Cancer Pain Management – Lessons Learned

Dermot Fitzgibbon, MD

Outline

- Case
- Types of pain management – Acute vs Chronic vs Cancer
- Keys to successful Oncology Pain Management
- Opioids in Oncology
- Blocks in Oncology pain
- To admit or not to admit
- Final Thoughts

Case

- 74 yo woman with locally advanced pancreatic adenocarcinoma
- ↑pain x 1 month, ↑ abdominal distension x 3-4 days PTA
- 3.5 cm mass in head of pancreas in 11/2023
  - At diagnosis: borderline resectable
  - Possible Whipple, neoadjuvant FOLFIRINOX x 4 cycles
  - December 2023 presented for Whipple but reported use of meth (smokes)
  - Surgery cancelled, continued FOLFIRINOX x 12 cycles (7/2024)

Case

- Tumor board: chemoRT (capecitabine + 3600 cGy in 10 fractions, completed August 2024)
- 10/2024: reconsidered for surgery, u tox positive for meth, cancelled.
- 12/2024: imaging indicated not surgical candidate, continued on capecitabine
- 7/2025: disease progression with gastric outlet obstruction. s/p pyloric enteral stent placement
- 9/2025: plan for gemcitabine/abraxane with palliative intent

Case – Addiction History

- Extensive polysubstance use history
- 12/6/2024 diagnosed with stimulant use disorder
- Began using cocaine and heroin in her 30s (iv). Also used alcohol excessively and injected methamphetamine
- Started on Methadone 5-6 years prior (sober from heroin since then).
- Transitioned to Suboxone in 2023 (QTc prolongation)
- On admission: no cravings and withdrawal symptoms and reported compliance. Managed by local Addiction specialist
- Continued to smoke methamphetamines intermittently (by her report) and on OUD treatment since

Case – Urine Toxicology

- 9/11/2025: positive for **methamphetamine**
- 7/21/2025:positive for **methamphetamine**
- 7/20/2025: positive for **methamphetamine**
- 7/19/2025: positive for **methamphetamine**
- 11/4/2024: positive for **methamphetamine**
- 10/15/2024: positive for **methamphetamine**

Case – Meds Prior to Admit

Buprenorphine 8/2mg daily FOR OUD since 2023

Oxycodone 5mg, was using 3 tabs every 2-4 hours since prescribed #120 tabs on 9/8/25 by PCP


H

Case

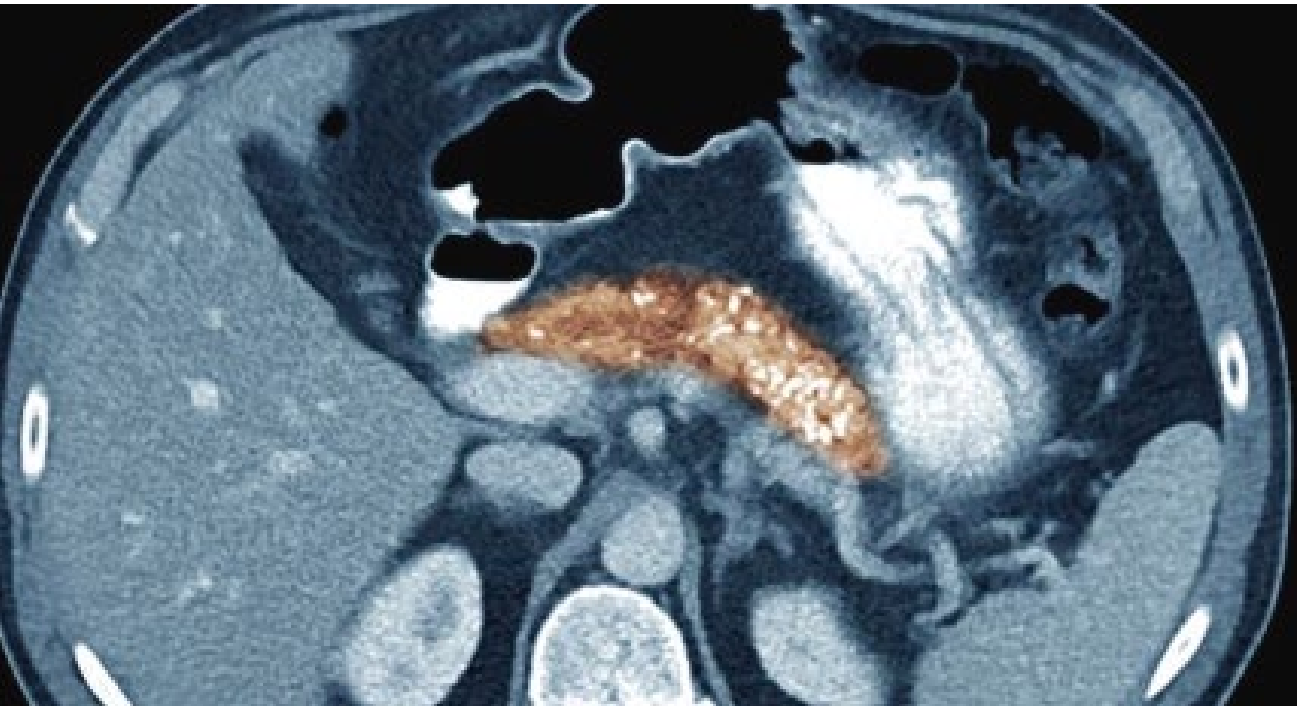
Given the palliative nature of the patient's disease and poor prognosis:

- continue opioid therapy for pain management
- ongoing methamphetamine use concerning for controlled substance prescription
- on this admission reported she can abstain from methamphetamine use.
- management and monitoring of abstinence - regular u tox

Predicting outpatient course for pain management difficult:

- ascites + pressure/distention/pain best treated with paracentesis (not opioids)
- tumor pain, long-acting + short acting opioid combination

Continue suboxone (addiction), start morphine ER + IR (tumor)



Types of Pain - Acute

- Normal physiological response to a noxious stimulus
- Associated with injury, trauma, surgery, procedures, or medical conditions (pancreatitis, MI, acute colitis)
- Often decreases with time with healing

Definitions:
Chronic vs. Cancer vs. Cancer-Related Pain

- Chronic pain:
  - Persistent pain > 3 months or past time of normal tissue healing

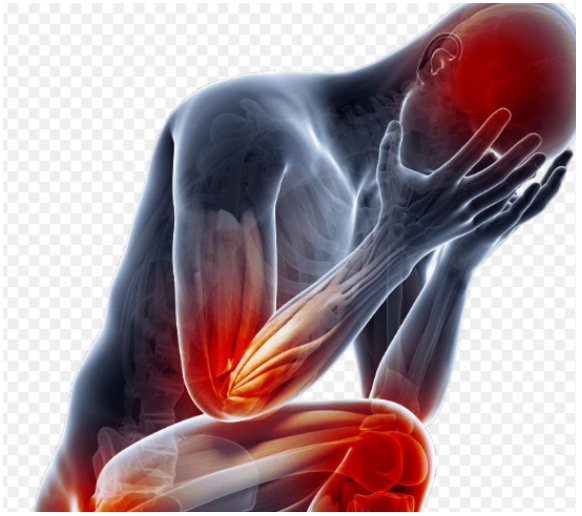
CDC Guideline for Prescribing Opioids for Chronic Pain - 2016

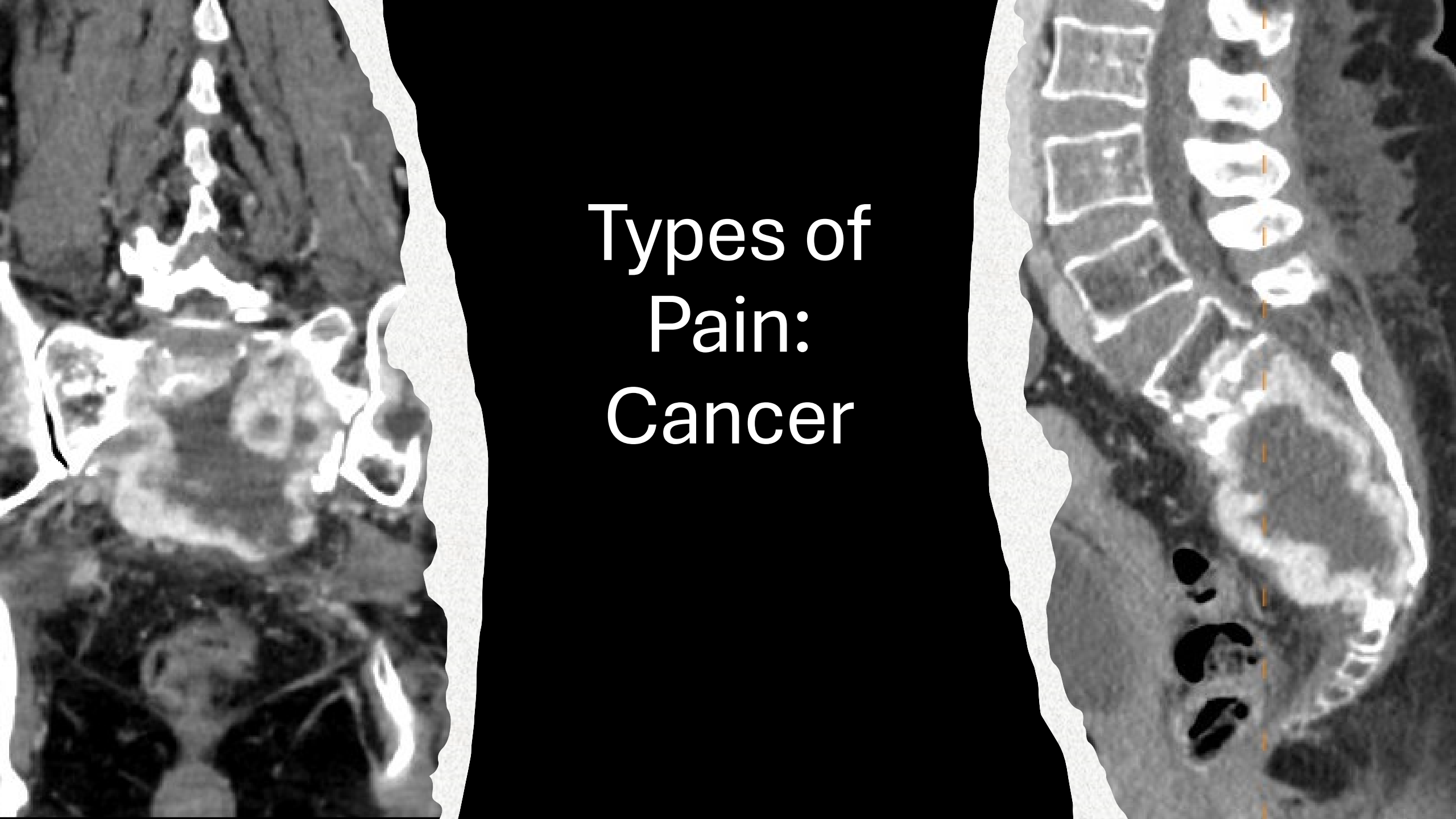
- Cancer Pain:
  - Pain associated with tumor/disease
- Cancer-related pain:
  - Unpleasant, persistent, subjective sensory and emotional experience associated with actual or potential tissue injury or damage or described in such terms and is related to cancer or cancer treatment that interferes with usual functioning.

Washington State HB 1427; 2018

Types of Pain - Chronic

- Involves sensory, emotional, and cognitive experiences
- Accompanied by psychosocial factors that can impact daily functioning and QoL.
- Examples: chronic low back; diabetic neuropathy, herpes zoster, fibromyalgia.



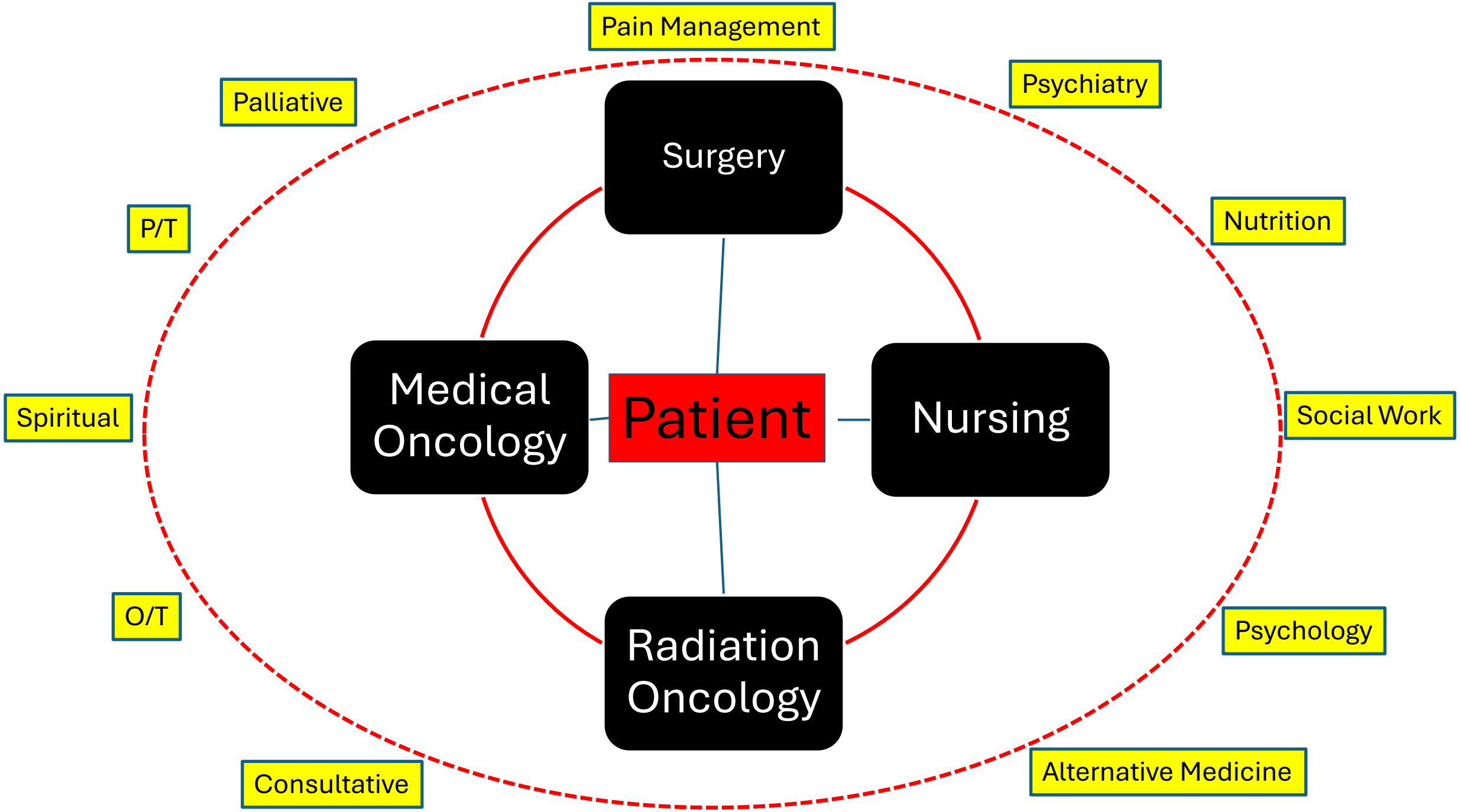


Types of Pain: Cancer

Causes of Pain in Oncology Patient

- Tumor
- Treatment
- Unrelated
- Combination

Oncology Pain Management


Pain Management
Psychiatry
Palliative
Surgery
Nutrition
P/T
Medical Oncology
Patient
Nursing
Spiritual
Social Work
O/T
Psychology
Radiation Oncology
Consultative
Alternative Medicine

Goals of Pain Management – 5A's

Analgesia: optimize pain relief

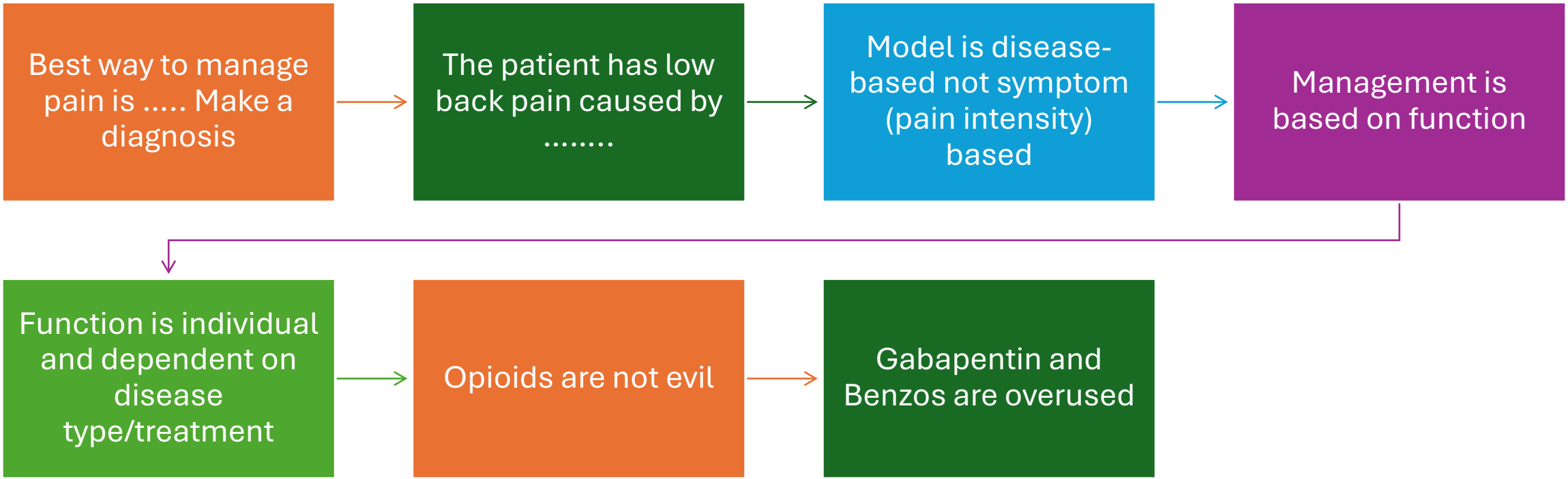
Activities: ADLs + psychosocial functioning

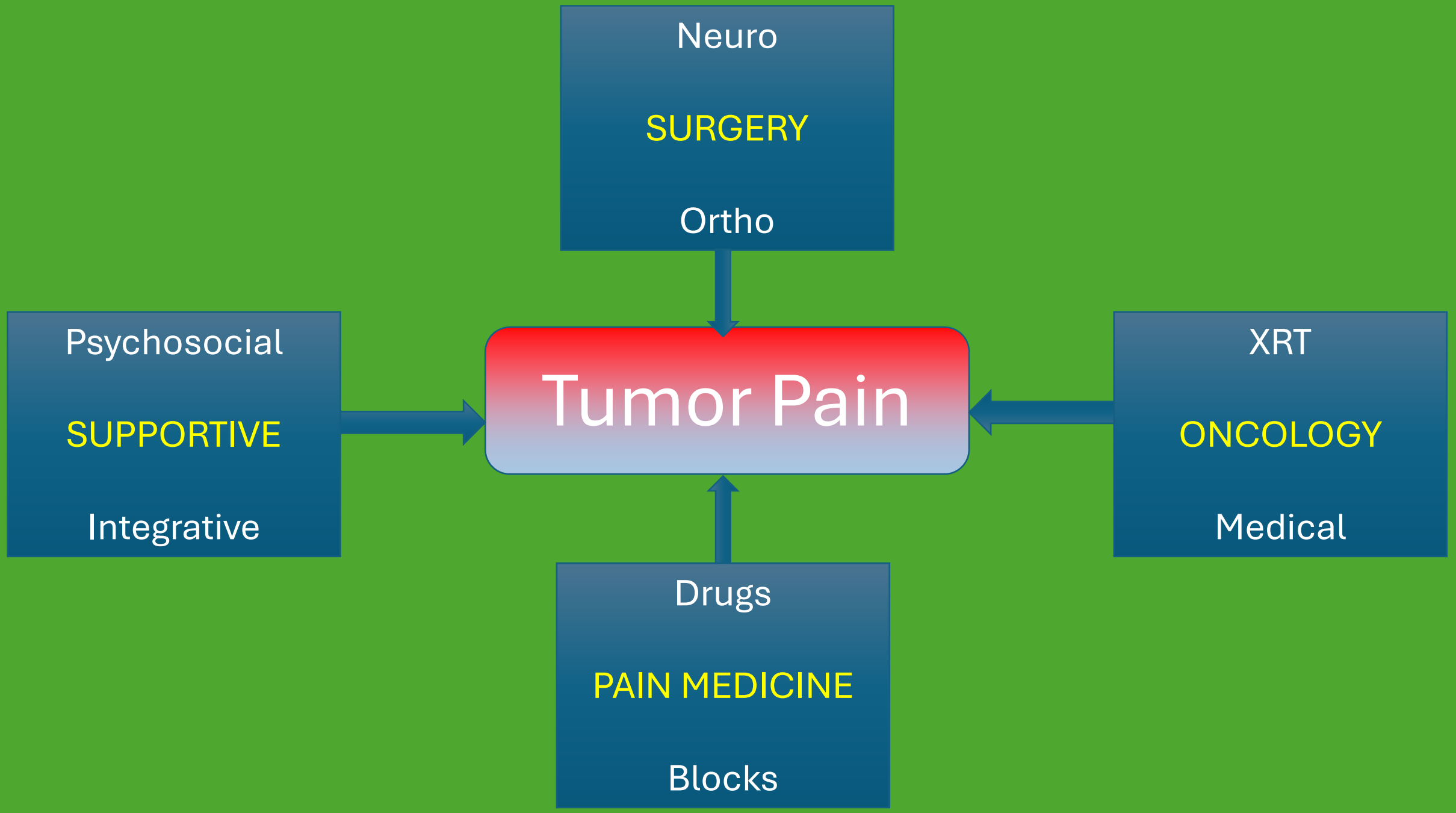
Adverse events: minimize

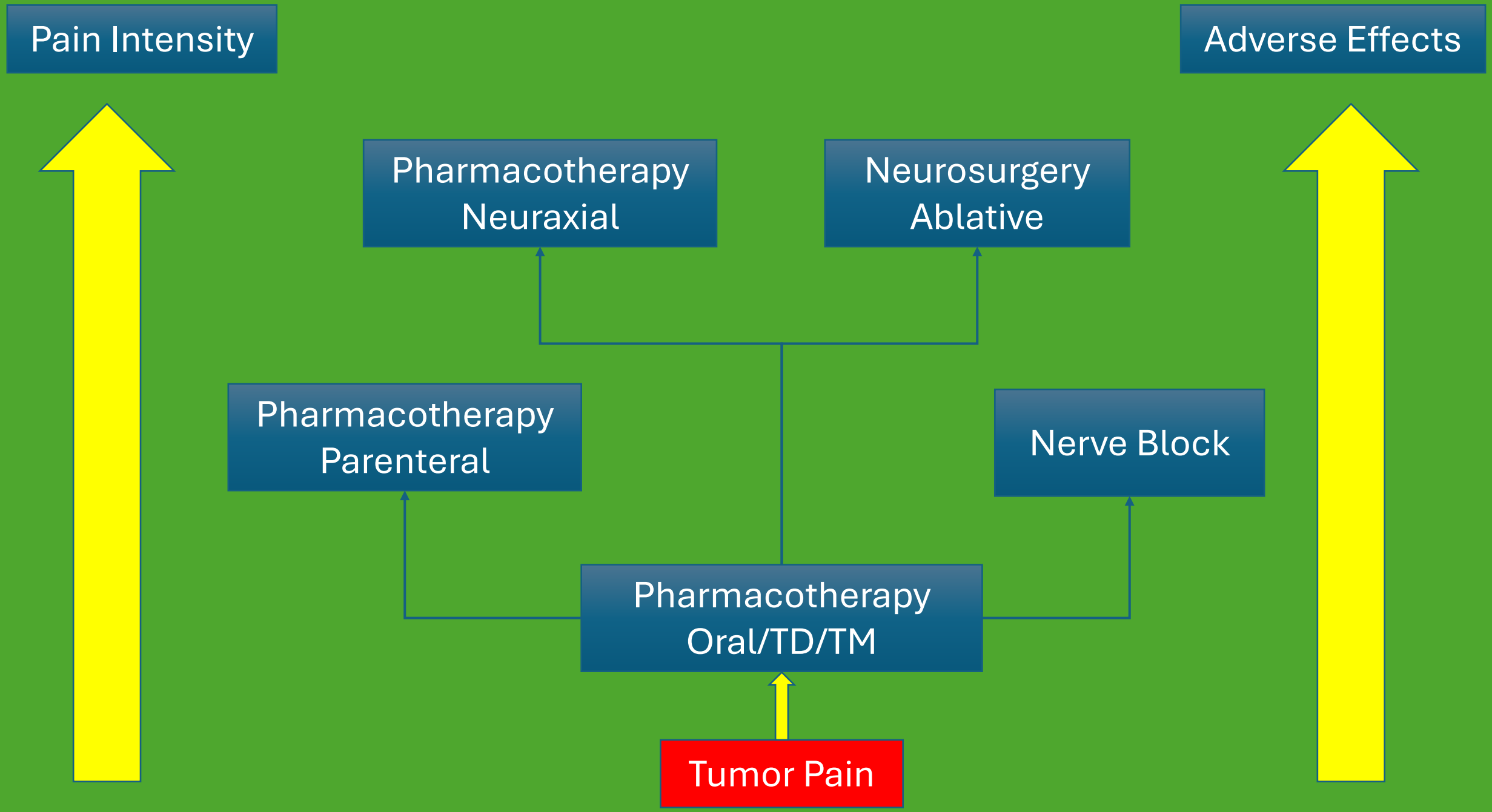
Aberrant behaviors: addiction-related outcomes

Affect: recognize mood and other issues.

Pain Management is not Pain Elimination




Neuro
SURGERY
Ortho
Psychosocial
SUPPORTIVE
Integrative
Tumor Pain
XRT
ONCOLOGY
Medical
Drugs
PAIN MEDICINE
Blocks


Pain Intensity
Adverse Effects
Pharmacotherapy Neuraxial
Neurosurgery Ablative
Pharmacotherapy Parenteral
Nerve Block
Pharmacotherapy Oral/TD/TM
Tumor Pain

Non-Pharmacological Interventions

Integrative	Physical therapy – conditioning exercise, etc.	Cognitive behavioral therapy
Psychosocial support - family/friend involvement	Spiritual	Interventions – PCA, nerve blocks (lytic), vertebral augmentation, cordotomy, etc.

Opioid Prescribing: Cancer-Related Pain

Fundamental component of pharmacological pain management in oncology is opioid therapy, used primarily for functional improvement

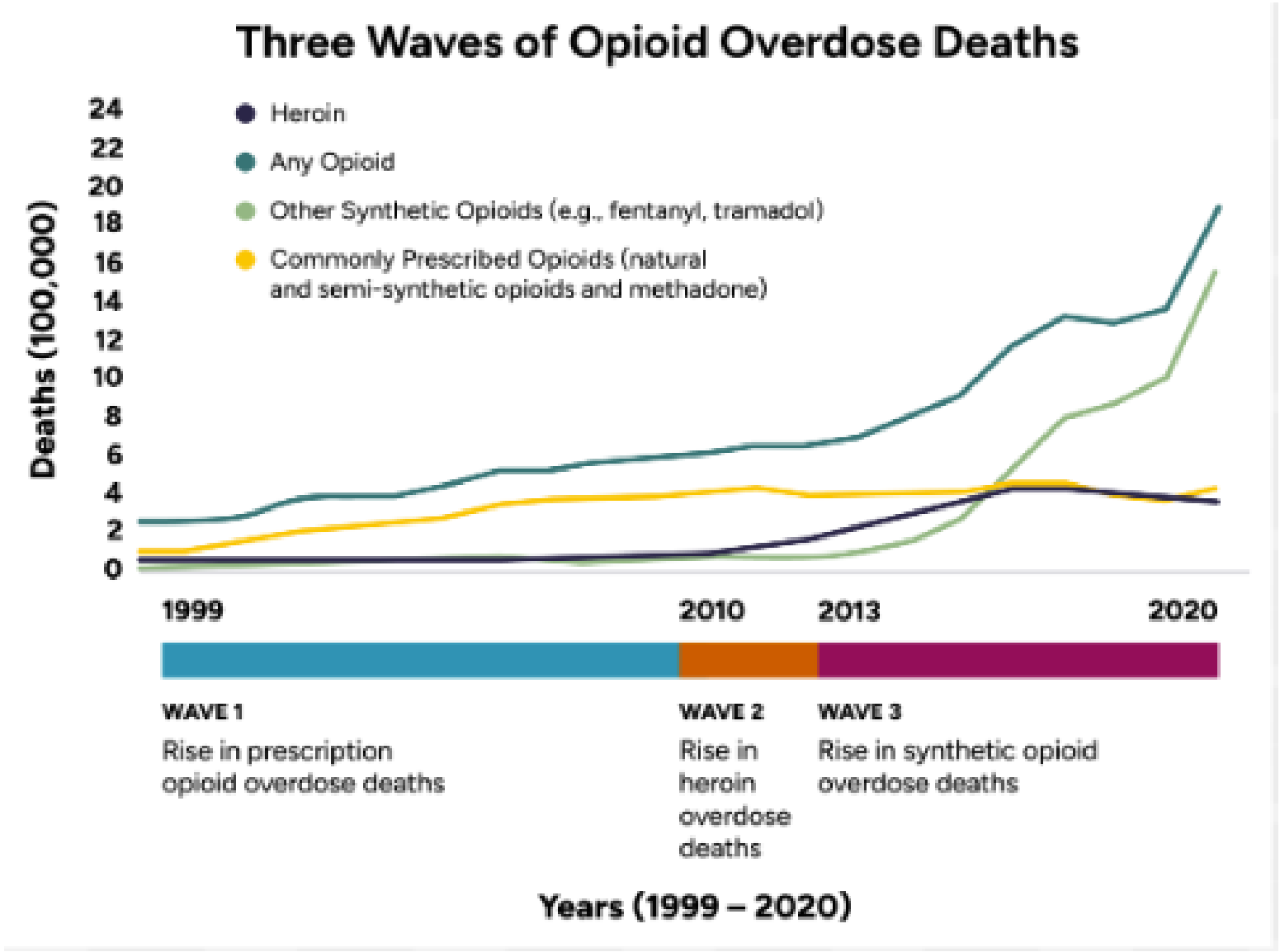
Appropriate opioid use will always require high level of care and diligence and system to support this

Should not be regarded as simple provision of a prescription but provision of complex medical care by all principles that govern safe and appropriate care of any complex medical condition

Oncology Opioid Prescribing

- Indications for opioids?
- When to increase?
- When to stabilize?
- When to decrease/taper?

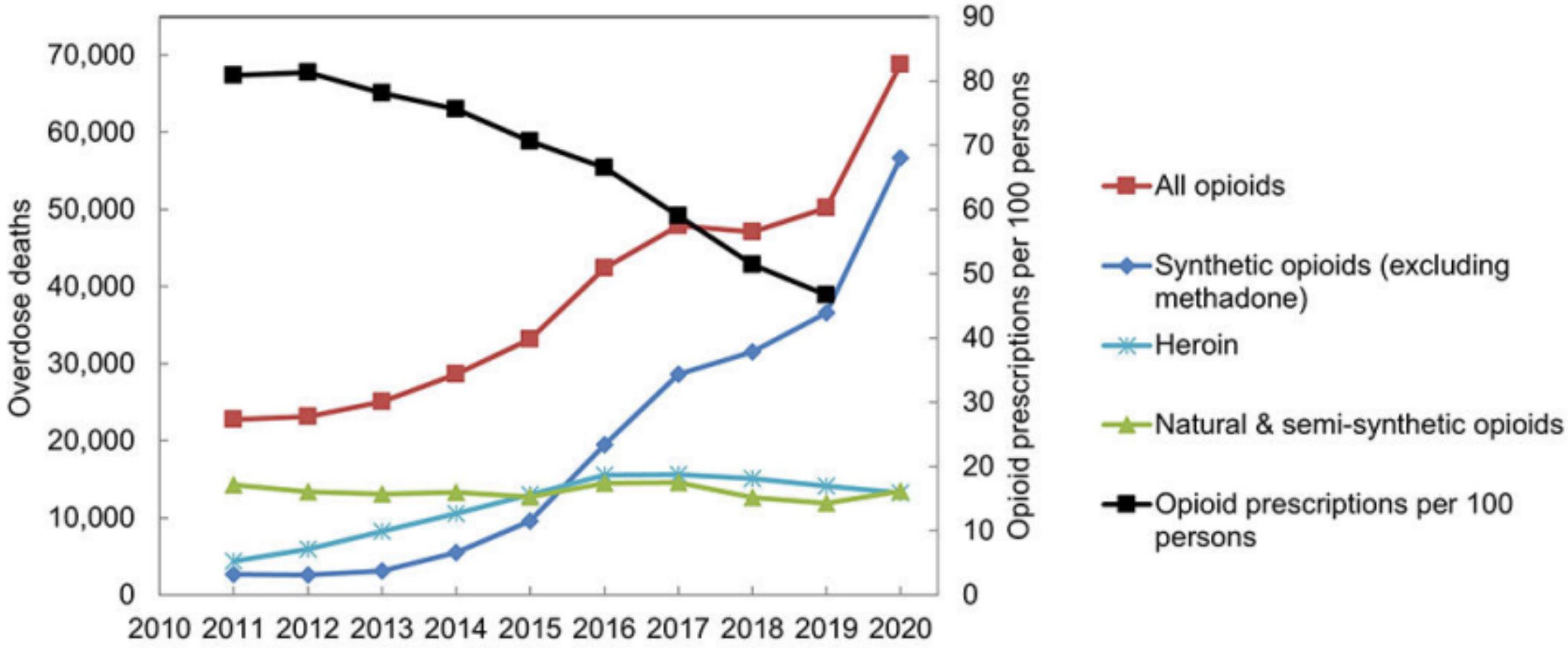
Opioid Overdose



Source: https://wonder.cdc.gov

US Opioid OD Deaths and Opioid Prescribing

Kharasch ED et al:
Anesthesiology 2022; 136:10-30.



Overdose Deaths

Many of deaths from synthetic opioids also involve prescription opioids, heroin, and other illicit or prescription opioids

In 2019 nearly half of drug OD deaths in US involved more than one drug

Source: https://wonder.cdc.gov

Morphine Milligram Equivalents (MME)

- Daily MED is sum of MME of all opioids used in 24 hrs

OPIOID DOSE CALCULATOR		
Optional:	Patient name:	
	Today's date:	**June 29, 2021**
Instructions:	Fill in the mg per day* for whichever opioids your patient is taking. The spreadsheet will automatically calculate the total morphine equivalents per day.	
Opioid (oral or transdermal):	**mg per day*:**	**Morphine equivalents:**
codeine		**0**
fentanyl transdermal (in mcg/hr)		**0**
hydrocodone		**0**
hydromorphone		**0**
methadone		**0**
morphine		**0**
oxycodone		**0**
oxymorphone		**0**
Tapentadol		**0**
Tramadol		**0**
TOTAL daily morphine equivalent dose (MED) =		**0**

* **Note: All doses expressed in mg per day with exception of fentanyl transdermal, which is expressed in mcg per hour**

If this value is less than 120mg Morphine Equivalent Dose (MED), please follow Part I of the AMDG Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain. Referral for pain management consultation is required before exceeding 120mg MED daily. See:

www.agencymeddirectors.wa.gov/opioiddosing.asp

www.doh.wa.gov/hsqa/professions/painmanagement/

CDC Recommendations for COT

- Accurate pain diagnosis + assessment of function
- Compliance with prescriptions issued (pill counts)
- Monitor for opioid side effects + adverse events
- Monitor for aberrant behaviors
- Maintain at lowest effective doses
- Goal-setting prior to next refill
- Urine toxicology according to clinical concerns and routinely based on opioid MEDs
  - >90 mg/day 4 times per year
  - 30-90 mg 2 times per year
  - <30 mg 1/year

Dowell D, et al. *JAMA*. 2016;315(15):1624-1645.

Opioid Misuse/Abuse - Prevention

- Longitudinal monitoring
- Patient factors:
  - Personal history of prescription, illicit, alcohol abuse
  - Family history of prescription, illicit, alcohol abuse
  - Psychiatric disorders – depression, ADD, OCD, bipolar, schizophrenia
  - Younger age
  - History of medication-assisted therapy for substance use disorder

Guidelines for Chronic Opioid Therapy (COT)

- COT may lead to tolerance and pain sensitivity
  - ➢Tolerance (ultimately resulting in dose increases to maintain efficacy)
  - ➢Sensitivity (hyperalgesia)
- High opioid doses (MME >90) result in increased mortality and morbidity
  - ➢CDC and WA Agency Medical Directors Group
    - ↑ risk if MME/day ≥90
    - Risk of development of opioid use disorder with high daily MMEs

Journal of Pain and Symptom Management
Volume 61, Issue 5, May 2021, Pages 1080-1087

Clinical Note

Chronic Opioid Therapy in Cancer Survivors at a Specialty Oncology Pain Clinic: Opioid Dosing, Efficacy, and Safety During Five Years of Pain Management

Andréa LeVoir PharmD [a], Mina Lee PharmD [b], Dermot Fitzgibbon MBBCh [c], Margaret Hsu MBBCh [c], Karen Posner PhD [d]

Design

Clinical study examining long-term safety and efficacy of chronic opioid therapy (COT) in cancer survivors with persistent pain
Conducted at specialty oncology pain clinic
32 patients in remission from cancer, not undergoing active treatment, and receiving opioids between 2013 and 2018
Pain was primarily related to postsurgical changes (43%), post-radiation effects (32%), and chemotherapy-induced syndromes (25%)

Design – Functional Assessment

ECOG

Patient Questionnaires (self reported:

- Pain disability index
- Functional Assessment of Cancer therapy – FACT-G, ver 4
- Individual pain goals for functional improvement (defined by patient at initial visit)

Number of years in pain clinic care ($n = 31$)	
Median (IQR)	1 (1–4)
Range	0–17
Number of years on opioids ($n = 31$)	
Median (IQR)	8 (6–10)
Range	3.5–23
Historical baseline MME/day ($n = 30$)	
Median (IQR)	130 (51–265)
Range	0–1365

IQR = interquartile range.

LeVoir A, et al. *J Pain Symptom Manage*. 2021;61(5):1080-1087.

Key Findings - Safety

COT safely managed without significant opioid dose escalation or serious adverse events

Aberrant behaviors were rare, with only one case of misuse identified

Common side effects included constipation, but no serious adverse effects reported

Key Findings - Efficacy

Pain scores remained stable: opioids help maintain function rather than reduce pain intensity

Functional improvement was prioritized over pain intensity reduction

By Year 5: 91% of patients met functional goals, compared to 58% at start

Key Findings – Opioid Dosing

MME/day increased slightly from 135 at Year 0 to 159 at Year 5 (p=NS)

Most patients prescribed high doses (>90 MME/day) with no evidence of ↑ tolerance/escalating doses

Key Findings: Multimodal Drug Therapy

Many patients used psychoactive medications with opioids, with careful monitoring to minimize risks

By Year 5: only one patient was prescribed both opioids and benzodiazepines

Implications Limitations

Importance of individualized, closely monitored opioid therapy focused on functional improvement for cancer survivors with chronic pain (not pain scores)

Emphasizes need for specialized care structures to ensure safe and effective long-term opioid use

Limitations include the small sample size and retrospective design

Cancer
An International Interdisciplinary
Journal of the American Cancer Society

ORIGINAL ARTICLE | Open Access

The association of physical activity with survival in colon cancer versus a matched general population: Data from Cancer and Leukemia Group B 89803 and 80702 (Alliance)

Justin C. Brown PhD, Chao Ma MS, Qian Shi PhD, Leonard B. Saltz MD, Anthony F. Shields MD, Jeffrey A. Meyerhardt MD, MPH

First published: 24 February 2025 | https://doi.org/10.1002/cncr.35727

2 NCI-sponsored postop treatment trials in stage III colon cancer

2876 patients who self-reported physical activity (converted to MET-hours/week)

Compared to matched general population from National Center for Health Statistics

Key Findings – Survival Disparity

- Colon cancer patients had inferior survival compared to MGP.
- However: higher physical activity levels were associated with reduced survival disparity.
  - Patients reporting ≥18 MET-hours/week had survival rates closer to MGP compared to those with <3 MET-hours/week.
  - Among patients alive and tumor-free at year 3, those with ≥18 MET-hours/week achieved survival rates approximating the MGP.

Conclusions

- Benefits were obtained from exercising equivalent of walking about an hour a day at a 2-to-3 mile per hour pace about six days a week

Key Findings – Impact of Tumor Recurrence

Tumor recurrence significantly influenced survival outcomes:

- Patients with tumor recurrence had large survival disparity compared to MGP, even with higher physical activity levels
- Physical activity was associated with relative extension in survival time after tumor recurrence

Conclusions

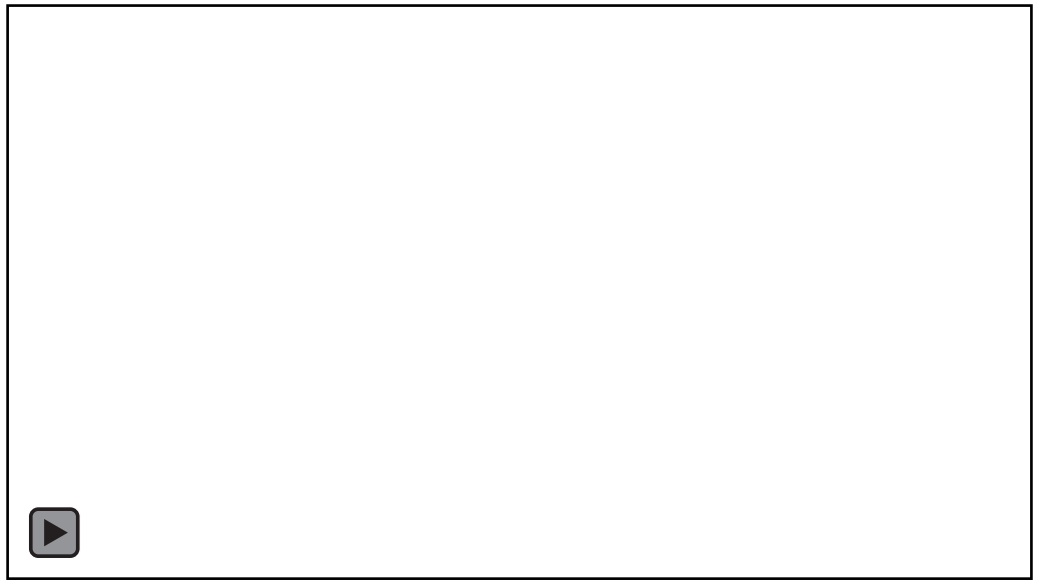
- Physical activity is associated with improved survival outcomes in stage III colon cancer patients, reducing the survival disparity with MGP
- Remaining tumor-free is critical for achieving survival rates comparable to general population
- Promoting physical activity should be cornerstone of cancer survivorship care

DEEP DIVE // Pain drugs

Cancer patients are living longer than ever. Pain drugmakers haven't kept up.

Decades of slow-moving research, along with broader failures of the healthcare system, have left millions of people in daily pain. Doctors fear that's bound to continue.

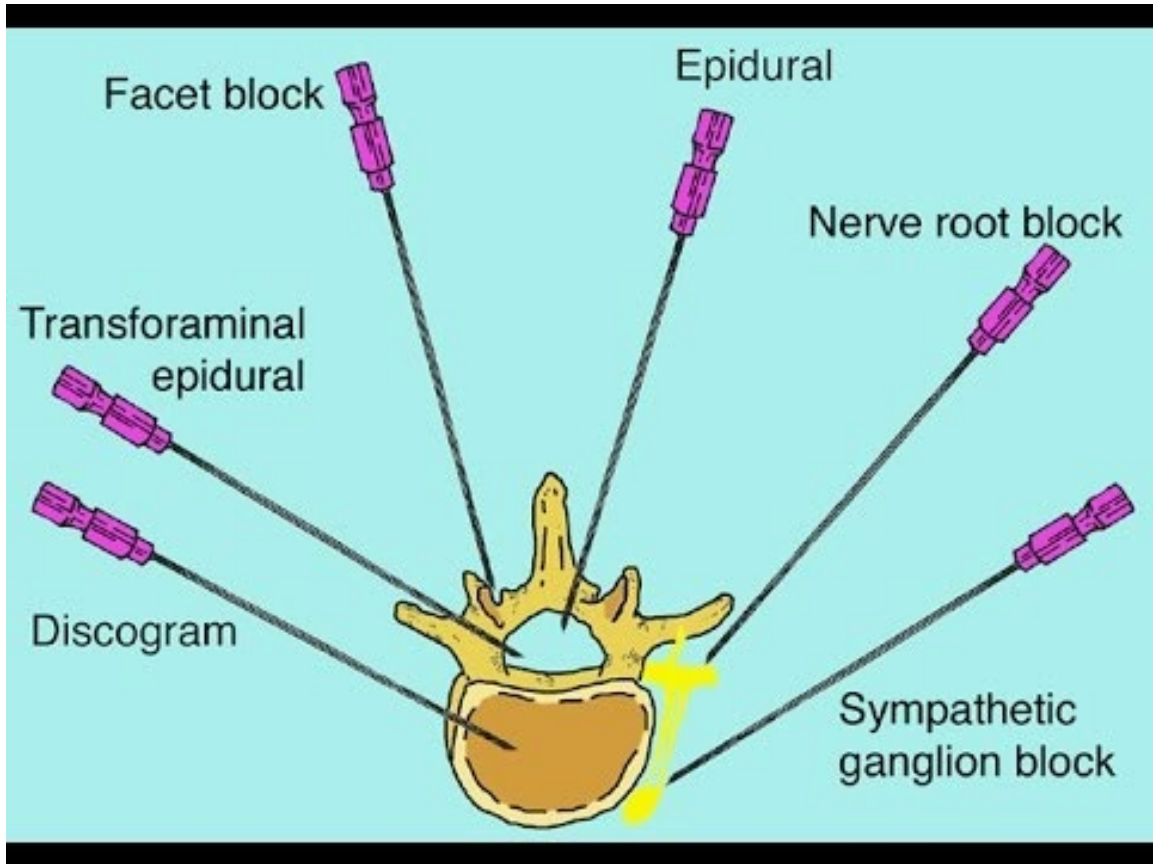
Published Sept. 25, 2025 • By Jacob Bell



Blocks

Chronic Pain Blocks

- Spinal
  - ➢Steroid
  - ➢Steroid + LA
  - ➢RFA



RFA Effect on Pain Intensity in Chronic Low Back Pain

- 3 randomized clinical trials (681 participants) with chronic low back pain originating from facet joints, sacroiliac joints, or combination of these or intervertebral disks
- RFA + exercise or compared to exercise alone
- No significant difference in pain intensity, or a difference smaller than prespecified minimal clinically important difference after 3 months

Juch JNS, et al. *JAMA*. 2017;318(1):68-81.

Problem With A Block

- Almost impossible to separate motor and sensory block effects
- Sensory loss is not always a good thing – patients don't like it
- Motor loss = loss of function
- Typical anesthetic agents last less than 24 hours
- Neurolytic agents are different

Types of Neurolysis

Chemical

- Alcohol
- Phenol

Thermal

- RFA
- Cryoablation

Mechanical

- Balloon trigeminal gangliolysis

Potential Neurolytic Block Candidates

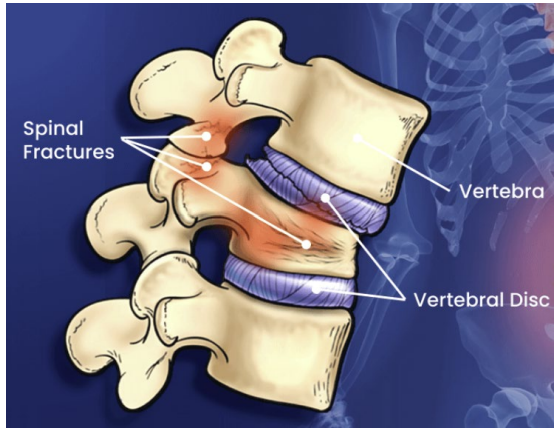
- Well defined pain problem (pancreatic cancer, rib lesion)
- Advanced disease (medically ill) = less functional
- “End-of-the Line” care
- Failed opioid therapy – high doses, persistent severe pain, intractable side effects

Interventional Pain Options

- Minimally invasive for vertebral pain (vertebro/kypho plasty)
- Peripheral nerve blocks – head & neck, plexus, intercostal
- Sympathetic block for abdominal/pelvic pain
- Neuraxial (epidural, spinal, saddle)
- Percutaneous cordotomy

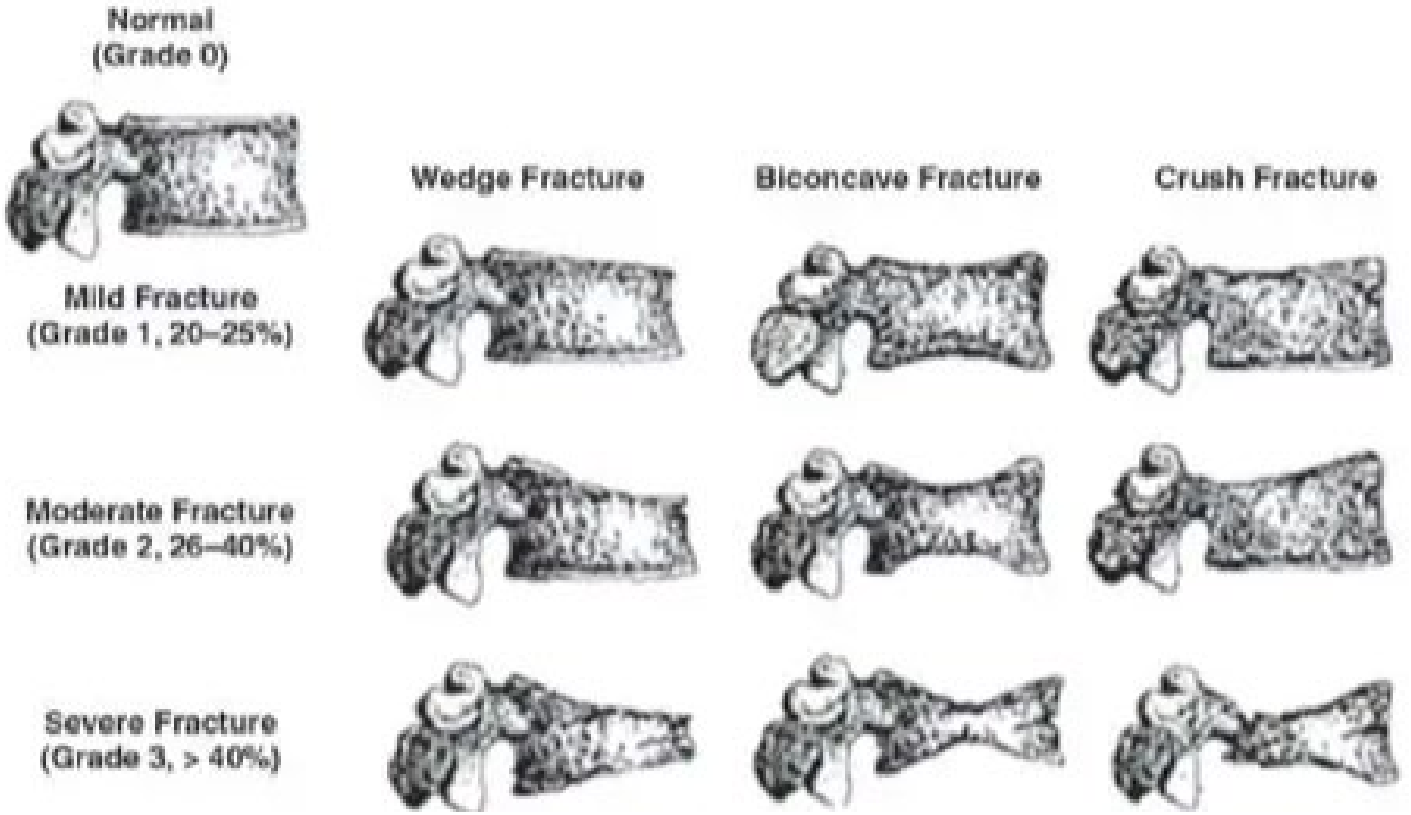
Spinal Metastases and Vertebral Fracture

- **Incidence of fracture**
  - **Multiple myeloma 24%**
  - **Breast 14%**
  - **Prostate 6%**
  - **Lung 8%**
- **Consequences – pain, neurological dysfunction, spine instability**
- **Treatment**
  - **Conservative – meds + bracing**
  - **Surgical – usually reserved for neurological involvement**



Saad F, et al. *Cancer*. 2007;110(8):1860-1867.

Genant Classification



Spinal Metastases and Vertebral Fracture

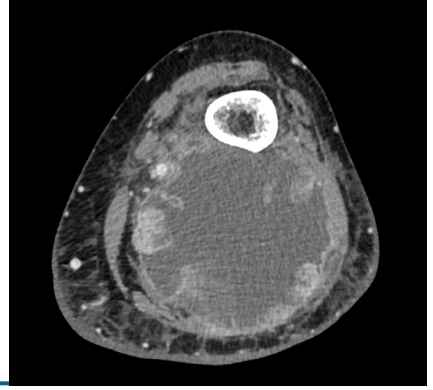
Meta-analysis included 476 cancer patients

- Augmentation only
- Addition of
  - Chemotherapy
  - Radiation therapy
  - RFA
  - ^{125} I seed implantation
  - Steroid (intrasomatic)
- Outcome
  - Reduces pain intensity (augmentation only or with ^{125} I seed, RFA, steroid)
  - Cement leakage (24% of cases)

Mattie R, et al. *Spine* (Phila Pa 1976). 2021, 46: 1729-1737

Inpatient Pain Management

Reasons for Admission



Rapidly escalating pain in setting where outpatient regimen cannot be adjusted quickly and safely

New issues (compression fractures, spinal cord involvement) severely limiting function

Substance use disorder (unsafe to prescribe in outpatient setting) and continuing oncology care (chemotherapy)

Other (admitted for induction regimen, transplant, CAR-T) and outpatient pain regimen

Inpatient Pain Structure

- Complex pain issues
- Specialized pain providers (MD, APP, PharmD)
- Familiarity with all options: PCA, IT, Vertebroplasty, Cordotomy, Surgery, XRT
- Transition to outpatient regimen or continuation to home therapy (PCA)
- Coordination of care as outpatient

Cancer Pain Specialist

Adept at cancer pain assessment/treatment

- Pathogenesis of cancer pain
- Pain assessment techniques (in oncology)
- Familiarity with pharmacological, anesthetic, neurosurgical, behavioral, physical therapy approaches
- Familiarity with tumor burden reduction approaches – medical, radiation, surgical options

Establish a system of longitudinal management

Final Thoughts

- Pain management is important in oncology care
- Understanding components of pain are critical to management
- Interdisciplinary care is a must
- Individual functional improvement more important than pain intensity reduction
- Management takes time and a team
- Longitudinal (coordinated) care is key