

## A Cancer Pain Primer

Kathleen Reeves

*Opportunities exist for improving cancer pain management. Medical-surgical nurses must partner with patients and families to achieve optimal pain management. They must use valid tools to assess patients and be knowledgeable about pharmacologic and nonpharmacologic measures to manage pain.*

In various health care settings, not all patients with cancer are admitted to oncology units. Because many medical-surgical units/facilities admit patients with cancer, medical-surgical nurses must be knowledgeable about cancer pain management. Despite advances in pain management, an estimated 25% of patients with newly diagnosed cancers experience pain. In addition, 33% of patients undergoing anticancer therapy experience pain, as do an estimated 75% of patients with advanced disease (National Comprehensive Cancer Network [NCCN], 2008). Continued improvement in pain management is needed because over one-third of the patients with cancer pain experience it at a moderate or severe level (van den Beuken-van Everdingen et al., 2007).

The International Association for the Study of Pain (2007) defined pain as “an unpleasant sensory and emotional experience

associated with actual or potential tissue damage, or described in terms of such damage.” Margo McCaffery, a nurse and leader in the pain management arena, offered a more useful definition for nurses: “Pain is whatever the experiencing person says it is, existing whenever he says it does” (McCaffery & Pasero, 1999, p. 17). Nurses must accept the patient’s report of pain regardless of the patient’s overall appearance, affect, or vital signs.

### The Pain Assessment

Cancer pain can range from mild to severe. It may occur due to the tumor damaging viscera, nerves, or bone, or because of treatments such as radiation therapy and chemotherapy (Mickle, 2002). Patients with cancer also may have pain unrelated to their cancer or treatment. The first step in cancer pain management is to perform a comprehensive pain assessment; lack of assessment can lead to inadequate pain management

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**Notes:** This column is made possible through an educational grant from C-Change, a 501(3)c (not-for-profit) organization. The purpose of the Cancer: Caring and Conquering column is to strengthen the cancer knowledge, skills, and confidence of medical-surgical nurses who care for patients at risk for or living with cancer.

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The author and all *MEDSURG Nursing* Editorial Board members reported no actual or potential conflict of interest in relation to this continuing nursing education article.

(NCCN, 2008). A pain assessment must be conducted on admission to a health care facility, whether inpatient or outpatient, and then must be conducted on a regularly scheduled basis. A pain assessment should include the following components: location, quality/description, intensity, duration, alleviating and aggravating factors, associative factors, and effect of pain on the patient's life (St. Marie, 2002). The patient should be involved actively in the assessment and pain management plan (Gordon et al., 2005). The American Society for Pain Management Nursing developed clinical practice recommendations related to assessing nonverbal patients, specifically elders with advanced dementia and patients who are intubated and/or unconscious (Herr et al., 2006). The general recommendations include seeking self-report when appropriate, investigating potential causes of pain, observing behaviors using a behavioral pain tool, using surrogate reporting, and initiating an analgesic trial.

When performing the pain assessment, the nurse should ask the patient about the *location* of all the areas of pain. Having the patient point to the painful areas or marking those areas on a body diagram helps to identify them accurately. The patient may have more than one area of pain and may not share this information unless specifically asked about all the locations of pain. Although a list of words related to the *quality* of pain (sharp, dull, aching, burning) can be provided to the patient, it is important that nurses document the individual's own words and descriptions. The quality or descriptions of pain may provide direction related to the selection of appropriate therapy. Somatic nociceptive pain arising from the skin, bone, and muscle may be described as sharp, throbbing, and aching. Visceral nociceptive pain arising from the organs

## **A comprehensive pain assessment also includes questioning the patient about associated symptoms.**

or viscera may be described as cramping, aching, and sharp. Nociceptive pain generally responds to nonopioids and opioids. Neuropathic pain arising from damage to the central or peripheral nervous system may be described as sharp, shooting, burning, and prickly, and may not respond well to opioids (NCCN, 2008). Neuropathic pain often requires the use of adjuvant medications for effective pain management (Dworkin et al., 2007).

*Intensity of pain* should be measured using a valid, objective tool that uses a word, phrase, picture, or number to communicate the severity of pain. Using a scale provides a personal measure of the patient's pain and allows evaluation of pain management using a consistent measure. A variety of pain-intensity rating scales are available in the Adult Cancer Pain Practice Guidelines in Oncology (NCCN, 2008). Once a nurse has registered on the NCCN Web site, he or she can locate numerous pain management resources.

*Duration of pain* can be assessed by asking the patient about the onset of pain, how long the pain has been experienced, when the pain is at its worst, and when the pain improves (St. Marie, 2002). In addition, the patient can be asked if the pain is continuous or intermittent (Fink, 2000).

Assessing the *events or activities that aggravate or alleviate pain* can engage the patient in the plan of care. Aggravating factors are those that worsen the pain and might be related to body positions, exercise, or to the time of day. Conversely, alleviating factors might include body positions, rest, or the application of heat or

cold. If the alleviating factors can be incorporated into the care plan, then the patient may achieve improved pain control (McCaffery & Pasero, 1999).

A comprehensive pain assessment also includes questioning the patient about *associated symptoms*. The patient should be asked about the presence of nausea, vomiting, constipation, confusion, and sedation (St. Marie, 2002). Additionally, the patient should be asked about the effects of pain on his or her life such as a disturbed sleep pattern, fatigue, changes in appetite, and activity. Although this component may not be completed with each pain assessment, the nurse should determine the impact of pain on the patient's life (St. Marie, 2002) because the patient may discontinue medications if associated symptoms or the influence on quality of life is unpleasant or negative.

Along with a thorough pain assessment, a history related to previous pain management therapies is important in determining planned interventions. To further involve the patient in the plan of care, the patient can be encouraged to track pain and effectiveness of interventions in a pain diary. A pain diary form is available on the American Cancer Society Web site (2008) ([http://www.cancer.org/downloads/MON/pain\\_diary.pdf](http://www.cancer.org/downloads/MON/pain_diary.pdf)).

### **Pain Management Measures**

Pharmacologic and nonpharmacologic measures should be evaluated in a plan of care to provide optimal pain management. The World Health Organization (1986) developed an analgesic ladder for the relief of cancer pain. Use of the ladder has resulted in effective

### Cancer Pain Management Resources

<p><b>American Cancer Society</b>  <a href="http://www.cancer.org/docroot/home/index.asp">http://www.cancer.org/docroot/home/index.asp</a></p>
<p><b>Cancer-Pain.Org</b>  <a href="http://www.cancer-pain.org">http://www.cancer-pain.org</a></p>
<p><b>Clinical Practice Guidelines</b>  <a href="http://www.nccn.org">http://www.nccn.org</a></p>
<p><b>National Cancer Institute Pain Management</b>  <a href="http://www.cancer.gov/cancertopics/paincontrol">www.cancer.gov/cancertopics/paincontrol</a></p>
<p><b>International Association for the Study of Pain provides resources including the <i>Outline Curriculum on Pain for Schools of Nursing</i></b>  <a href="http://www.iasp-pain.org">http://www.iasp-pain.org</a></p>
<p><b>Pain Management Pocket Tool, Pain Diary</b>  <a href="http://www.cancer.org">http://www.cancer.org</a></p>

tive pain management for 80%-90% of patients with cancer pain. The emphasis is on prompt administration of medications to achieve freedom from pain. Recommendations include the oral administration of nonopioids (e.g., acetaminophen [Tylenol®], ketorolac [Toradol®]) initially and adding adjuvant drugs as needed. As pain increases or persists, the pain should be treated with mild opioids (e.g., codeine), with nonopioids, and adjuvant medications or treatments added or deleted as needed. If pain increases or persists then strong opioids (e.g., morphine, hydromorphone [Dilaudid®]) should be administered, with nonopioids and adjuvants added or deleted until the patient is pain free. A further recommendation is to provide the drugs around the clock rather than on an as-needed basis.

An algorithm for treating cancer pain is available in the Adult Cancer Pain Practice Guidelines in Oncology (NCCN, 2008). Recommendations include managing pain in patients not taking opioids, patients taking opioids, and for procedural or event-related pain. The algorithm also provides recommendations for pain related to an oncologic emergency, and pain not related to an oncologic emergency. In

addition, the algorithm provides management principles for mild, moderate, and severe pain.

When administering analgesics, the nurse must use a preventive approach to pain management. When pain is predictable, such as with cancer pain, analgesics are more effective when given around the clock (ATC) rather than as needed (PRN). An ATC schedule maintains therapeutic blood levels of the analgesics. With a PRN schedule, the patient may have frequent periods of unrelieved pain, and increased episodes of breakthrough pain (Ellison & Stanley, 2005).

Nonopioid analgesics include aspirin, acetaminophen, and nonsteroidal anti-inflammatory drugs (NSAIDs) (e.g., ibuprofen [Motrin®]). The nonopioids are generally the initial treatment choice for mild pain, but the use of this class of drugs may be limited with cancer pain (Ellison & Stanley, 2005). Nonopioids may have antipyretic, analgesic, and/or anti-inflammatory properties. This range of actions makes them useful for postoperative pain and bone pain. Unlike opioids, the nonopioids have a ceiling effect on analgesia; thus, beyond a certain dosage, improved analgesia will not occur.

The nonopioids may be as effective as low-dose opioids. For instance, 650 mg of aspirin or acetaminophen provides the same amount of analgesia as 32 mg of oral codeine or 50 mg of oral meperidine. Because nonopioids tend to block pain transmission peripherally and opioids block pain transmission in the central nervous system, it may be advantageous to administer both classes of drugs. Side effects of nonopioids may include gastrointestinal irritation, fluid retention, and increased bleeding time. Therefore, they should be used with caution in patients with liver or kidney disorders, or thrombocytopenia (NCCN, 2008). If bleeding is a concern, the COX-2 inhibitor celecoxib (Celebrex®) or nonacetylated salicylates (salsalate [Disalcid®]) can be given because they do not inhibit platelet aggregation to the same extent as acetylated salicylates (e.g., aspirin) and may be considered for treatment of mild general pain or bone pain (NCCN, 2008).

### Addiction and Opioids

Opioids are the mainstay in the treatment of mild cancer pain that does not respond to nonopioids and for moderate and severe cancer pain (Ellison & Stanley, 2005). When discussing opioid analgesics, the nurse should review terminology that is often misunderstood and may result in undertreatment of pain. For example, patients, families, nurses, and physicians have misconceptions about *addiction*; therefore, the term must be defined and differentiated from *tolerance* and *physical dependence*.

When patients take opioids over a period of time, tolerance and physical dependence occur. The tolerant patient requires higher doses of the opioid to provide pain management. Not only does the patient become tolerant to the analgesic effects of the opioid, but also to side effects with the exception of constipation. Tolerance

## ***Breakthrough pain is episodic or transient pain that occurs despite stable pain management in patients receiving chronic opioid therapy.***

can develop within a matter of a few days of initiating the drug and is *not* synonymous with addiction (Ellison & Stanley, 2005).

Physical dependence is a physiologic response to the abrupt discontinuance or rapid reduction of the opioid, and also is *not* synonymous with addiction. Withdrawal symptoms can include nausea, vomiting, diarrhea, insomnia, and diaphoresis (Ellison & Stanley, 2005).

Addiction, on the other hand, is the active, compulsive use of the drug (opioid) for *effects other than pain relief* (Mickle, 2002), even if it causes harm (Ellison & Stanley, 2005). Addiction by individuals using opioids for pain management is infrequent (Ellison & Stanley, 2005), although patients and families often fear addiction will result. It is therefore imperative that the nurse discuss this fear with patients and families.

Opioids vary in potency and duration of action. "The appropriate dose is the dose that relieves the patient's pain throughout the dosing interval without causing unmanageable side effects" (NCCN, 2008). Some opioids are present in combination drugs (e.g., hydrocodone and acetaminophen [Vicodin<sup>®</sup>]). Although there is no ceiling to the dose of opioid, the limiting factor is the acetaminophen dose (usually limited to 4 grams per day). Consideration should be given to change to a single-entity opioid when dosing exceeds the maximum amount of acetaminophen (NCCN, 2008). It is important to refer to an equianalgesic table when changing from one opioid to another. An equianalgesic table provides dosages of various oral and parenteral drugs that are essentially

equivalent to each other in their ability to provide pain relief (McCaffery & Pasero, 1999). For example, to administer a dose of hydromorphone equianalgesic to parenteral morphine 10 mg, the nurse would need to administer 1.5 mg of parenteral hydromorphone or 7.5 mg of oral hydromorphone. When converting one opioid to another, however, the amount of opioid required in a 24-hour period is summed. Then the equianalgesic dose of the new opioid is calculated. If pain control was adequate with the original opioid, then the total dose of the new opioid should be reduced by 25%-50% initially due to cross-tolerance between opioids. The dose then can be titrated upward rapidly. If the pain is not managed, the starting dose of the new opioid can be as much as 100%-125% of the equianalgesic dose (NCCN, 2008). Finally, the daily dose is divided by the number of doses per day to determine the individual dose. The NCCN Adult Cancer Pain Guidelines (2008) also provide an equianalgesic table of oral and parenteral opioids.

The most commonly used opioids used to control severe cancer pain in the United States are morphine, hydromorphone, oxycodone (Percocet<sup>®</sup>), and fentanyl (Sublimaze<sup>®</sup>) (Ellison & Stanley, 2005). Opioids can be administered by various routes depending on the patient's needs. The oral route is preferred if tolerated, especially for patients with chronic pain; oral opioids can control severe pain when given in adequate dosages. The NCCN Adult Cancer Pain Guidelines (2008) recommend using short-acting opioids initially when titrating to the dose that relieves the pain. Once

an efficacious dose is reached and side effects are managed, sustained-released opioids are considered along with rescue medications for breakthrough pain. The breakthrough dose is generally 10%-20% of the total 24-hour oral dose of the sustained-acting opioid.

Breakthrough pain is episodic or transient pain that occurs despite stable pain management in patients receiving chronic opioid therapy (Payne, 2006; Portenoy & Hagen 1990). One of the preferred drugs for breakthrough pain in a patient who is tolerant to opioids is fentanyl. Although the sustained-release preparation of fentanyl is available in transdermal patches, short-acting fentanyl is available in an oral transmucosal lozenge or a buccal tablet. The patient and family must be taught that the two formulations are not the same. The transmucosal lozenge is placed between the cheek and the gum, and is to be sucked rather than chewed. It is left in place for approximately 15 minutes (Cephalon, 2006). The buccal tablet is placed in the mouth above a rear molar and left in place between the cheek and gum for up to 25 minutes. Whatever part of the tablet that remains then can be swallowed. The patient must be instructed to leave the tablet whole and not chew or suck on the tablet because less medication will be directly absorbed across the oral mucosa (Cephalon, 2008).

The sustained-release fentanyl transdermal patch often is used for cancer pain because the patch can provide a constant release of medication over time. Although the patch can last up to 72 hours, the time may vary with each patient and sometimes may reach only 48 hours. Many drug interactions are possible with fentanyl. Concomitant administration of drugs such as clarithromycin (Biaxin<sup>®</sup>), diltiazem (Cardizem<sup>®</sup>), erythromycin (Erythrocin<sup>®</sup>), flu-

conazole (Diflucan<sup>®</sup>), and verapamil (Calan<sup>®</sup>) can increase fentanyl plasma concentrations and thus increase adverse drug effects. Grapefruit or grapefruit juice can increase the plasma concentration of fentanyl and should be avoided. Patients must be instructed that they cannot cut the patches because direct exposure to the fentanyl could occur and cause a potentially fatal overdose. Direct heat, heating pads, and other heat sources should be avoided because heat can produce an increased release of fentanyl and result in overdose. Likewise, if the patient has a fever, monitoring for adverse side effects should be more frequent (Waknine, 2008). Although respiratory depression is rare in opioid-tolerant patients, an increased concentration of fentanyl could be fatal. Sedation precedes respiratory depression (McCaffery & Pasero, 1999), making it essential to monitor the patient for this side effect more closely.

Morphine, oxycodone, and hydromorphone are available in fast-acting and sustained-release preparations. Use of one opioid for pain management is preferred to a combination of several opioids. The use of multiple opioids does not always result in good patient adherence, and adds to the complexity and cost of treatment (Cooney, 2005). Meperidine (Demerol<sup>®</sup>) and propoxyphene (Darvon<sup>®</sup>) are not recommended for cancer pain due to toxic metabolites. Buprenorphine (Buprenex<sup>®</sup>), pentazocine (Talwin<sup>®</sup>), nalpuphine (Nubain<sup>®</sup>), butorphanol (Stadol<sup>®</sup>), and dezocine (Dalgan<sup>®</sup>) also are not recommended in the treatment of cancer pain because they can precipitate withdrawal symptoms in an opiate-dependent patient (NCCN, 2008).

For increases in the dose of daily opioid, adjustments can be made by adding the total amount of rescue medication (needed for breakthrough pain over a 24-hour

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period) to the ATC dose to calculate the new daily dose of opioid. The other method of increasing the opioid dose is to increase the dose by 25%-100% depending on factors such as the pain severity and the patient's response to previous adjustments (Cooney, 2005). This increase in dosing can make nurses uncomfortable if they have only cared for patients who do not take opioids or use them only in acute pain episodes. It is important to remember that patients who take opioids for extended periods and are tolerant to the side effects of the drugs may require high doses. There is no ceiling dose for opioids (McCaffery & Pasero, 1999).

### **Case Study**

Ms. G. was hospitalized for poorly managed pain due to ovarian cancer with metastasis to the meninges. At times, she would have increased intracranial pressure and head pain as well as constant generalized pain. Ms. G.'s intravenous morphine dose was increased to 1,000 mg per hour, a dose that was startling to the medical-surgical nurses who believed it would be lethal to Ms. G. The dose was approximately a 25% increase from the patient's previous dose. Ms. G. was tolerant to the morphine and to its side effects. She was lucid whenever the intracranial pressure was normal. She was tachypneic and did not have depressed respirations. Ms. G. was monitored closely for the first few hours after the initiation of the morphine drip because of the nurses' discomfort in not previously caring for a patient receiving such a high dose of morphine. Ms. G. remained on the unit for several more days before transferring to an out-of-state hospital near her husband's new job.

The adverse effects of opioid analgesics include constipation, nausea, sedation, respiratory depression, confusion, hypotension, dizziness, itching, and urinary retention. These side effects need to be addressed proactively to insure that the patient continues to take the opioid and has well-managed pain. Because tolerance does not develop to constipation, prophylactic measures are needed; these include increased fluid and fiber intake, exercise if possible, and medications, such as laxatives and stool softeners (NCCN, 2008), and subcutaneously administered methylnaltrexone bromide (Relistor<sup>®</sup>).

### **Adjuvant Medications**

Adjuvant medications are drugs not usually classified as analgesics but may relieve pain in certain situations. Opioids may control some of the cancer pain, but additional adjuvant medications may have a *synergistic effect* that results in improved pain management. Antidepressants, anti-convulsants, and corticosteroids are examples of medications that may be helpful with specific pain syndromes. Pain from nerve compression or inflammation may respond to corticosteroids. Neuropathic pain may respond to antidepressants and anticonvulsants. First-line medications for neuropathic pain include the tricyclic antidepressants and selective serotonin and norepinephrine reuptake inhibitors (Dworkin et al., 2007). It is important to teach the patient and family that antidepressants or anticonvulsants must be taken for several weeks to evaluate the effectiveness of the drugs; otherwise the patient may become frustrated and stop taking the drug. Suggested doses of adju-

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vant drugs are provided in the NCCN Guidelines (2008). Topical medications such as lidocaine patches (Lidoderm®) and capsaicin cream may provide additional relief of neuropathic pain.

A Pain Management Pocket Tool (2005) available on the American Cancer Society Web site provides commonly used opioid and nonopioid analgesics with dosing and side effect information. An opioid equianalgesic table and information about adjuvant medications also are provided. Additional recommendations related to breakthrough pain and changing from one opioid to another are available on the pocket tool.

### **Nonpharmacologic Interventions**

Nonpharmacologic interventions also can be incorporated into the plan of care, but they are not intended to replace medications. Physical interventions can include simple comfort measures, such as changing an immobile patient's position; providing rest periods for a fatigued patient who is unable to sleep, or ensuring a quiet environment at the correct temperature for the patient. Comfort measures may increase pain tolerance and ultimately allow the patient to experience less pain. Effective pain management measures should be documented in the medical record for use by others on the health care team (McCaffery & Pasero, 1999).

Cutaneous stimulation through modalities such as massage, heat and cold application, and transcutaneous nerve stimulator has demonstrated variable effects. Cutaneous stimulation can decrease the intensity of pain or change the sensation so that it is

tolerable for the patient (Cahill, 2005). Although not curative, cutaneous stimulation may reduce pain by modifying the transmission of painful stimuli. Cold therapy may reduce swelling and relieve pain longer than heat therapy. When applied incorrectly, cutaneous stimulation may damage tissue and thus the nurse must be knowledgeable about the application of these therapies (Cahill, 2005).

Psychological interventions include patient and family teaching about pain, analgesics, and procedures or psychological strategies, including relaxation therapy and guided imagery. These types of interventions are *complementary* and are used together with analgesics to improve pain management. Distraction techniques can be helpful in reducing mild-to-moderate pain or during brief periods of procedural pain. Examples of distraction methods include listening to music, laughing, counting, watching television, reading, talking on the phone, and visiting with friends or family. Including several distraction techniques in the plan of care may be helpful; this allows the patient to select the methods most effective for individual pain management (McCaffery & Pasero, 1999).

Relaxation is a cognitive approach using a self-hypnotic technique that may produce the relaxation response. The relaxation response counteracts the stress response and is characterized by decreased muscle tension, heart rate, and respiratory rate, and normal or decreased blood pressure. Relaxation decreases mental stress and physical tension, which may be helpful because pain often is accompa-

nied by increased anxiety and muscle tension (Cahill, 2005).

Imagery is another cognitive approach to pain management that uses a person's imagination to encourage physical and mental relaxation. The nurse should assess a patient's preferences before initiating imagery exercises; for example, it is not helpful to have a patient imagine being at the beach and then learn that his or her previous negative experience at the beach creates anxiety in just thinking about being there. Likewise, if a specific activity or location promotes relaxation, it is helpful to incorporate that in the imagery exercise (McCaffery & Pasero, 1999).

### **Case Study**

Mrs. B. underwent an allogeneic bone marrow transplant and subsequently suffered from graft versus host disease. When Mrs. B. urinated, sloughed tissue passed through her meatus, which resulted in significant pain. An imagery exercise helped reduce her pain during these episodes. She imagined herself floating in an inner tube down a lazy river. She imagined the wind against her skin, the sounds of birds, the smell of the fresh air, and the peace she felt during the tubing experience. Mrs. B. practiced the imagery exercise when she was not experiencing the pain so that when the pain occurred, the imagery exercise could be used readily with success.

Sample relaxation and imagery exercises that can be used in clinical practice are available at the National Cancer Institute's Web site ([http://www.cancer.gov/cancer\\_topics/pain\\_control/page14](http://www.cancer.gov/cancer_topics/pain_control/page14)) These exercises can be used easily in outpatient and inpatient settings. Patients can also use the exercises at home. The patient's pain should be assessed before and after relaxation and imagery exercises to evaluate the effectiveness of the modalities.

## **Medical-surgical nurses must partner with patients and families to achieve optimal pain management.**

### **Patient and Family Education**

Patient and family education is a key component of safe and effective pain management. Discussions between the nurse and the patient and family should include the following:

- Terminology related to pain management.
- Assessment of the patient's pain at home (perhaps through use of a pain diary).
- Facts about medications and the rarity of addiction when opioids are used to relieve pain.
- Adjuvant therapies for pain management.
- Alternative and complementary therapies for pain management.
- Vital nature of communication with the interdisciplinary team, especially related to the pain experience, effectiveness of interventions/medications, side effects, and other modalities. The team may consist of nurses and physicians, as well as physical and occupational health professionals, psychologists, counselors, social workers, and case managers. Team members work with the patient in achieving optimal pain management.

Opportunities exist for improving cancer pain management. Medical-surgical nurses must partner with patients and families to achieve optimal pain management. They must use valid tools to assess patients and be knowledgeable about pharmacologic and nonpharmacologic measures to manage pain. Evidence supports

the feasibility of attaining appropriate pain management for patients with cancer through use of clinical practice guidelines (NCCN, 2008) within health care facilities. Medical-surgical nurses also should be involved in evaluating the safety and effectiveness of new medications and pain management technologies. The ultimate goal is the patient's effective pain management. ■

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**Answer/Evaluation Form:  
A Cancer Pain Primer**

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Registration fee: **Complimentary CNE provided as an educational service by C-Change (www.c-changetogether.org).**

**ANSWER FORM**

1. If you applied what you have learned from this activity into your practice, what would be different?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**OBJECTIVES**

This continuing nursing educational (CNE) activity is designed for nurses and other health care professionals who care for and educate patients and their families regarding cancer pain. For those wishing to obtain CNE credit, an evaluation follows. After studying the information presented in this article, the nurse will be able to:

1. List key considerations in assessing pain in the patient with cancer.
2. Discuss pain management measures in the patient with cancer.
3. Describe issues related to addiction and opioids in the patient with cancer.
4. Define the role of adjuvant medications and nonpharmacologic interventions in treatment of pain in the patient with cancer.

**CNE Instructions**

1. To receive continuing nursing education credit for individual study after reading the article, complete the answer/evaluation form to the left.
2. Photocopy and send the answer/evaluation form to *MEDSURG Nursing*, CNE Series, East Holly Avenue Box 56, Pitman, NJ 08071-0056.
3. Test returns must be postmarked by December 31, 2010. Upon completion of the answer/evaluation form, a certificate for 1.0 contact hour(s) **AND** 30 minutes of pharmacology hours will be awarded and sent to you.
4. CNE forms can also be completed online at [www.medsurnursing.net](http://www.medsurnursing.net).

This independent study activity is co-provided by **AMSN** and **Anthony J. Jannetti, Inc. (AJJ)**.

AJJ is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation (ANCC-COA).

Anthony J. Jannetti, Inc. is a provider approved by the California Board of Registered Nursing, Provider Number, CEP 5387.

This article was reviewed and formatted for contact hour credit by Dottie Roberts, MSN, MACI, RN, CMSRN, OCNS-C®, *MEDSURG Nursing* Editor; and Sally S. Russell, MN, CMSRN, AMSN Education Director.

Evaluation	Strongly disagree		Strongly agree		
2. By completing this activity, I was able to meet the following objectives:					
a. List key considerations in assessing pain in the patient with cancer.	1	2	3	4	5
b. Discuss pain management measures in the patient with cancer.	1	2	3	4	5
c. Describe issues related to addiction and opioids in the patient with cancer.	1	2	3	4	5
d. Define the role of adjuvant medications and nonpharmacologic interventions in treatment of pain in the patient with cancer.	1	2	3	4	5
3. The content was current and relevant.	1	2	3	4	5
4. The objectives could be achieved using the content provided.	1	2	3	4	5
5. This was an effective method to learn this content.	1	2	3	4	5
6. I am more confident in my abilities since completing this material.	1	2	3	4	5
7. The material was (check one) ___new ___review for me					
8. Time required to complete the reading assignment: _____minutes					

I verify that I have completed this activity: \_\_\_\_\_

Comments

\_\_\_\_\_

\_\_\_\_\_