

**OLIVE VIEW-UCLA MEDICAL CENTER
MEDICAL ADMINISTRATION
POLICY & PROCEDURE**

**NUMBER: 2121
VERSION: 6**

SUBJECT/TITLE: STANDARDIZED PROCEDURE: PROTOCOL FOR EVALUATION AND MANAGEMENT OF PAIN IN HEMATOLOGY-ONCOLOGY PATIENTS

POLICY: This protocol describes the process of care followed by Nurse Practitioners in the evaluation and management of pain.

This protocol was developed solely for use by Nurse Practitioners within Olive View-UCLA Medical Center, and must be implemented in conjunction with the Standardized Procedure “General Policy Component.” This protocol is suitable for use by Adult Nurse Practitioners in Hematology-Oncology clinic. The scope of practice of each individual Nurse Practitioner is determined by the Standardized Procedures approved for the Nurse Practitioner.

PURPOSE:

DEPARTMENTS: MEDICAL ADMINISTRATION

DEFINITIONS:

PROCEDURE: I. Protocol for evaluation and management of cancer pain in hematology-oncology patients.

A. Definition

According to the International Association for the Study of Pain, pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.” There are three types of pain: somatic, visceral, and neuropathic pain. Each type results from activation and sensitization of nociceptors and mechanoreceptors in the periphery by either mechanical (tumor compression or infiltration) or chemical (epinephrine, serotonin, bradykinin, prostaglandin, histamine, and so forth) stimuli.

This protocol is a disease-specific protocol and covers the management of cancer pain hereby defined as “disease,” furnishing drugs and devices for Hematology-Oncology patients presenting to the Special Treatment Center. The nurse practitioner may initiate, alter, discontinue, and renew medications included on, but not limited to Los Angeles County Pharmaceutical Formulary. The protocol covers all scheduled narcotic drugs II-V. The prescribing nurse practitioner must have completed a BRN approved pain management course and possess a DEA number for furnishing schedule II-V narcotic drugs. All chemotherapy agents are excluded and will be prescribed only by a physician. This protocol does not apply to patients with suspected cardiac problems (i.e. Acute MI, stable/unstable angina.)

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The following table demonstrates types of patients with pain from cancer:

Acute cancer-related pain	Chronic cancer-related pain	Preexisting chronic pain & cancer-related pain	History of drug addiction & cancer-related pain	Dying patients with cancer-related pain
Diagnosis of cancer	Cancer progression		Actively involved in illicit drug use	
Cancer therapy (surgery, chemotherapy, or radiation)	Cancer therapy (surgery, chemotherapy, or radiotherapy)		In methadone maintenance program	
			With a h/o drug abuse	

Three types of pain, somatic, visceral, and neuropathic have been described based on the neuroanatomy and neurophysiology of pain pathways. Each type is caused by either mechanical (tumor compression or infiltration) or chemical stimuli (epinephrine, serotonin, bradykinin, prostaglandin, histamine, and so forth) as a result of activation and sensitization of nociceptors and mechanoreceptors in the periphery.

SOMATIC PAIN	Visceral PAIN	NEUROPATHIC PAIN
Activation of nociceptors in cutaneous or deep tissues	Activation of nociceptors from infiltration, compression, extension, or stretching of the thoracic, abdominal, or pelvic viscera	Injury to the peripheral or central nervous system resulting from tumor compression, infiltration nerves or spinal cord, chemical injury caused by surgery, radiation or chemotherapy
Dull or aching, well-localized pain	Deep, squeezing, pressure-like, poorly localized. When acute, associated with autonomic dysfunction, nausea, vomiting, diaphoresis	Severe burning or dysesthetic, vice-like quality. Most common in the site of sensory loss
i.e. Musculoskeletal pain	i.e. Intraperitoneal metastasis; for example pancreatic cancer	i.e. Metastatic or radiation induced brachial and lumbosacral plexopathies, paraneoplastic peripheral neuropathies, postmastectomy, postthoracotomy, phantom limb pain
	Usually referred to cutaneous sites that may be remote from the site of the lesion (shoulder pain with diaphragmatic irritation)	

B. Data Base

1. Subjective Data: Subjective data will include but is not limited to: Relevant health

history to warrant the use of the drug:

- Features of the pain history – “PQRST:”
- P Provocative factors, palliative factors
 - Q Quality of pain
 - R Region, pattern of radiation, referral
 - S Severity, intensity (use pain rating scales)
 - T Temporal factors: onset, duration, time to maximum intensity, frequency, daily variation

- Associated signs and symptoms
- Change of pain control over recent time period
- Interference with activities of daily living
- Impact on patient’s baseline psychologic state and impact of pain on psychological state
- Response to previous and current analgesic therapies
- Allergic history specific to the drug.
- Personal and/or family history, which is an absolute contraindication to use the drug or device.
- Assess the patient’s potential psychologic risk:
- Evaluate the patient’s current level of anxiety and depression.
- Past history of anxiety/depression.
- How patient has handled past painful events.
- Family history of alcohol or drug dependence.
- Meaning of pain for the patient.
- Patient’s goal of treatment.

2. Objective Data

Diagnostic tests should be reviewed and should supplement as necessary.

C. Diagnosis and Assessment

1. Pain History

a. Treatment and drug history

- Medications or treatments they receive for pain, and the degree of pain relief by these medications (using pain scale).
- Patients belief about the cause of their pain
- How much pain interferes with their mood, relationships, and their daily activities
- The extent of the disease and patient’s current medical condition.

b. Pain-rating Scale

Ask patients to rate their pain on a scale of 0 to 10; zero is labeled no pain and 10 as the worst pain possible; Use the pain rating scales per pain standard protocol. Behavioral observation may be used if patient is unable to communicate.

Numeric Rating Scale

0 1 2 3 4 5 6 7 8 9 10

0 No pain
1-3 Mild pain
4-6 Moderate pain
7-10 Severe pain

2. Physical Examination

- a. Physiologic signs of acute pain – elevated blood pressure and pulse are rare and unreliable in subacute/chronic pain.
- b. Careful neurologic assessment, especially if neuropathic pain is suspected
- c. Assess the mechanism that underlies the pain.
- d. Presence or absence of infection, erythema, and disease progression.

Note: Suspected myocardial infarction, cord compression, brain mets with neurologic symptoms are medical emergencies consult with a physician immediately.

3. Diagnostic tests

Diagnostic tests should be reviewed and supplemented as necessary.

D. Treatment Plan

1. Pharmacologic treatment:

a. Follow the WHO three steps for the management of pain.

Step I A non-opioid analgesic, with or without an adjuvant
Pain increasing or persisting
e.g. acetaminophen, aspirin, nonsteroidal anti-inflammatory agents.

Step II Switch to an opioid + a nonopioid agent with/without adjuvant medications (All standard schedule III)
If pain persists or increased, go to the next step
e.g. Hydrocodone, oxycodone
Beware of acetaminophen combinations. Do not exceed 4000 mg of acetaminophen in 24 hours.

Step III Strong opioid analgesic with or without a non-opioid and/or

adjuvant agents e.g. morphine, hydromphone, fentanyl, meperedine, levophoranol.

- b. Guidelines for the use of opioid analgesics:
 - Start with an analgesic that provides adequate relief
 - Individualize and titrate the dosage
 - Administer analgesics regularly after initial dose titration
 - Provide analgesic for breakthrough pain
 - Use drug combination to enhance effectiveness
 - Recognize and treat the side effects
 - Make conversions from one route or agent to another using known analgesic dosages
 - Manage physical dependence (withdrawal, prevention)

b. Opioid analgesic

Table 1. Opioid agonist analgesics for mild to moderate pain

Drug	Equianalgesic dose to 650 mg of aspirin	Dose interval	Half-life (h)
Codeine	32-65 mg	q 4-6 h	2-3
Hydrocodone	—	q 3-4 h	4
Oxycodone	2.5 mg	q3-6 h	—

Table 2. Opioid agonist analgesics for severe pain

Drug	Equianalgesic dose (mg)		Half-life	
	To 10 mg of IV morphine	Parenteral		
Fentanyl, oral Transmucosal	See package insert	NA		Breakthrough cancer pain
Fentanyl, transdermal	NA	100µg/h	—	Slow onset to effect, needs “breakthrough” analgesics; Patch sizes of 25, 50, 75, 100 µg/h
Hydromorphone	4 mg	1.5 mg	2-3	Constipation, nausea, sedation
Morphine sulfate Controlled release	30 mg	NA	3	Mg-for-mg conversion from immediate release; do not crush or chew tablets
Morphine sulfate	30 mg	30 mg	3	Constipation, nausea,

				sedation
Oxycodone Controlled-release	15 mg	NA	—	Constipation, nausea, sedation; use as single Agent
Oxycodone Immediate release	15 mg	NA	2-3	constipation, nausea sedation
Oxymorphone	NA	1 mg	2-3	constipation, nausea, Sedation

The following parameters must be taken into consideration when using opioid analgesics:

1. Dosage
 Opioid agonists do not exhibit ceiling effects. Dosing is guided by efficacy and limited by side effects. Dosage of tablets combining nonsteroidal anti-inflammatory drug (NSAID) or acetaminophen and an opioid are limited according to the nonopioid component.
2. Routes of administration
 Start with oral route when possible
 Use alternative route if PO not tolerated (i.e. transdermal, transmucosal, rectal, & neuroaxial infusion (By MD)).
3. Side effects
 Anticipate and treat the side effects.
 Laxatives should be ordered for constipation with regular opioid dosing
 With chronic opioid use physical dependence and tolerance may develop (respiratory depression, nausea, & sedation).
 Compulsive and harmful use of opioids should be addressed and evaluated for addiction.

d. Non-opioid analgesics

The following table (Table 3) is a list of nonopioid analgesics and NSAIDs are useful for treating cancer pain:

Generic name Usual dosage	Maximum dose/day	Adverse effects
Acetaminophen (325-975 mg q4-6h)	4,000mg	Hepatic & renal impairment
Acetylsalicylic acid (aspirin, ASA) (325-975 mg q 4-6 h)	4,000 mg	Dyspepsia & GI ulceration antiplatelet effect, bleeding
Celecoxib	400 mg	
Ibuprofen (200-400 mg q 4-6 h)	2,400 mg	Hepatic, renal dysfunction bleeding, gastric ulceration
Naproxen (250-500 mg q 8-12 h)	1,500 mg	hepatic & renal dysfunction bleeding, gastric ulceration

e. Adjuvant medications

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Standard analgesic alone may not adequately relieve neuropathic pain. Use of anticonvulsants, antidepressants, benzodiazepines, local anesthetics, neuroleptics, psychostimulants, antihistamines, corticosteroids, levodopa, calcitonin, and bisphosphonates are effective for such pains. The following table is a list of these drugs for particular indications.

Table 4. Adjuvant drug therapy for cancer pain

Drug	Therapeutic effect	Comments
Steroids Corticosteroids Prednisone 10 mg tid po Dexamethasone <4mg po q 6h	Potentiates analgesia Elevates mood Improves appetite	For pain caused by nerve compression or spinal cord compression/risk of GI bleed
Antidepressants Amitriptyline 10-25 mg HS, increase gradually to 75-100 mg/has	Analgesic, elevate mood, induces sleep	
Imipramine 200 mg HS for severe depression	Analgesic Elevates mood	Neuropathic pain
Nortriptyline 200 mg HS	Analgesic	Neuropathic pain Elevates mood
Gabapentine 300 mg po q HS and increase over a few days to 300-600mg po tid	Analgesic	Neuropathic pain Elevates mood
Anxiolytic Hydroxyzine Start with 25 mg PO tid; increase to 50-100 mg q4-6 h) Diazepam (5-10 mg PO, IV, PR bid or tid Lorazepam 1-2 mg po, IV, PR bid or tid	Potentiates opioid analgesia Reduces anxiety Antiemetic Sedative Relieves acute anxiety/panic Antiemetic Sedative Relieves acute anxiety/panic Antiemetic Sedative	Convulsions may occur with >500mg/d More antiemetic effect than chlorpromazine; Orthostatic hypotension, hypotonia As Diazepam
Phenothiazines Chlorpromazine	Reduces anxiety Produces hypnosis	Orthostatic hypotension

10-25 mg q 4-8 h		
Prochlorperazine 5-10 mg q4-8 h	Antiemetic	Combined with antidepressants, useful in neuropathic pain
Haloperidol Start with mg po tid, increase to 2-4 mg po tid	Decreases confusion Antiemetic	More potent antiemetic than chlorpromazine

f. Miscellaneous Pharmacologic and radiopharmecutic interventions:

1. Bisphosphonate (e.g. Pamidronate, Zometa) for relief of pain in osteolytic bone mets.
2. Strontium 89 for pain relief in disseminated metastatic bone cancer.

E. Circumstances under which physician consultation is to be obtained

- Infection
- Suspicion of spinal cord compression with or without associated signs and symptoms: worsening back pain with/without pain radiation to legs, urinary /stool incontinence, numbness and tingling in the legs.
- Central nervous system changes: sedation, euphoria, coordination and mood
- Respiratory status: decreased rate, increased level of carbon dioxide, decreased ventilatory volume
- Cardiovascular: hypotension
- Gastrointestinal system: constipation, nausea
- Genitourinary system: urinary retention, difficult urination
- Dermatologic system: diaphoresis, facial flushing, cutaneous reactions, pruritus

F. Education to be provided to patient and/or family

1. Measures to increase patient and family knowledge

Provide the patient/family with information and counseling in regard to the drug.
 Caution patient/family on pertinent side effects or complications with chosen drug(s).

- Difference between long acting and short acting analgesics.
- Take long-acting analgesics around the clock for constant pain.
- Take short-acting analgesics for breakthrough pain.
- Take analgesic early in the pain experience to avoid severe pain and maximize sleep, self-care, and quality of life.
- Take your bowel regimen upon initiation of opioid analgesics to avoid constipation, not PRN.
- Teach signs and symptoms of spinal cord compression in patients with bony lesions and to notify the health care team immediately if experiencing any of the symptoms.

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- Notify your doctor, nurse practitioner when experiencing any of the symptoms mentioned in the above section.
- Educate family to reposition immobile patients every 2 hours to prevent skin breakdown.

2. Measures to facilitate coping:

- Provide information about complimentary therapies such as relaxation, guided imagery, and deep breathing.
- Discuss use of music, arts and crafts, reading, and humor as measures to distract from pain.
- Encourage self-care behaviors and incorporate cultural and spiritual preferences into the plan of care.

G. Follow-up to be recommended to patient and/or family

Communication among health care providers, patient and family is essential. Review goals of pain management on an ongoing basis and integrate it into the overall plan of care.

Patient/family should report the following to the health care team as soon as possible:

- Inadequate pain relief.
- Increased pain not relieved with prescribed analgesic and/or other treatment modalities.
- Any new skin redness, warm and tender area, with or without drainage.
- Fever and chills.
- New onset of back pain radiating down the legs.
- Stool or urinary incontinence
- Any allergic reactions to prescribed analgesics.
- Constipation > 2 days, and/or no flatus.
- Urinary retention.
- Increased sleepiness or altered mental status.
- Bone pain.

Healthcare workers should be ready to assess the following outcomes:

- Patient and family recognize importance of preventing and controlling pain.
- Patient and family communicate pain intensity and temporality using standard measures.
- Patient and family use appropriate pharmacologic and complimentary interventions to control pain.
- Patient state that the pain is reduced or relived to a satisfactory level.
- Patient participates in the usual daily activities with appropriate modifications as needed.

H. Documentation: Patient contact is documented according to accepted procedures in the SOAP format. Documentation reflects consultation where appropriate.

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I. Consultation and/or referral: Non-responsiveness to appropriate therapy and/or unusual or unexpected side effects and as indicated in general policy statement.

(Surgery, Radiation-Oncology, Physical therapy, Psychologist/Psychiatrist, Social Worker, Continuity of Care (Visiting Nurse), Hospice, Palliative Care Clinic).

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