



# Equianalgesic Dosing: Principles of Practice for the Care Team

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Opioids are the basis for managing cancer-related pain. Pain assessment and management are critical competencies for the clinical care team to improve quality of life for patients with cancer. Knowledge and application of evidence-based practice approaches to cancer pain relief, including the principles of equianalgesic dosing, opioid switching and rotation, and use of coanalgesics, can lead to improved patient outcomes.

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**P**ain is a major healthcare problem for patients with cancer (Portenoy & Lesage, 1999). Given the growing number of patients with cancer in treatment and cancer survivors, adequate pain management is a cornerstone of high-quality cancer care, promoting and enhancing quality of life for patients. Regardless of numerous national guidelines, standards, and best practice recommendations for pain management, pain continues to be underrecognized and undermanaged.

The World Health Organization (WHO) has a three-step ladder for cancer pain relief (see Figure 1). Using the ladder strategy to address pain, prompt oral administration of medications for mild pain starts with nonopioids (aspirin and acetaminophen), then advances, when necessary, to mild opioids (codeine), and finally strong opioids, such as morphine, until the patient is free of pain; for moderate-severe pain, step 1 is skipped. To calm patient fears and anxiety and to provide synergy to primary pain medications, adjuvant agents (e.g., tricyclic antidepressants, anticonvulsants) can be used (WHO, 2012).

To best manage pain, medications should be given around the clock, every 3–6 hours rather than on demand. The three-step approach to administer the right drug in the right dose at the right time is inexpensive and 80%–90% effective; surgical intervention to involved nerves may provide additional pain relief if drugs are not wholly effective (WHO, 2012). Undertreatment usually is attributed to an inappropriate or ineffective use of opioids involving barriers related to healthcare providers, patients, families, institutions, and society (Maltoni, 2008).

According to the National Comprehensive Cancer Network (NCCN), 2012, appropriate pain medication dosing is the dose that relieves the patient's pain throughout the dosing interval without causing unmanageable adverse effects. Prior to selecting appropriate analgesic therapy, patients should be given a Pain Intensity Rating Scale (NCCN, 2012). The intensity rating scale includes a numerical rating scale from 0 (no pain) to 10 (the worst pain you can imagine). It also includes a face pain rating scale. On that scale, the expression that best describes

the patient's pain is circled. Patients who cannot verbally express their level of pain are the best candidates to use the scale. Healthcare providers must also take into consideration a patient's cultural and linguistic needs.

## Opioid Conversion

Opioids are recommended for moderate to severe acute pain and persistent nociceptive pain (American Pain Society [APS], 2005). Opioids are part of the foundation of cancer pain management, so healthcare providers need to master the skill of opioid conversions (see Appendix A).

Selection of the appropriate opioid is based on several variables, including

*Opioid naive* includes patients who are not chronically receiving opioid analgesic on a daily basis.

- ▶ **Mild pain (score 1–3)**  
**Step 1:** Simple analgesia (nonopioid); initiate simple oral, nonopioid analgesics (e.g., acetaminophen, nonsteroidal anti-inflammatory drugs) with or without adjuvant for neuropathic pain (e.g., tricyclic antidepressant, anticonvulsants)
- ▶ **Moderate pain (score 4–6)**  
**Step 2:** Weak opioid (e.g., tramadol, codeine phosphate) with or without adjuvant for neuropathic pain (e.g., tricyclic antidepressant, anticonvulsants)
- ▶ **Severe pain (score 7–10)**  
**Step 3:** Strong opioids (e.g., morphine, oxycodone) with or without adjuvant for neuropathic pain (e.g., tricyclic antidepressant, anticonvulsants)

**FIGURE 1. Management of Pain in an Opioid Naive Patient**

*Note.* Based on information from World Health Organization, 2012.