Pain Management in the Cancer Patient

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Learning Objectives

1. Outline strategies for assessing the cause of pain in patients with cancer
2. List current modalities for the treatment of cancer pain
3. Describe the principles for safe and effective opioid prescribing, including methadone, in patients with cancer pain
4. Summarize key ASCO guidelines recommendations for management of chronic pain in cancer survivors
Cancer Pain: ASSESSMENT
Cancer Pain

• Pain is common in cancer
  – Assess pain at each visit

• Incidence of cancer pain in patients:
  – Undergoing active treatment: 59%
  – With advanced disease: 64%
  – After completing curative treatment: 33%
Cancer Pain

• **Fear** of cancer pain is common
  – Many fear having **pain** more than they fear **death** from cancer

• **Survival is linked to pain and symptom control!**

• Pain assessment should include a multidimensional approach to evaluate the impact of **suffering** on the pain experience
  – Access to a multidisciplinary team is key!
    • Chaplain, social work, psychology/psychiatry

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Adult Cancer Pain


NCCN.org
Etiology & Pathophysiology

• Etiology:
  – Cancer
  – Cancer treatment
  – Unrelated to cancer or cancer treatment

• Pathophysiology:
  – Somatic pain
  – Visceral pain
  – Neuropathic pain

Etiology - Examples

• Cancer
  – Mid-thoracic pain from pancreas cancer
  – Humerus pain from a pathological fracture

• Cancer treatment
  – Oral mucositis
  – Chemotherapy-induced painful peripheral neuropathy

• Unrelated:
  – Pre-existing chronic low back pain
  – Joint pains from osteoarthritis

Pathophysiology – Somatic & Visceral

• Somatic pain
  – Pain arising from the bones, muscles, connective tissues
  – Quality: Aching, throbbing, bruised

• Visceral pain
  – Pain originating from the organs (e.g. stomach, liver, bowel, ureter, heart)
  – Quality: Cramping, colic, squeezing
  – Often “referred” to another site
    • Gall bladder pain may be perceived in the right shoulder

Pathophysiology: Neuropathic Pain

• Abnormal processing of pain signals & damage to the nerves due to:
  – Disease (diabetic peripheral neuropathy), injury (amputation), iatrogenic sources (surgery, radiation, chemotherapy)

• Three categories of neuropathic pain descriptors
  – Continuous pain (burning, bruised feeling)
  – Lancinating, paroxysmal pain (shooting, electric shocks)
  – Abnormal cutaneous sensitivity (allodynia)

• Examples: Post-surgical neuropathies (post-mastectomy pain syndrome); radiation-induced (brachial plexopathy), chemotherapy-induced peripheral neuropathy

Basic Pain Assessment: “The Golden Six”

- Location ("point to where it hurts")
- Quality (aching, sharp, burning)
- Quantity (mild, moderate, severe)
- Duration (frequency, timing, pattern)
- Aggravating and alleviating factors (standing, distraction)
- Associated symptoms (nausea, dizziness)

Additional History in Cancer Pain

- Pain medication history
  - Medications previously tried
  - Review reports of an “allergy” to opioid (= nausea, constipation?)

- What is the **Meaning** of the pain?
  - “If the pain is worse, it means the cancer is worse.”
  - “Morphine is just for people who are dying”

- Psychological, social, spiritual, & cultural impacts of pain

Cancer Pain: TREATMENT
3 Basic Approaches to Cancer Pain Management

- **Modify the SOURCE of the pain**
  - Treat or palliate neoplasm, inflammation, or infection

- **Alter the CENTRAL PERCEPTION of the pain**
  - Opioids, neuromodulators
  - Alternative therapies (acupuncture)

- **Block TRANSMISSION of the pain to the CNS**
  - Interventional blocks

Goals of Cancer Pain Management

NCCN defines this by the 4-A’s of Pain Management:

1. Optimize Analgesia
2. Optimize Activities of Daily Living (ADL)
3. Minimize Adverse Effects
4. Avoid Aberrant drug taking behaviors

Additionally: Improve Affect, improve Quality of Life (QoL), reduce suffering, improve function; prevent and manage pain crises.

Overview of Therapies

• **Anti-neoplastic Therapies**
  – The most effective therapy!

• Pharmacological Therapies

• Non-pharmacological Therapies

• Interventional Approaches

Overview of Therapies

• Anti-neoplastic Therapies
  – Chemotherapy, radiation therapy, surgery, immune modulators

• Pharmacological Therapies
  – Opioids, non-opioid analgesics, neuromodulators

• Non-pharmacological Therapies
  – Thermal, physical therapy, massage, aromatherapy
  – Counseling, mindfulness/relaxation, spiritual care

• Interventional Approaches (blocks)

Antineoplastic Treatments for Cancer Pain

• Chemotherapy
  – Reduces tumor burden in chemo-sensitive neoplasms

• Radiation Therapy
  – 75% of patients with bone metastasis obtain some relief from palliative radiation, and half become pain free

Surgery or Procedures - Examples

• Orthopedic procedures--THR or TKR to stabilize the joint and manage pain from avascular necrosis

• Colostomy for bowel obstruction

• Common bile duct stents for obstruction/jaundice

• Nephrostomy tubes or ureteral stents for ureteral obstruction

THR = total hip replacement; TKR = total knee replacement

Other Oncological Therapies

- **Bisphosphonates**
  - Pamidronate (Aredia®), zolendronic acid (Zometa®), others
  - Reduces bone pain
    - from metastasis to the bone or from multiple myeloma

- **Octreotide**
  - Reduces pain related to malignant bowel obstruction
  - Helpful in carcinoid syndrome

Non-Opioid Analgesics
Acetaminophen (APAP, Tylenol®)

- For mild to moderate pain, fever
- Maximum 4000 mg/day
  - Limit to 2000-3000 mg/day for chronic use
  - <1000-2000 mg/day if liver compromise, alcoholism
- To avoid inadvertent overdose, check for “hidden” APAP in combination and over-the-counter products
- May “mask” a fever and developing sepsis
  - Usually avoid in hematopoietic cell transplant

Non-steroidal Anti-inflammatory Drugs

• Naprosyn (Aleve®), ibuprofen (Motrin®, Advil®)

• For mild-moderate pain, pain from bone metastasis

• Adverse Drug Effects (ADE)
  – Reduces platelet function, increases bleeding risk
  – Avoid if on anticoagulation (LMWH, warfarin)
  – GI bleeding, fluid overload, hypertension
  – Acute Renal Failure, especially if dehydrated

LMWH = Low molecular weight heparin; GI = gastrointestinal
Topical Agents

• Topical NSAID – Diclofenac (Voltaren®) gel
  – FDA approved for osteoarthritis of hands, elbows, knees
  – Off label: aromatase inhibitor (AI)-induced arthralgias and myalgias

• Lidocaine 5% patch (Lidoderm®)
  – FDA approved for postherpetic neuralgia (PHN)
  – Off label: myofascial pain, focal neuropathic pain, e.g. post-mastectomy pain

• Capsaicin cream (Zostrix®)
  – FDA: arthritis, musculoskeletal pain, neuropathic pain/PHN

• Compounded topical gels – Chemotherapy-Induced Peripheral Neuropathy (CIPN)

Neuromodulators & Adjuvant Analgesics
Antidepressants for Cancer Pain

- Neuropathic pain, depression, (appetite, sleep)

- Serotonin-norepinephrine reuptake inhibitors (SNRI):
  - Duloxetine (Cymbalta®); Venlafaxine (Effexor®)

- Tricyclic antidepressants (TCA)
  - Amitriptyline, nortriptyline, desipramine, imipramine
  - TCA’s have multiple drug interactions with chemotherapy, used less commonly in oncology

- ADE: sedation, falls, dry mouth, urinary hesitancy

Anticonvulsants  (Antiepileptic Drugs; AED)

- Neuropathic pain, (DPN, FMS, RLS, PHN [anxiety, muscle pain])

- Gabapentin (Neurontin®) (DPN, PHN)
  - Start 100-300 mg qHS, titrate to 300-900 mg TID

- Pregabalin (Lyrica®)
  - Start 25-50 mg BID, titrate to 100 mg TID

- [Levetiracetam (Keppra®), oxcarbazepine (Trileptal®), carbamazepine (Tegretol®)]

- ADE: sedation, dizziness, ataxia, weight gain, LE edema
  - Dose reduce in renal impairment

DPN=diabetic peripheral neuropathy; FMS=fibromyalgia syndrome; RLS = Restless Leg Syndrome; PHN = Postherpetic neuralgia; LE = lower extremity

Metastatic Bone Pain – Does Pregabalin Have a Role?
Metastatic Bone Pain—Does Pregabalin Have a Role?


- My experience …. Yes, pregabalin or gabapentin may help with management of metastatic bone pain
Corticosteroids

• Dexamethasone
  – Has the least mineralocorticoid effect (Na and K+ excretion)
  – (Note: All corticosteroids can produce glucocorticoid effects: anti-inflammatory, immunosuppression, exogenous Cushing’s syndrome)
  – Can be given orally, IV, subcutaneous

• Used for pain, improved appetite and mood

• Adverse Effects: elevated blood sugar, psychosis, insomnia

• Use > 4-6 weeks may cause proximal muscle wasting & LE weakness

Non-Pharmacological Approaches
Interventional Options

• Nerve blocks (temporary or neurolytic)
  – Celiac plexus block for pancreatic cancer
  – Superior hypogastric plexus block for cervical, bladder, prostate, rectum
  – Saddle block for rectal, vaginal, perineal, scrotum, penis

• Vertebroplasty/kyphoplasty
  – Injection of polymethyl methacrylate cement / with balloon inflation to decompress the vertebrae
  – For metastatic compression fractures

• Rarely: lesioning of nerves, roots, plexus, or spinal cord

Physical Measures

- Thermal: hot or cold packs
- Massage, [chiropractic adjustment--with care!]
- Physical therapy
- Positioning, bracing
- TENS unit (transcutaneous electrical nerve stimulation)
- Lymphedema garments and pumps

Psycho-social-spiritual Therapies

- Relaxation, guided imagery
- Mindfulness-based stress reduction
- Counseling, cognitive-behavioral therapy (CBT)
- Spiritual support, prayer
- Support groups
- Music
- Humor therapy
Integrative Therapies

• Acupuncture
  – Obtain oncologist OK if on chemotherapy
  – WBC >3, platelets >50,000

• Aromatherapy

• Reiki, therapeutic touch, healing touch

WBC = white blood cell
Safe and Effective Prescribing of OPIOIDS
Opioids for Cancer Pain

- Opioids are the basis for cancer pain management
- Start with immediate-release (IR) opioid
  - Take as needed (prn) for breakthrough pain (BTP)
  - Or, on a scheduled basis (such as every 6 hours)
- Add an extended-release (ER) opioid if requiring more than about 4-6 tablets per day of immediate-release opioid for adequate pain control

Selecting an Opioid -1

- Morphine (Avinza®, Kadian®, MS Contin®, Oramorph®)
  - Widely available, low cost, many formulations; the “standard” drug, especially in hospice care
  - Toxic metabolites M3G & M6G can accumulate, lead to myoclonus; avoid in renal failure
- Oxycodone (OxyContin®)
  - Available in many formulations (tablets, solution, combined with acetaminophen)
  - Better choice if renal impairment
  - Long acting and new abuse deterrent formulations are costly
  - Not inherently more addictive
- Hydromorphone (Dilaudid®)
  - Available in many formulations, including high-potency solution for subcutaneous injection
  - Use carefully in renal impairment
Selecting an Opioid - 2

• Fentanyl patch (Duragesic®)
  – Good option, especially for someone who forgets to take pills.
  – Not inherently more addictive
  – Avoid if diaphoretic, fevers, (cachectic); no heating pads or hot tubs!
  – Acceptable in renal disease

• Hydrocodone
  – Combined with acetaminophen (Vicodin®, Lortab®) or ibuprofen (Hycet®)
  – Monitor total daily acetaminophen or ibuprofen dose

• (Codeine – analgesic ceiling?)

Selecting an Opioid - 3

• New opioid formulations – Costly
  – Hydrocodone: Zohydro® ER
  – Hydromorphone: Exalgo® ER & Hysingla® ER
  – Oxymorphone: Opana® IR & ER

• Tramadol (Ultram®) or tapentadol (Nucynta®)
  – Mixed action drug: “An opioid + a TCA”
  – Not used commonly in the US for cancer pain, but is used commonly in Europe
Methadone

- May be used for pain management
  - Not limited to opioid substitution therapy ("methadone maintenance")
- No active metabolites, good choice in renal impairment, use with caution in hepatic impairment
- Low cost, lower street value
- Long duration of action, very long half life, non-linear pharmacokinetics
  - USE WITH CAUTION! Consult with an experienced prescriber or pharmacist!
- Dosed BID, TID, QID for analgesia

Methadone -2

- Highly variable pharmacodynamics and pharmacokinetics
  - Oral bioavailability 40-99%

- Requires individualized dose and interval, and close initial monitoring

- Full effect at 5 half-lives = 5 days (if normal renal & hepatic function)
  - Do not titrate more frequently than every 7 days
  - Advise patient not to drive for at least 1 week!
  - Weekly visits or phone calls for 1 month

- QTc prolongation may occur, especially with drug interactions
  - Check EKG prior to therapy, in 1-3 months, and annually

EKG = electrocardiogram
Methadone Safety: A Clinical Practice Guideline From the American Pain Society and College on Problems of Drug Dependence, in Collaboration With the Heart Rhythm Society

Abstract: Methadone is used for the treatment of opioid addiction and for treatment of chronic pain. The safety of methadone has been called into question by data indicating a large increase in the number of methadone-associated overdose deaths in recent years that has occurred in parallel with a dramatic rise in the use of methadone for chronic pain. The American Pain Society and the College on Problems of Drug Dependence, in collaboration with the Heart Rhythm Society, have developed these guidelines to help address these issues. Specific recommendations include the need to educate and counsel patients on methadone safety, use of electrocardiography to identify persons at greater risk for methadone-associated arrhythmia, use of alternative opioids in patients at high risk of complications related to corrected electrocardiographic QTc interval prolongation, careful dose initiation and titration of methadone, and diligent monitoring and follow-up. Although...
Opioids to AVOID in Cancer Pain

- **Meperidine (Demerol)**
  - Short half-life and toxic metabolite
  - Normeperidine can accumulate in renal dysfunction
  - Metabolite can cause seizures

- **Propoxyphene (Darvon)**
  - Long half-life and risk of accumulating toxic metabolite, norpropoxyphene
  - Less potent than aspirin
  - Taken off the market in US

- **Mixed agonist-antagonists**
  - Pentazocine, Butorphanol, Nalbuphine
  - Low maximal efficacy and have potential to reverse mu-receptor agonist analgesia
  - Has an analgesic ceiling

- **Partial agonists:**
  - Buprenorphine
  - Can reverse mu-agonist analgesia
  - But, used in Europe for cancer pain

Opioid Adverse Effects

ADE that reduce over time:
- Nausea
- Pruritus
- Sedation
- Dry mouth
- Lightheadedness & dizziness
- Some cognitive changes
- Delirium
- Respiratory depression
- Urinary retention
- Mood change: euphoria

ADE that do not improve over time:
- **Constipation**
- Sleep disordered breathing
  - Obstructive sleep apnea
  - Central sleep apnea
- Some cognitive effects
  - May impact driving safety
- Urinary retention may persist
- Mood changes: dysphoria
- Endocrine effects
- Sexual dysfunction

Other Opioid Adverse Effects

• Myoclonus: Brief, involuntary jerking arising from CNS
  – Most common with higher doses of morphine due to metabolites
  – Especially in renal compromise and older adults

• Opioid-induced hyperalgesia (OIH)
  – Rare phenomenon in which escalating doses of an opioid causes paradoxical worsening of pain and allodynia (skin sensitivity)
  – Treat with dose reduction, rotation to another opioid, especially methadone; ketamine infusions

Dosing of Immediate Release Opioid

- When an ER opioid is added, continue an IR opioid PRN for breakthrough pain
  - **Dosed at 10 (-20)% of the total daily opioid dose**

- Example:
  - Initial IR: oxycodone 5 mg, taking 10 tab/day = 50 mg/d
  - Initiate oxycodone ER 20 mg BID = 40 mg/day
  - + oxycodone IR 5 mg, 1-2 q4 hr prn pain
    - (10% of 40 mg = 4 mg, 20% = 8 mg)

IR=immediate-release; ER=extended-release; BTP=breakthrough pain.
NCCN Adult Cancer Pain Guideline; v. 2.2016, NCCN.org. Quill et al. 2014. Primer of Palliative Care. AAHPM.
Managing an Acute Pain Crisis in a Patient With Advanced Cancer
“This Is as Much of a Crisis as a Code”

Natalie Moryl, MD
Nessa Coyle, NP, PhD
Kathleen M. Foley, MD

THE PATIENT’S STORY
Mr X is a 33-year-old man with a 4-year history of metastatic mucinous adenocarcinoma of the appendix. Over the course of his illness, Mr X completed several cycles of chemotherapy and had several percutaneous draining ostomies for small-bowel obstruction due to peritoneal carcinomatosis. The assessment and management of an acute pain crisis in the setting of advanced illness is challenging. Using the case of Mr X, a 33-year-old man with advanced metastatic mucinous adenocarcinoma of the appendix and “15 out of 10” pain, we explore the issues of acute pain and its management. We define a pain crisis as an event in which the patient reports pain that is severe, uncontrolled, and causing distress for the patient, family members, or both. Our management strategy focuses on making a pain diagnosis, determining the cause, and instituting pain control measures.
Acute Pain Crisis in Cancer

- Severe, uncontrolled pain, causing patient and/or family distress. Causes include:
  - Progression of neoplastic disease; acute biliary or ureteral obstruction, perforated viscus, abscess, pathological fracture
  - Medication problem: Unable to swallow analgesics, IV infiltrated, medications not absorbing (gastroparesis), patient stopped taking meds for some reason
  - Opioid-induced hyperalgesia
  - Remember to assess for existential distress and anxiety!

Moryl, Coyle, Foley. Acute pain crisis advanced cancer, “This is as much of a crisis as a code.” JAMA, 2008; 299(12):1457-67
Adult Cancer Pain

INITIATING SHORT-ACTING OPIOIDS IN OPIOID-NAÏVE PATIENTS

Monitor for acute and chronic adverse effects. See Management of Opioid Adverse Effects (PAIN-F)

Opioid-Naïve Patients

Initial Dose

- Oral (peak effect 60 min)
  - Dose 5–15 mg oral short-acting morphine sulfate or equivalent (See PAIN-E)
  - Reassess efficacy and adverse effects at 60 min

- Intravenous bolus (peak effect 15 min) or patient-controlled analgesia (PCA)
  - Dose 2–5 mg intravenous morphine sulfate or equivalent (See PAIN-E)
  - Reassess efficacy and adverse effects at 15 min

Subsequent Dose

- Pain unchanged or increased
  - Increase dose by 50%–100%
  - After 2–3 cycles, consider IV titration and/or see (PAIN-6) for subsequent management and treatment

- Pain decreased but inadequately controlled
  - Repeat same dose

- Pain improved and adequately controlled
  - Continue at current effective dose as needed over initial 24 h
  - See Subsequent Pain Management, Mild Pain 0–3 (PAIN-6)

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- Pain improved and adequately controlled
  - Continue at current effective dose as needed over initial 24 h
  - See Subsequent Pain Management, Mild Pain 0–3 (PAIN-6)

*Opioid naïve includes patients who are not chronically receiving opioid analgesic on a daily basis and therefore have not developed significant tolerance. The FDA identifies tolerance as receiving at least 60 mg of morphine daily, at least 30 mg of oral oxycodone daily, or at least 8 mg of oral hydromorphone daily or an equianalgesic dose of another opioid for a week or longer.

Subcutaneous can be substituted for intravenous; however, peak effect subcutaneously is usually 30 min.
Cancer Pain Management: Opioid-Naïve

**Oral**
- Morphine 5-15 mg po
- Reassess in **60** minutes
  - Pain better: continue at same dose
  - Pain same: repeat dose
  - Pain worse: titrate by 50-100% (10-30 mg po)
- Reassess in 60 minutes

**Intravenous**
- Morphine 2-5 mg IV
- Reassess in **15** minutes
  - Pain better: continue at same dose
  - Pain same: repeat dose
  - Pain worse: titrate by 50-100% (4-10 mg IV)
- Reassess in 15 minutes

NCCN Adult Cancer Pain Guideline; v. 2.2016, NCCN.org. Quill et al. 2014. Primer of Palliative Care. AAHPM.
Cancer Pain Management: **Opioid-Tolerant**

- **Oral & Intravenous**
  - Administer 10-20% of total opioid dose taken in the last 24 hours
  - Reassess in 60 minutes (oral) or 15 minutes (intravenous)
    - Pain better: continue at same dose
    - Pain same: repeat dose
    - Pain worse: titrate by 50-100%
  - Reassess in 60 minutes (oral) or 15 minutes (intravenous)
How is “Opioid Tolerant” Defined?

• Patient is chronically receiving opioid analgesics on a daily basis, for one week or longer, in the following doses or more:
  
  – Morphine 60 mg /day
  – Oxycodone 30 mg/day
  – Fentanyl patch 25 mcg/hr
  – Oxymorphone 25 mg/day
  – Hydromorphone 8 mg/day
  – Or equivalent dose of another opioid

A Word About Oral Medications

• “If the gut works, use it....”
“Universal Precautions in Pain Medicine”

• Make a diagnosis and identify whether opioids are appropriate for the pain problem

• Screen for comorbid conditions (sleep apnea)

• Perform a psychological evaluation & screen for addictive disorders

• Utilize a Patient-Provider Opioid Treatment Agreement

• Discuss urine drug testing

• Document the “5-A’s” of pain medicine at each visit:
  – Analgesia, Activity, Adverse effects, Affect, Aberrant behavior.

Chronic Pain in the CANCER SURVIVOR
“It’s not over when it’s over.”

Cancer survivors have multiple ongoing physical, psychological and social concerns.

Pain is Common in the Cancer Survivor

- The vast majority of pain is from the cancer TREATMENT
- Reviews suggest that 40% of survivors have chronic pain
- Higher prevalence for certain cancers, esp in the 1st year
  - Post-thoracotomy, post-amputation: up to 80%
  - Breast cancer: up to 63%
  - Post-neck dissection: up to 52%

Management of Chronic Pain in Survivors of Adult Cancers: American Society of Clinical Oncology Clinical Practice Guideline

Judith A. Paice, Russell Portenoy, Christina Lacchetti, Toby Campbell, Andrea Cheville, Marc Citron, Louis S. Constein, Andrea Cooper, Paul Glare, Frank Keefe, Lakshmi Koyyalagunta, Michael Levy, Christine Miaskowski, Shirley Otis-Green, Paul Sloan, and Eduardo Bruera

Recommendations
Clinicians should screen for pain at each encounter. Recurrent disease, second malignancy, or late-onset treatment effects in any patient who reports new-onset pain should be evaluated, treated, and monitored. Clinicians should determine the need for other health professionals to provide comprehensive pain management care in patients with complex needs. Systemic nonopioid analgesics and adjuvant analgesics may be prescribed to relieve chronic pain and/or to improve function. Clinicians may prescribe a trial of opioids in carefully selected patients with cancer who do not respond to more conservative management and who continue to experience distress or functional impairment. Risks of adverse effects of opioids should be assessed. Clinicians should clearly understand terminology such as tolerance, dependence, abuse, and addiction as it relates to the use of opioids and should incorporate universal precautions to minimize abuse, addiction, and adverse consequences. Additional information is available at www.asco.org/chronic-pain-guideline and www.asco.org/guidelineswiki.
ASCO Key Recommendations: Management of Chronic Pain in Survivors of Adult Cancers

• Screen for pain at each encounter

• **Recurrent disease, second malignancy, or late onset treatment effects** in any patient who reports new-onset pain should be evaluated, treated, and monitored.

• Determine the need for other health professionals to provide comprehensive pain management care in patients with complex needs.

• Use nonopioid analgesics and adjuvant analgesics to relieve chronic pain and/or to improve function.

• Consider a trial of opioids in **carefully selected patients** with cancer who do not respond to more conservative management and who continue to experience distress or functional impairment…..and **incorporate universal precautions** to minimize abuse, addiction, and adverse consequences.

Two Common and Problematic Pain Syndromes in Survivors

- Chemotherapy-induced peripheral neuropathy
- Aromatase Inhibitor myalgias and arthralgias
Chemotherapy-induced painful peripheral neuropathy

• CIPN is common, especially in breast, GI, lung cancers, and multiple myeloma
  – Platinum agents, taxanes, vinka alkaloids, bortezomib

• Stocking-glove distribution, may be painful or non-painful
  – Length-dependent, symmetrical
  – Often involves predominantly in either the hands or the feet

• Causes significant distress and reduced quality of life
  – Insensate digits or feet make it difficult to perform instrumental activities of daily living such as buttoning shirt, typing, walking, or driving

• ASCO: No agents recommended for prevention of CIPN

• CIPN may last for years, and is difficult to treat

ASCO Clinical Practice Guidelines for Management of Chemotherapy-Induced Peripheral Neuropathy

• Moderate recommendation for treatment of CIPN
  – Duloxetine (Cymbalta®)

• Other agents: inconclusive evidence, but worth a try
  – Anticonvulsants: gabapentin, pregabalin
  – Antidepressants: tricyclic antidepressants, venlafaxine
  – Compounded topical gel (BAK: baclofen, amitriptyline, ketamine)

Aromatase Inhibitors (AI)

• Used in breast cancer to extend disease-free survival and prevent recurrence
  – Letrozole (Femara®), anastrozole (Arimidex®), exemestane (Aromasin®), and others
  – Taken for 5 (-10) years after completing treatment

• Chronic pain problems include:
  – Arthralgias, myalgias, muscle cramps & spasms
  – Carpal tunnel syndrome and trigger finger

Aromatase Inhibitor Induced Myalgias & Arthralgias

- Incidence 35-50%
- Onset at 1.6 months, peak at 6 months
- Symmetrical pain in hands, wrists, knees, neck, shoulder, feet, back
- 60% report moderate to severe intensity
- Adherence to therapy is a problem, only 50-68% at 3 years
- Thus, pain **COULD AFFECT SURVIVAL!**

Summary: Pain in the Cancer Survivor

- Investigate all new, changing, or worsening pain for cancer recurrence
- In general, avoid “watchful waiting” for new onset back pain or headaches,
  - Especially if severe or associated with neurological findings
  - And in cancers that tend to metastasize to bone: Breast, lung, prostate
- Once cancer is ruled out provide reassurance
- For hypervigilant patients, work with the oncologist to come up with a reasonable plan for frequency of scans

Web Resources

- National Comprehensive Cancer Network (NCCN): nccn.org
  - Adult Cancer Pain Guidelines, and Survivorship Guidelines
- National Cancer Institute Office of Cancer Survivorship
  - http://dccps.nci.nih.gov/ocs/
- Patient Booklet: National Cancer Institute (NCI) Pain Control
  - May 2014, NIH Publication No. 14-6287
Questions?