NCCN Clinical Practice Guidelines for Adult Cancer Pain (2024)

About the Guideline

- This guideline was published on November 25, 2024. It provides updates and changes from the previous versions.
- The National Comprehensive Cancer Network (NCCN) panel consisted of 28 physicians and other health care professionals from cancer centers across the United States. Their specialties included anesthesiology, complementary and alternative medicine, medical oncology, internal medicine, hematology, hematology oncology, radiation oncology, neurology, psychiatry, and psychology, as well as nursing, pharmacology, supportive care, and patient advocacy.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements provided in this guideline, especially if you work in an acute care setting.

Principles of Cancer Pain Management

- Cancer survival is linked to symptom control and pain management, which contribute to the quality of life. Pain management is an essential part of oncologic care.
- An interdisciplinary team, including palliative care, is optimal to manage the multiple symptoms and complex pharmacologic therapies.
- Goals of pain management are described by the "5 As," which include:
    - Analgesia
    - Activities
    - Adverse effects
    - Aberrant drug taking
    - Affect (relationship between pain and mood)

Screening, Assessment, and Management of Pain

- **Screening**
    - Uncontrolled pain is a medical emergency and needs to be addressed promptly.
    - If the patient has pain, quantify its intensity and characterize its quality using a pain intensity scale.
    - If the patient does not have pain, continue to reassess for pain at each visit and as needed.

    - For planned painful events or procedures, ensure that the patient is treated before the event.
- **Assessment**
    - Gather information from the patient to determine:
        - pain experience, etiology, and pathophysiology
        - presence of cancer pain syndrome (if any)
        - patient-specific goals for comfort and function
        - risk of drug diversion, substance abuse, or both.
- **Management**
    - Determine if the patient is opioid naïve or opioid tolerant.
    - The U.S. Food and Drug Administration considers opioid-tolerant patients to be those who chronically take at least one of the following medications for 1 week or longer:
        - FentaNYL 25 mcg/hr transdermal patch
        - OxyCODONE 30 mg by mouth (PO) total per day
        - HYDROmorphone 8 mg PO total per day
        - Morphine 60 mg PO total per day
        - OxyMORphone 25 mg PO total per day
        - an equivalent medication and dose for 1 week or longer
    - Determine the etiology of the pain or whether the patient is experiencing an oncologic emergency.
        - Oncologic emergencies include:
            - bone fracture or impending fracture of a weight-bearing bone
            - neuraxial metastasis with threatened injury
            - infection
            - obstructed or perforated viscus
            - thromboembolic emergency
        - If treating an oncologic emergency, treat the emergency pain directly, as well as the underlying condition.

Pain Management in Opioid-Naïve Patients

- Select the most appropriate pain regimen based on the patient's pain, diagnosis, comorbidities, and potential drug interactions.
    - Regimens may include opioids, nonsteroidal anti-inflammatory drugs (NSAIDs), adjuvant analgesics, acetaminophen, or a combination of these medications.

        - Anticipate analgesic side effects and add prevention to the patient's regimen, as needed, including treatment for opioid-induced constipation.
        - Provide psychosocial support and education about the medication regimen.
    - Mild pain rating
        - First consider nonopioids and adjuvant therapies, unless contraindications exist.
    - Moderate or severe pain rating
        - Start nonopioids and adjuvant therapies, unless contraindications exist; add short-acting opioids, such as oxyCODONE, HYDROcodone, HYDROmorphone, or morphine, as needed.
            - If the patient needs four or more doses per day, consider adding a long-acting opioid.
    - Severe pain or pain crisis rating
        - Consider admitting the patient to the hospital or inpatient hospice to achieve patient-specific goals.

Pain Management in Opioid-tolerant Patients

- Select the most appropriate pain regimen based on the patient's pain, diagnosis, comorbidities, and potential drug interactions.
    - Regimens may include opioids, NSAIDs, adjuvant analgesics, acetaminophen, or a combination of these medication.
    - Anticipate and treat analgesic adverse effects.
    - Provide psychosocial support.
    - Use integrative interventions.
    - Mild pain rating
        - Use nonopioids and adjuvant therapies, unless contraindications exist
        - Re-evaluate opioid dosing and reduce, if needed.
    - Moderate or severe pain rating
        - Start nonopioids and adjuvant therapies, unless contraindications exist. Add short-acting opioids, such as oxyCODONE, HYDROcodone, HYDROmorphone, or morphine.
            - If the patient needs four or more doses per day, consider adding a long-acting opioid.
    - Severe pain or pain crisis rating
        - Consider admitting the patient to the hospital or inpatient hospice to achieve patient-specific goals.

Management of Pain Crisis

- Oral treatment
    - For opioid-naïve patients, administer 5 to 15 mg of oral, short-acting morphine sulfate or equivalent.
    - For opioid-tolerant patients, administer an opioid with the dose equivalent to 10% to 20% of the total opioid taken in the last 24 hours.
    - Subsequent dosing
        - Reassess in 60 minutes:
            - If pain is unchanged, increase the dose by 50% to 100%.
            - If pain has decreased but is inadequately controlled, repeat the same dose.
            - If pain has improved and is adequately controlled, continue at the current dose, as needed, over 24 hours.
        - After two or three cycles, consider IV administration.
- IV or subcutaneous bolus
    - For opioid-naïve patients, administer 2 to 5 mg of IV morphine sulfate or equivalent.
    - For opioid-tolerant patients, administer an opioid with the dose equivalent to 10% to 20% of the total opioid taken in the last 24 hours.
    - Subsequent dosing
        - Reassess in 15 minutes:
            - If pain is unchanged, increase the dose by 50% to 100%.
            - If pain has decreased but is inadequately controlled, repeat the same dose.
            - If pain has improved and is adequately controlled, continue at the current dose, as needed, over 24 hours.

Ongoing Care

- If pain control is achieved, continue the dose and re-evaluate during routine follow-up appointments; decrease the dose, if needed.
- If pain control is not achieved, complete a universal pain screening, consult a pain management specialist, and consider palliative care for pain management.
- Medications may need to be transitioned from parenteral to oral or transdermal opioids, if possible.
- Simplify the analgesic regimen to increase patient adherence.

- Schedule regular follow-up appointments to assess pain, regimen adherence, and activity level.
- Ensure the continuity of care among health care practitioners.
- Collaborate with the patient's pharmacy and insurance provider to ensure that the patient can obtain the medication regimen.
- Teach the patient and family about any reasons the practitioner should be contacted.

Pain Intensity Rating

- Many pain scales exist to assess pain. At a minimum, patients should be asked about their current pain as well as their worst pain, average pain, and least pain over the last 24 hours.
- Common scales are the numeric scale or faces pain scale; both are effective as long as the patient understands how the tool is used.

Procedure-related Pain and Anxiety

- Providers should offer analgesics and anxiolytics for procedures when pain, anxiety, or both are anticipated.
- Make every effort to provide a calm procedural environment.
- Analgesic doses
    - Give a supplemental dose before the procedure.
    - If the patient is on patient-controlled analgesia (PCA) and the PCA will be stopped temporarily, give a bolus 10 minutes before the procedure and consider a subcutaneous dose equivalent to 2 hours of the basal infusion rate.
- Anxiolytic
    - Oral doses should be given 30 minutes before the procedure.
    - Patients should not drive after the procedure.
    - Beware of excess sedation when anxiolytics are combined with other medications.
- Local anesthetics
    - Topical anesthetics (such as lidocaine, prilocaine, and tetracaine) may be used and applied to intact skin. Allow adequate time for the anesthetic to take effect.
    - If administering subcutaneous lidocaine, use a 27G needle.

Pain Assessment

- Self-reporting by the patient is the standard of care.
- The goal is to find the cause of the pain and identify the best therapies to control it.
- Knowing the etiology of the pain will assist in providing the correct treatment.

- The pain assessment should include:
  - Location
  - Intensity
  - interference with activities
  - timing (onset, duration, and intermittent or persistent)
  - description and quality
  - aggravating and alleviating factors
  - current treatment or therapies and response
  - prior pain therapies (reason for use, dose, duration of therapy, response, adverse effects, and reason for discontinuing)
  - presence of breakthrough pain
  - spiritual and cultural beliefs related to pain, the treatment regimen, or both
  - potential or actual risk factors for medication misuse or abuse
  - psychosocial support
  - medical history

Strategies for Specific Cancer Pain Syndromes

- For pain from mucositis, pharyngitis, or esophagitis, consider:
  - Gabapentin
  - local anesthetic formulations
- For bone pain, consider:
  - NSAIDs, acetaminophen, or steroids
  - bone-modifying agents (bisphosphonates)
  - local radiation, nerve block, vertebral augmentation, or percutaneous ablation techniques (for local pain)
  - hormonal therapy or chemotherapy, corticosteroids, systemic administration of radioisotopes, or a combination of these (for diffuse bone pain)
  - assessing for impending fracture
  - a physical medicine evaluation
  - consulting an orthopedic or interventional pain specialist, if needed
- For bowel obstruction, consider:
  - evaluating for the cause of the obstruction
    - If due to a tumor, consider surgical intervention
  - medical management with:
    - corticosteroids
    - metoclopramide, which may be used for partial obstructions, but is not recommended for complete obstructions

    - palliative management with:
        - bowel rest
        - nasogastric (NG) tube insertion for decompression
        - anticholinergics
        - octreotide
        - corticosteroids
        - histamine (H_2) blockers
- For nerve pain, consider:
    - Corticosteroids
    - Antidepressants
    - Anticonvulsants
    - topical agents
    - radiation therapy
    - referral to a pain specialist.
- For painful lesions, consider a trial of radiation, hormones, chemotherapy, or a combination.
- For severe refractory pain in an imminently dying patient, consider palliative care and sedation.

Adverse Effects of Opioids

- Adverse effects are common and should be managed aggressively.
- If adverse effects persist, consider opioid rotation.
- **Constipation**
    - Teach the patient and family of the need for bowel movements, despite the minimal amount of oral intake.
    - Prevention is key when the patient is taking opioids.
    - A stimulant laxative or polyethylene glycol may be used to prevent constipation.
    - Encourage adequate fluid intake.
    - Consider docusate, which may offer benefits as a stool softener.
    - Encourage regular exercise, if possible.
    - Supplemental medicinal fiber, such as psyllium, is not recommended.
    - If constipation develops, take these steps:
        - Assess for the cause and evaluate the severity.
        - Rule out obstruction.
        - Titrate laxatives to achieve a non-forced bowel movement every 1 or 2 days.
    - If constipation persists, take these steps:

        - Reassess causative factors.
        - Consider adding another agent, such as magnesium hydroxide, bisacodyl, lactulose, rectal suppository, polyethylene glycol, magnesium citrate, or sorbitol.
            - Rectal suppositories should not be used in patients with neutropenia or thrombocytopenia.
    - If laxative therapy is ineffective, consider using:
        - peripherally acting mu-opioid receptor antagonists (PAMORAs)
        - opioid rotation to transdermal fentaNYL, buprenorphine, or methadone
        - neuraxial analgesics or neuroablative techniques.

- **Nausea**
    - Ensure that the patient is having consistent bowel movements.
    - Prophylactic treatment with antiemetics is highly recommended for patients with a history of opioid-induced nausea.
    - Assess the cause of the nausea.
    - Consider prochlorperazine, metoclopramide, or haloperidol, as needed.
    - Serotonin antagonists may be considered to lower the risk of central nervous system (CNS) adverse effects.
    - Other agents that may be considered include OLANZapine, scopolamine, dronabinol, mirtazapine, or dexamethasone.

- **Pruritus**
    - Rule out a true allergic reaction and reconsider opioid selection.
    - Consider using an antihistamine, such as diphenhydraMINE, cetirizine, promethazine, or hydrOXYzine.
    - Assess for causes other than opioids.
    - Switch to another opioid if symptom management is not effective.
    - If pruritus persists, consider nalbuphine, a continuous infusion of naloxone (low-dose), or ondansetron.

- **Delirium**
    - Assess for other contributing factors, such as infection or CNS metastasis.
    - If no other cause is found, consider changing the opioid or lowering the dose, if possible.
    - Consider nonopioid analgesics for pain management.
    - If delirium persists, OLANZapine or risperiDONE may be considered.

- **Motor and cognitive impairment**
    - Motor and cognitive function should be monitored during analgesic administration but usually does not affect function.

- **Respiratory depression**
    - Sedation often precedes respiratory depression; therefore, sedation should be monitored.
    - Patients with limited cardiopulmonary reserve are more susceptible.
    - Hypercarbia happens before hypoxia.
    - Administer naloxone to reverse opioid effects, if consistent with the plan of care. Naloxone administration is discouraged if the patient is receiving end-of-life comfort care.
        - Be prepared to administer several doses depending on the amount of opioid the patient has received.
        - A naloxone drip may be required if the patient has been taking extended-release or long-acting opioids.
- **Sedation**
    - It is important to know and identify the difference between cancer-related fatigue and sedation.
    - If significant or unexpected sedation develops, take these steps:
        - Assess for other causes of sedation.
        - Consider lowering the opioid dose or use opioid rotation.
        - Administer a nonopioid analgesic for pain management.
    - If sedation continues to persist, consider neuraxial analgesics or neuroablative techniques to reduce the need for opioid use.

Adjuvant Analgesics for Neuropathic Pain

- Antidepressants and anticonvulsants are first-line adjuvant analgesics for neuropathic pain.
- These drugs can be helpful for patients who do not respond to or who exhibit little response to opioids.
- The drug regimen should be selected based on the patient's comorbidities.
- Patient teaching should include explaining that finding the right combination may take some time and encouraging the patient not to get discouraged quickly.
- Doses should be increased until an analgesic effect is achieved, adverse effects become unmanageable, or the maximum dose is reached.

Psychosocial Support

- Due to the complexity of cancer diagnosis and treatment, health care practitioners should anticipate the need for support and education.
- Inform the patient and family that emotional reactions to pain are normal.
- Assure the patient and family that you will work with them to address pain management.
- Remind the patient that multiple treatment options exist and that, if one treatment does not work, another can be attempted.
- Empathize about the situation and communicate the plan of action for pain management.
- Teach coping skills.
- Teach the patient and family that pain management is a team effort, with members' diverse disciplines offering a wide range of treatment options.

Patient, Family, and Caregiver Education

- Assess for educational needs about pain treatment.
- Assess for literacy in general and health literacy in particular.
- Provide written material, if appropriate.
- Teach the patient and family about the meaning and consequences of pain.
- Establish the expectations for pain management.
- Teach about and evaluate the understanding of the use and risks of analgesics, including opioids.
- Convey these messages:
    - Pain relief is important, and being in pain has no medical benefit.
    - Pain can usually be well controlled with medications.
    - Patients with pain often have other symptoms that need to be controlled, such as constipation, nausea, fatigue, and depression.
    - Morphine and morphinelike medications are the principal medications used to treat severe pain.
    - Opioids are used to treat pain, but not sleep, anxiety, or other mood disorders or symptoms.
    - Opioids are controlled substances, should be used with caution, and should not be used with alcohol or illicit drugs.
    - All pain medications need to be stored in a secure location.
    - Unused or unneeded medications must be disposed of in a proper location.

Integrative Interventions

- Integrative interventions can be used in conjunction with medication to treat pain.
- Cognitive modalities that may improve pain include:
    - mindfulness-based stress reduction
    - imagery
    - hypnosis
    - biofeedback
    - distraction
    - relaxation
    - active coping training
    - acceptance-based training
    - cognitive behavior therapy
    - cognitive restructuring
    - yoga
- Physical modalities that may improve pain include:
    - bed, bath, and walking supports
    - therapeutic or conditioning exercise
    - physical therapy
    - occupational therapy
    - positioning
    - massage
    - heat
    - ice
    - acupuncture or acupressure
    - ultrasonic stimulation
    - transcutaneous electrical nerve stimulation
- Nutritional modalities include:
    - nutrition consultation
    - dietary recommendations
    - assessment and education on herbal, botanical, and dietary supplements

Specialty Consultations for Improved Pain Management

- The patient may benefit from many specialty services or consultations, such as:
    - palliative care
    - pain specialty care
    - physical therapy

    - occupational therapy
    - social work
    - substance use disorder specialist
    - mental health counseling
    - spiritual care
- An interventional consultation may result in additional strategies that may be used for pain management, such as:
    - nerve block
    - intraspinal block
    - regional infusion, which may be:
        - epidural
        - intrathecal
        - regional plexus
    - percutaneous vertebral augmentation or kyphoplasty
    - neurodestructive procedures for well-localized pain syndromes
    - neurostimulation
    - percutaneous ablation to bone lesions.

Reference

National Comprehensive Cancer Network. (2024). *NCCN clinical practice guidelines in oncology: Adult cancer pain* (Version 3.2024).