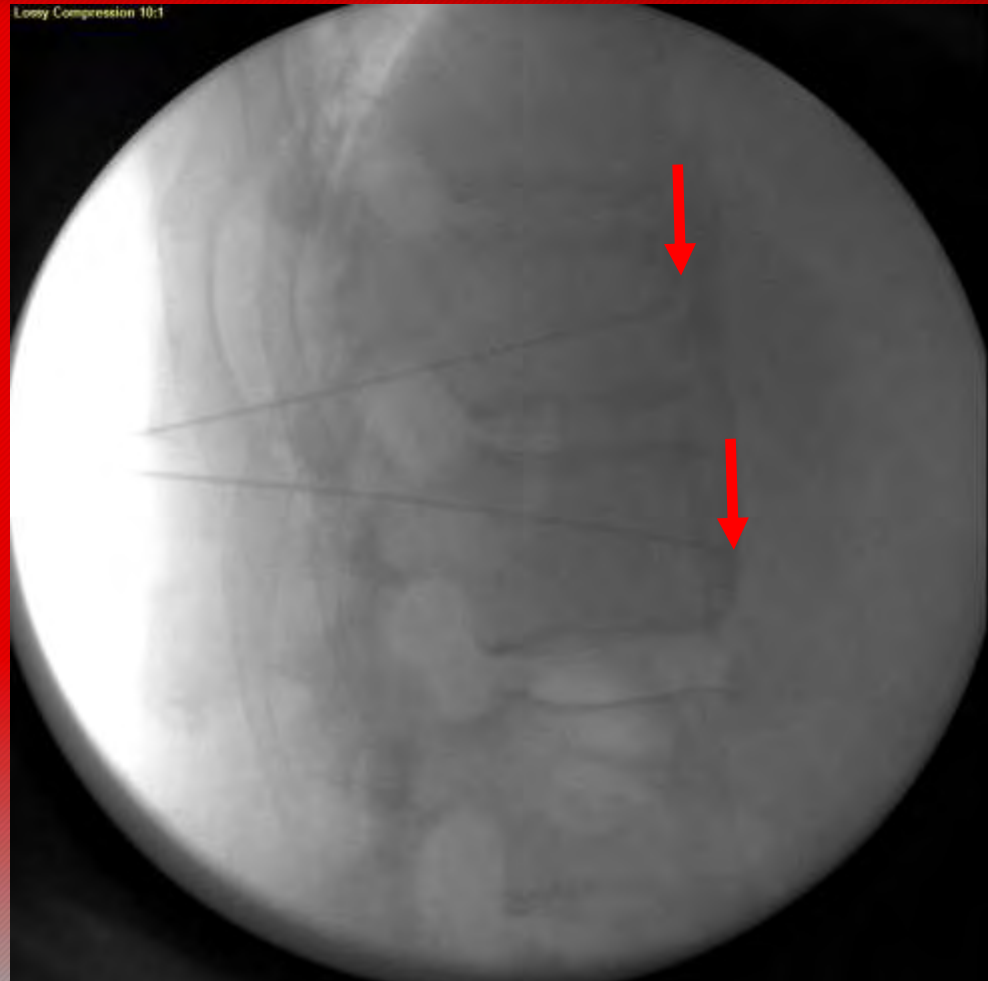
- ❖ Good/excellent relief = 89% of pts
- ❖ Persistent benefit => 3 months
- ❖ 70-90% benefit until death
- ❖ Similar benefits in pancreatic and non-pancreatic intra-abdominal malignancies

Eisenberg E et al. Neurolytic celiac plexus block for treatment of cancer pain: a meta-analysis. Anesth Analg. 1995;80(2):290.

Splanchnic Nerve /Celiac Block



Splanchnic Nerve /Celiac Block



Superior Hypogastric Plexus Block



Indications:

- ❖ Sympathetic mediated pain of the pelvic viscera
- ❖ Malignancy
- ❖ Endometriosis
- ❖ Reflex sympathetic dystrophy/causalgia: CRPS
- ❖ Proctalgia
- ❖ Radiation enteritis
- ❖ Radiation induced tenesmus



Superior Hypogastric Plexus Block

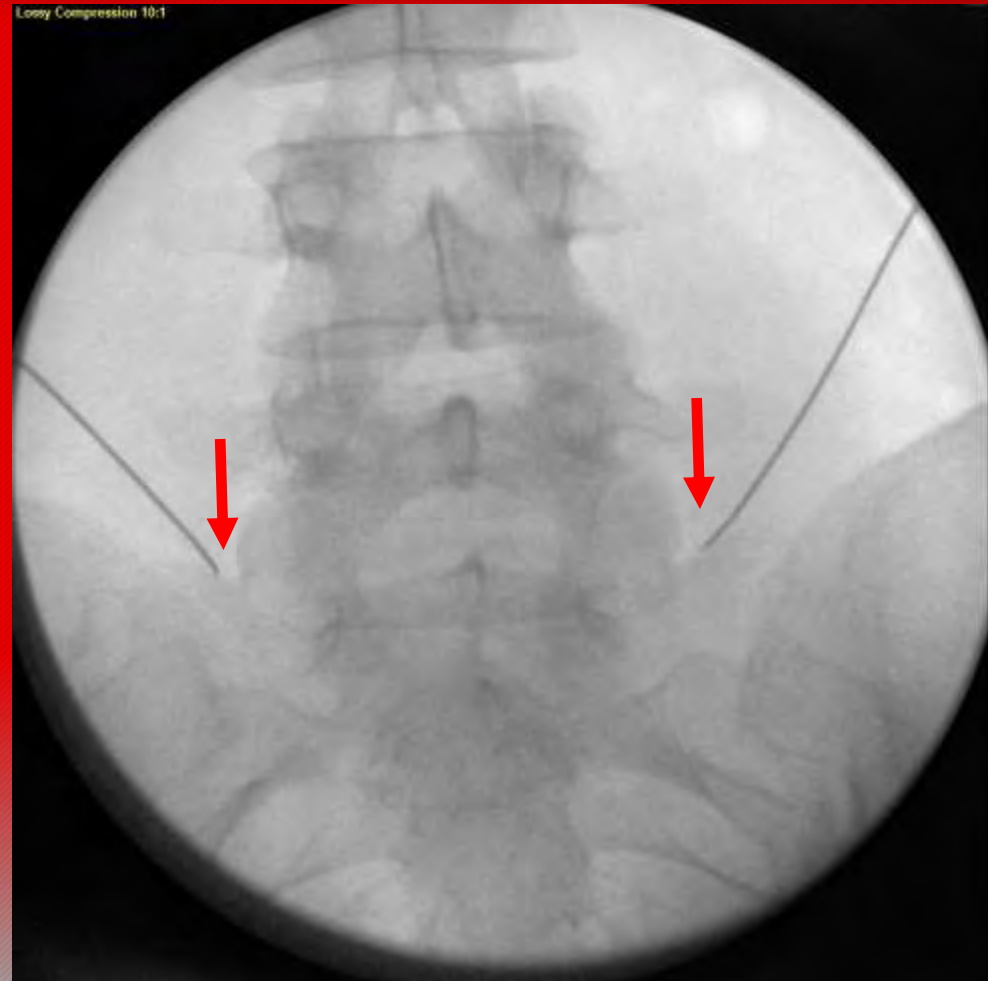


- ❖ Prospective study of 3 years

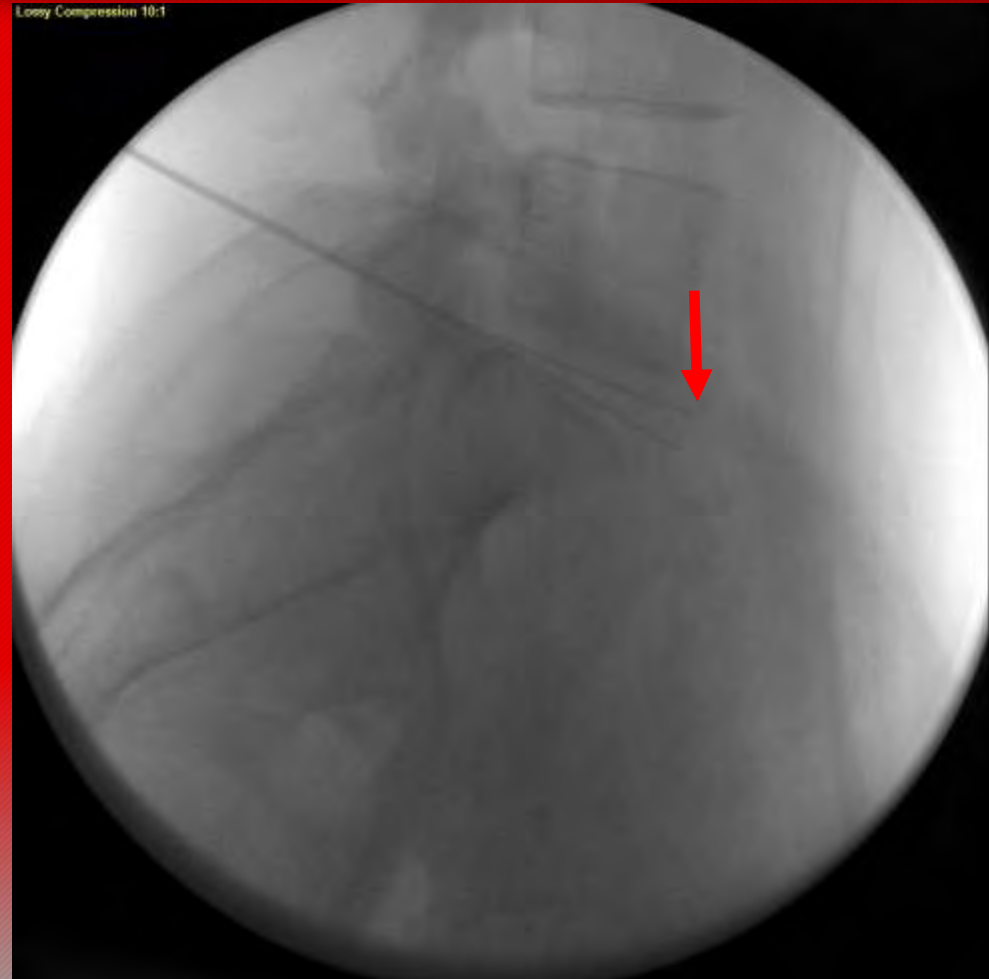
- ❖ n=227
- ❖ Pelvic pain =Gyn/colorectal/GU malignancies
- ❖ Poor pain control in past
- ❖ Percutaneous= 10% phenol
- ❖ Two blocks (local and then 10% phenol)

- ❖ 79% had +ve response to LA block
- ❖ 44%=moderate pain control with phenol
- ❖ Reduction in oral opioids- 51%
- ❖ No additional blocks needed- 3 months
- ❖ No major complications
- ❖ Poor results in patients with extensive retroperitoneal disease

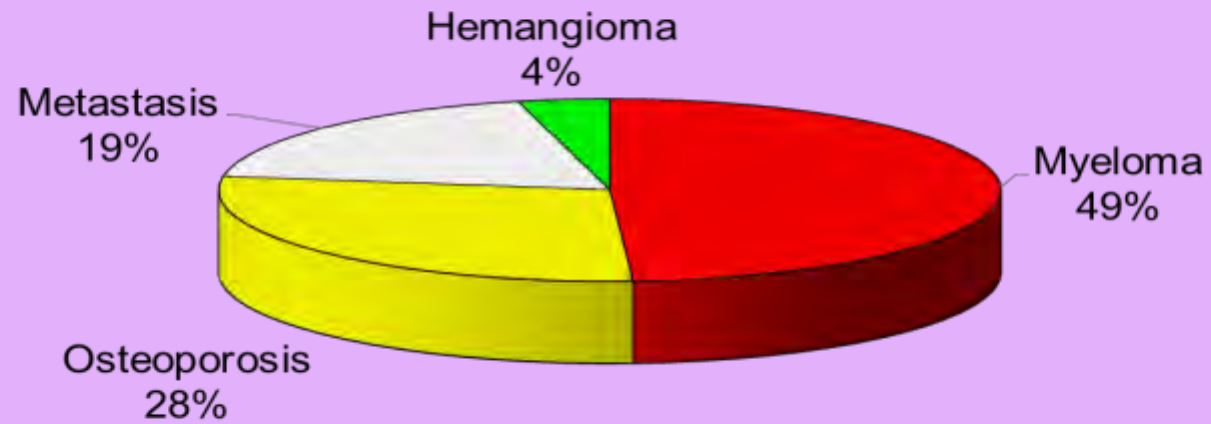
Superior Hypogastric Plexus Block



Superior Hypogastric Plexus Block



Pathology of compression fractures



Vertebroplasty: Definition



Vertebroplasty is an effective, minimally invasive spine procedure where acrylic bone cement is injected into a painful pathologically compressed vertebral body.

Vertebroplasty: Why performed?



To prevent further vertebral collapse which:

- ❖ leads to further loss of height
- ❖ is associated with fractures at adjacent levels
- ❖ results in kyphosis



Vertebroplasty/Kyphoplasty



Indications

- ❖ Pain related to vertebral compression fractures associated with osteoporosis or tumor infiltration

Contraindications

- ❖ Uncorrected coagulopathy or systemic or spinal infection, epidural disease
- ❖ Moderate to severe retropulsion of the posterior vertebral body cortex into the spinal canal, burst fracture
- ❖ Height loss > 70%

Kyphoplasty: Technique



- ❖ Inflatable bone tamp is inserted into the vertebral body
- ❖ Balloon is inflated, elevating the endplates
- ❖ Balloon is deflated and removed
- ❖ Void is filled

Vertebroplasty/Kyphoplasty: Potential Advantages

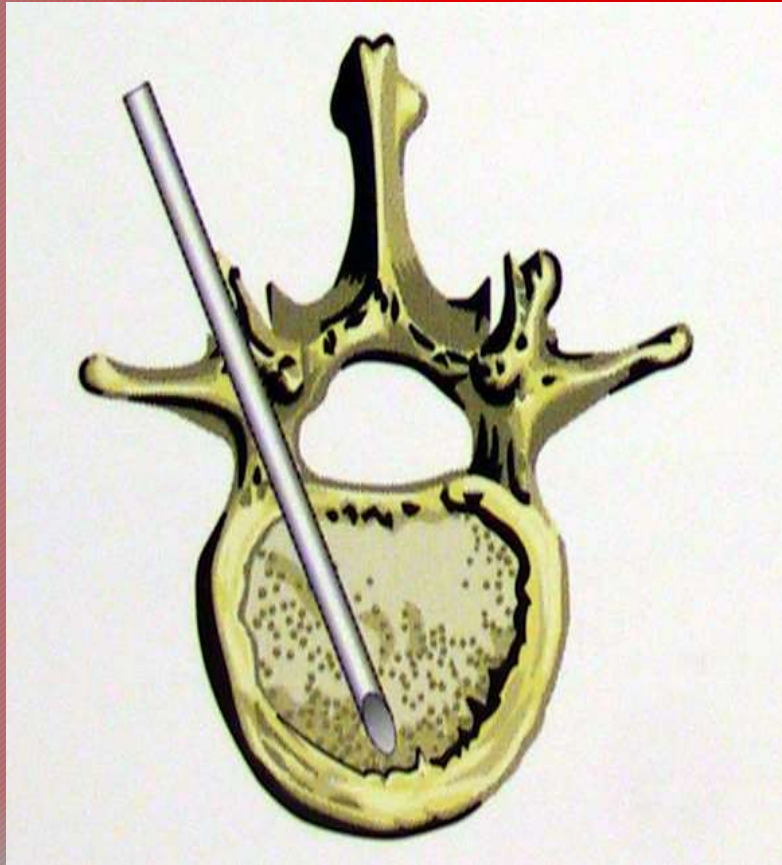


- ❖ Analgesia
- ❖ Mobility
- ❖ Stability
- ❖ Deformity correction
- ❖ Improved Pulmonary Function
- ❖ Pain Medication Reduction

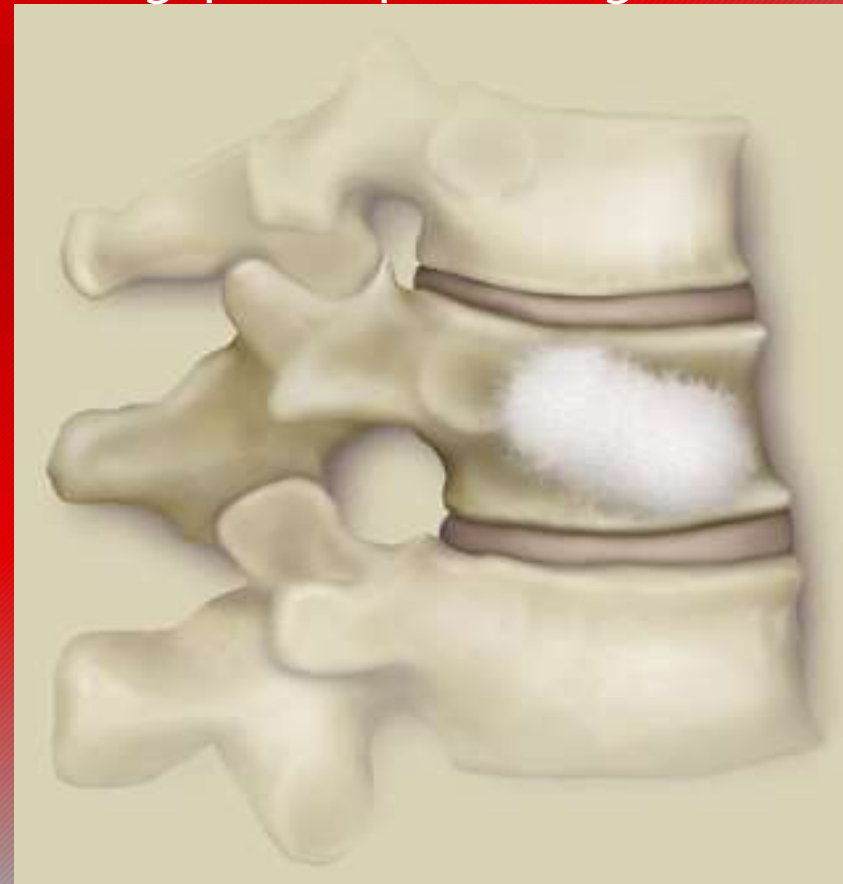
Vertebral compression fractures: Percutaneous interventions



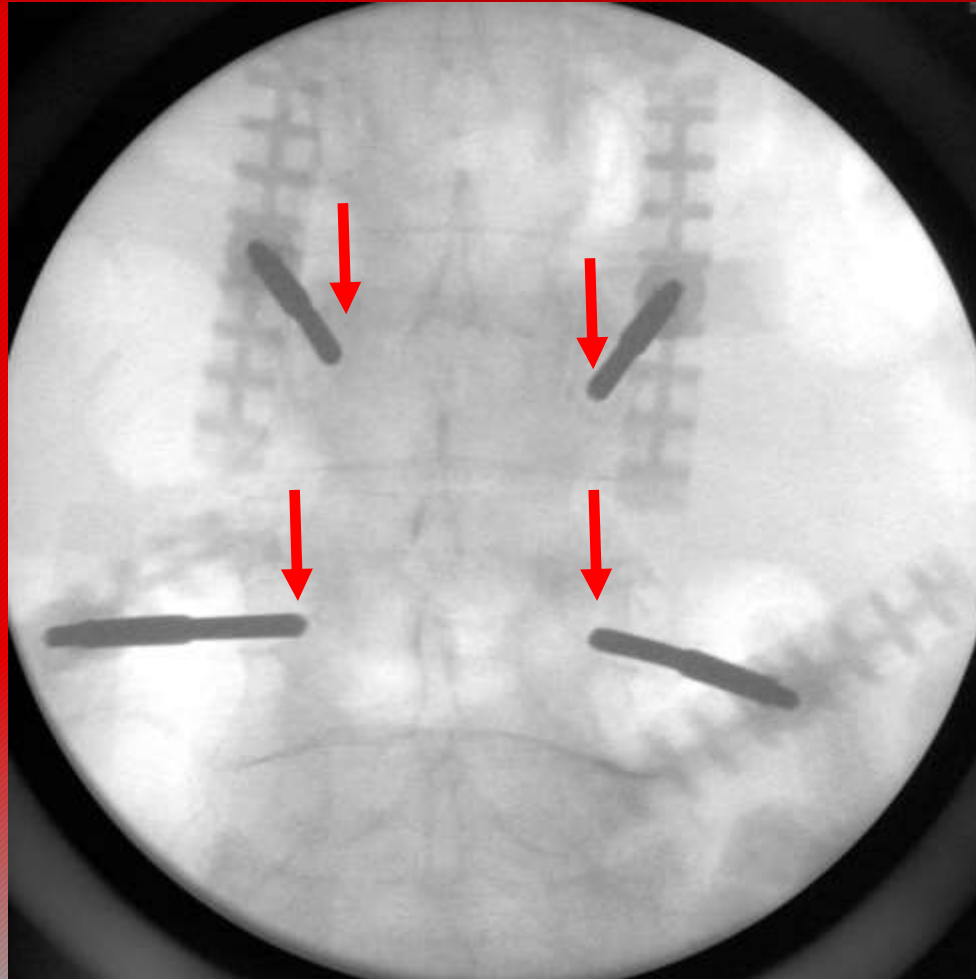
Vertebroplasty



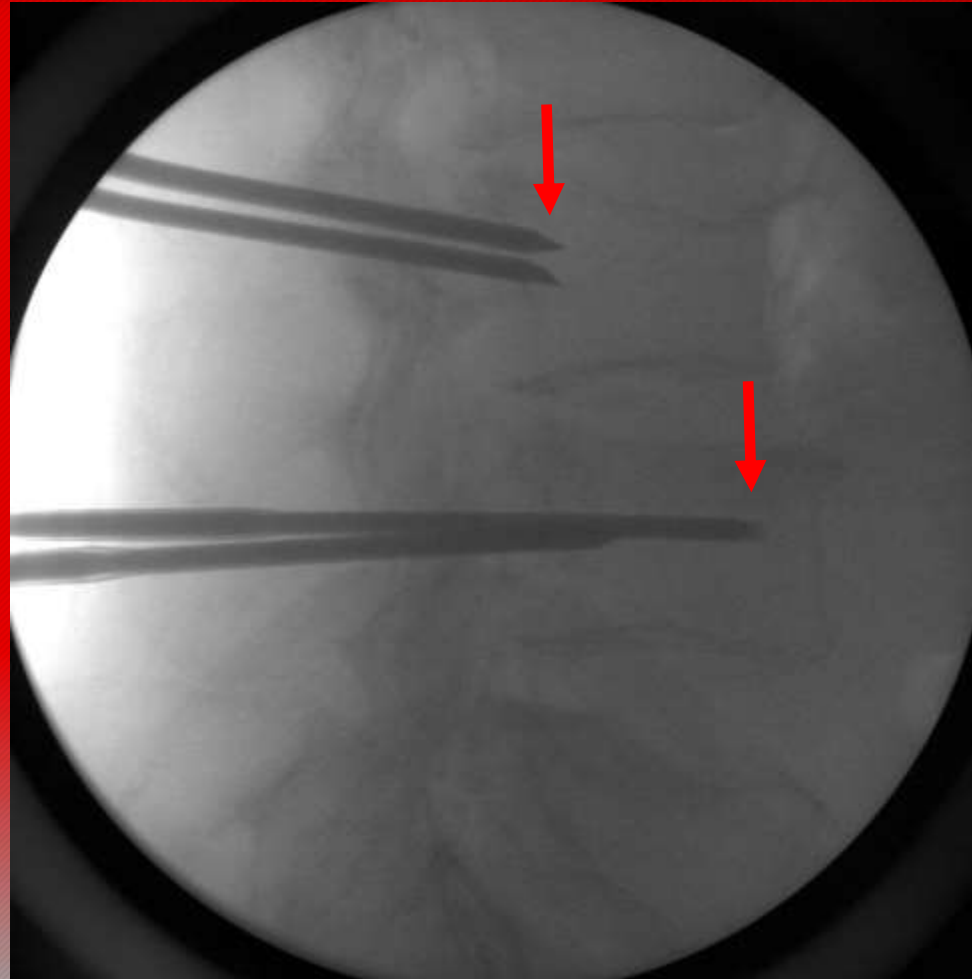
Kyphoplasty



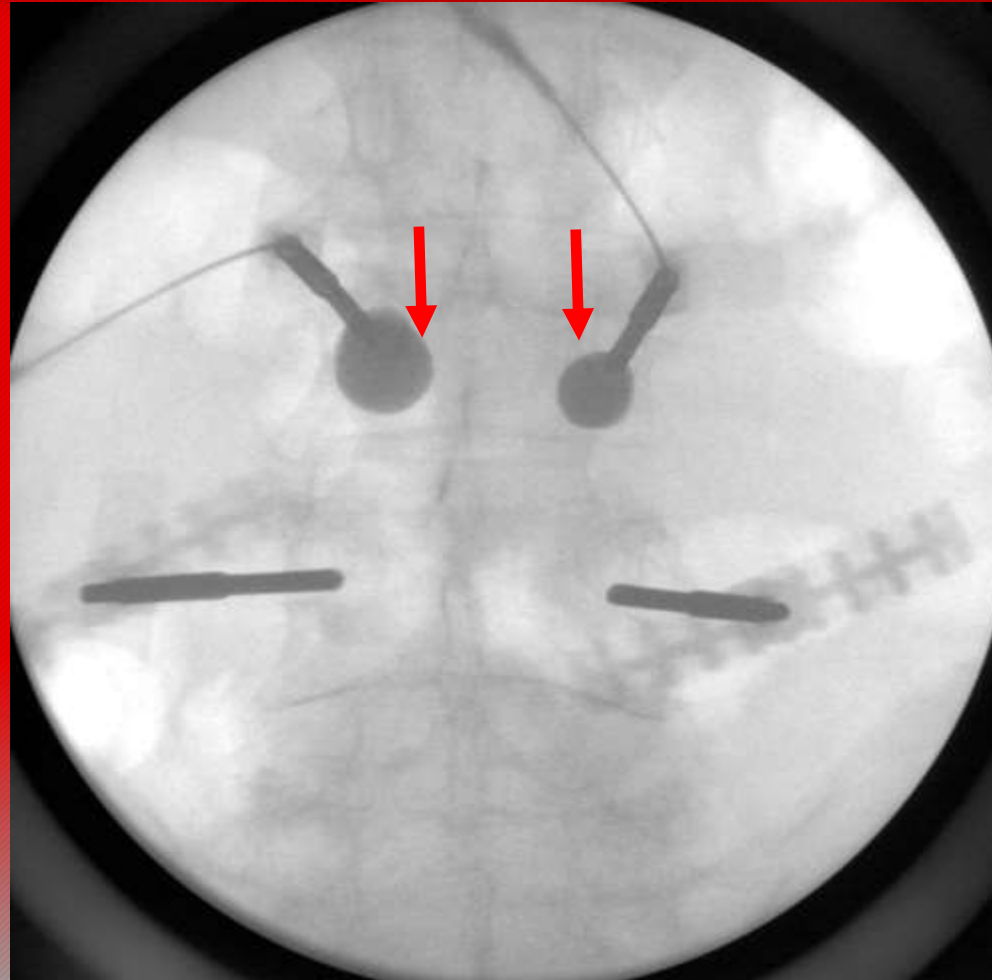
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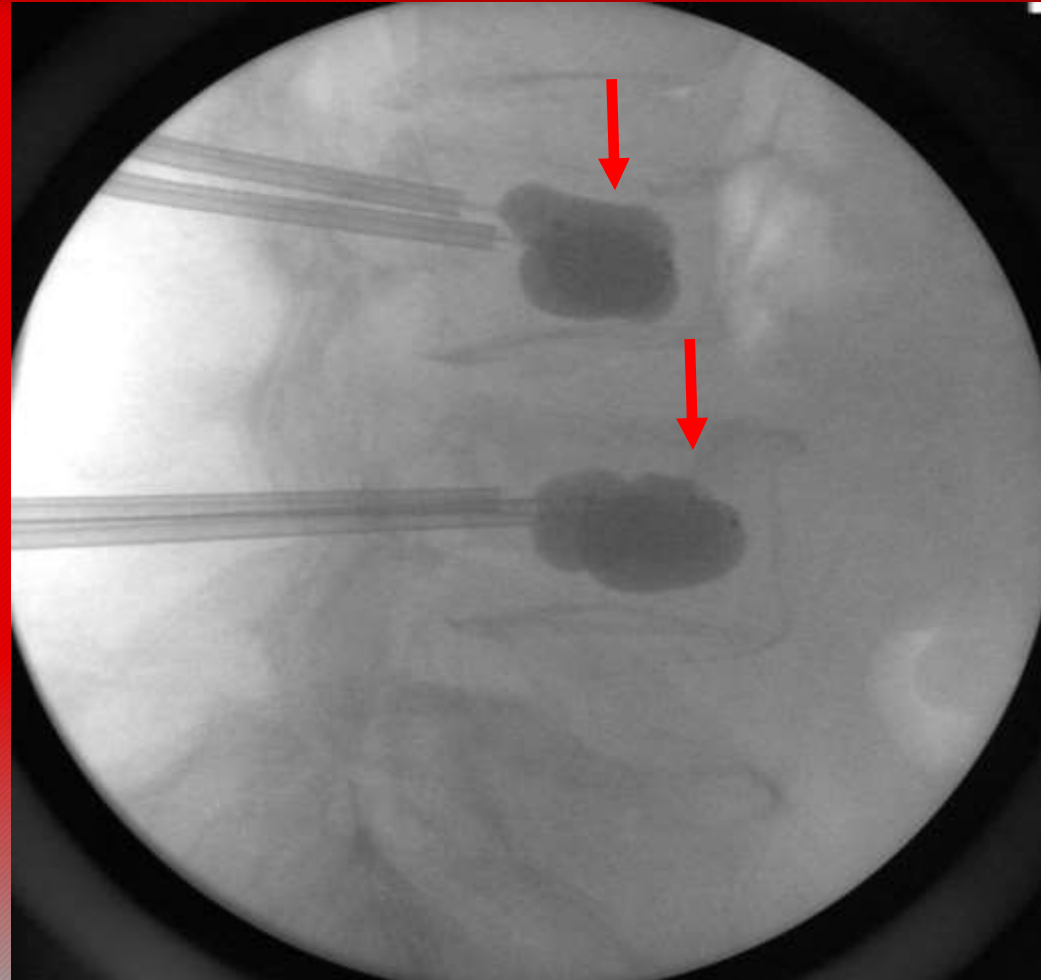
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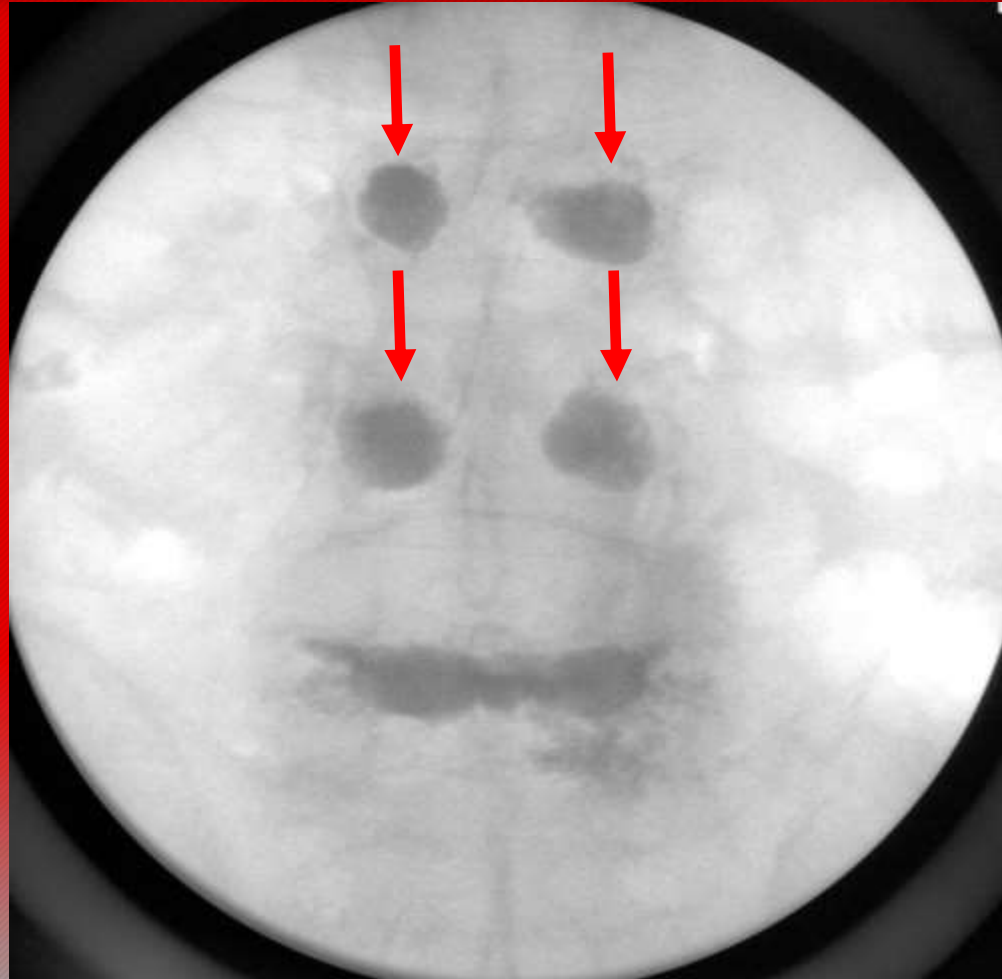
Vertebral compression fractures: Percutaneous interventions



Vertebral compression fractures: Percutaneous interventions



Vertebral compression fractures: Percutaneous interventions



Intrathecal trial: Patient selection



- ❖ Intolerable opioid side effects
- ❖ Unacceptable analgesia w/↑↑ dose opioids
- ❖ No psychological contraindications for implantation
- ❖ Types of pumps:
 - ❖ Baclofen for spasticity
 - ❖ Morphine-opioid, Ziconotide-calcium channel blocker for chronic pain



Intrathecal pump: Evidence for cancer pain

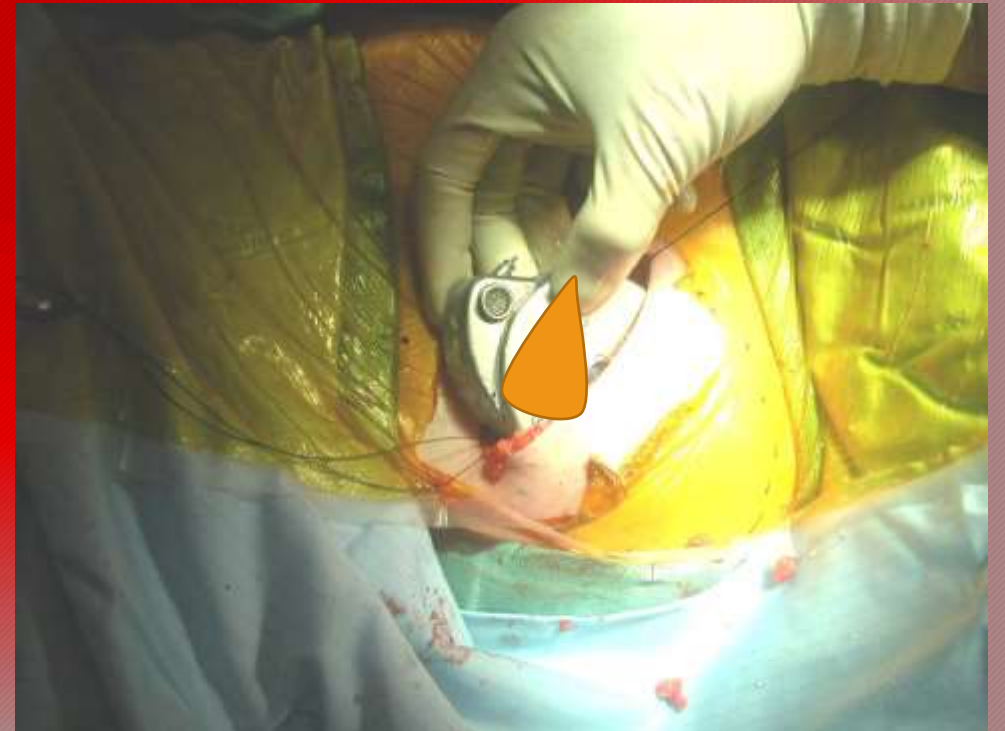


- ❖ Randomized controlled trial
-
- ❖ n=202
- ❖ Intrathecal pump vs medical management
- ❖ Clinical success= 20% drop in VAS scores OR equal scores with 20% drop in toxicity

	<u>Pump</u>	<u>Medical</u>
Success	84.5%	70.8%
20% drop	57.7%	37.5%
VAS score drop	52%	39%
Toxicity drop	50%	17%
Fatigue	More ↓	--
Consciousness	Improved	--
Survival@6 mo	53.9%	37.2%

Smith TJ et al. Randomized clinical trial of an implantable drug delivery system compared with comprehensive medical management for refractory cancer pain: impact on pain, drug-related toxicity, and survival. J Clin Oncol. 2002;20(19):4040.

Intrathecal pump: Procedure



Is All Cancer Pain Treatable?



- ❖ Diffuse bone metastases, leptomeningeal disease, lumbosacral plexopathies, pancreatic cancer
- ❖ Severe pain syndromes may require consideration of advanced techniques
 - IV/SC lidocaine, oral/IV ketamine
 - IT/epidural infusions
 - Neurolytic blocks
- ❖ High-dose steroids
- ❖ Relief from pain can be achieved in over 90% of cancer patients through pain/palliative care (World Health Organization. Cancer Pain Report. 2022)

The Vision - Paradigm Change



- ❖ **Early intervention to help cancer patients with pain**
- ❖ **Be proactive in helping patients avoid side effects from systemic opioids**
- ❖ **Focus on quality of life—help patient with treatment-related side effects**



To hurt, or not to hurt,
that is the question.

Cure disease sometimes.
Relieve symptoms often.
Care and comfort always.