

# Cancer Pain

## Treatment Guidelines for Patients

Version I

January 2001





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The mutual goal of the National Comprehensive Cancer Network® (NCCN®) and the American Cancer Society (ACS) partnership is to provide patients and the general public with state-of-the-art cancer treatment information in understandable language. This information, based on the NCCN's Clinical Practice Guidelines, is intended to assist you in the dialogue with your physician. These guidelines do not replace the expertise and clinical judgment of your physician. Each patient's situation must be evaluated individually. It is important to discuss the guidelines and all information regarding treatment options with your physician. To ensure that you have the most up-to-date version of the guidelines, consult the web sites of the ACS ([www.cancer.org](http://www.cancer.org)) or NCCN ([www.nccn.org](http://www.nccn.org)). You may also call the NCCN at 1-888-909-NCCN or the ACS at 1-800-ACS-2345 for the most recent information.

NCCN Clinical Practice Guidelines were developed by a diverse panel of experts. The guidelines are a statement of consensus of its authors regarding the scientific evidence and their views of currently accepted approaches to treatment. The NCCN guidelines are updated as new significant data become available. The Patient Information version will be updated accordingly and will be available on-line through the NCCN and the ACS web sites. To ensure you have the most recent version, you may contact the ACS or the NCCN.

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**T**his report shows patients how cancer pain is treated at the nation's leading cancer centers. Originally devised for cancer specialists by the National Comprehensive Cancer Network, these treatment guidelines have now been "translated" for the general public by the American Cancer Society. For another copy of these guidelines as well as to learn more information about cancer-related topics, call the American Cancer Society at 1-800-ACS-2345 or the National Comprehensive Cancer Network at 1-888-909-NCCN. Or visit these organizations' web sites at [www.cancer.org](http://www.cancer.org) (ACS) and [www.nccn.org](http://www.nccn.org) (NCCN).

Since 1995, health professionals have looked to the National Comprehensive Cancer Network for guidance on the highest quality, most effective advice on treating cancer. The Network has brought together experts from 18 of the nation's leading cancer centers.

After studying the research results on cancer pain, a panel of these experts has agreed upon specific, state-of-the-art recommendations for treating individuals with cancer-related pain. Every year the panel updates their recommendations based on advances in medical science.

For more than 85 years, the public has turned to the American Cancer Society when they needed information about cancer. The Society's books and brochures have provided comprehensive, current, and understandable information to hundreds of thousands of patients, their families, and friends. This collaboration between the National Comprehensive Cancer Network and the American Cancer Society provides a reliable and understandable source of cancer treatment information for the general public.

## *Making Decisions About Cancer-Related Pain*

About one-third of patients being treated for cancer have pain. More than two-thirds of patients with advanced cancer (cancer that has spread or recurred) have pain. For these patients, controlling pain and managing symptoms are important goals of treatment.

Pain affects all aspects of quality of life. Patients who have chronic pain (pain ranging from mild to severe and present for a long time) may not be able to participate in their regular activities as much, may have sleeping and eating problems, and may be frustrated that family and friends do not always understand how they feel.

Cancer pain is a common problem, but it is one that your cancer care team can treat. Your team may include a social worker, psychologist, oncology nurse, pastor, psychiatrist, medical oncologist, surgeon, and anesthesiologist. The cancer care team will consider each person's medical situation. Remember, each patient is unique and treatment will be developed based on each person's specific pain.

Questions to Ask Your Doctor about Pain Control:

- What can be done to relieve my pain?
- What can we do if the medicine doesn't work?
- What other options do I have for pain control?
- Will the pain medicines have side effects?

- What can be done to manage the side effects?
- Will the treatment limit my activities (i.e., working, driving, etc.)?

To make an informed decision about treatment, patients need to understand the medical terms the doctor uses. This booklet includes background information on cancer pain, explanations of what causes pain, what may prevent effective pain control, and treatments used to treat pain. There is a glossary at the back of the booklet.

## What is Pain?

Pain is a sensation that hurts. Normally, pain alerts us to a bodily injury or illness. Everyone feels pain differently so it is important for patients to be able to describe their pain to the doctor or nurse. Patients should explain where the pain is, when it began, how long it lasts, how much it hurts, what it feels like, what makes it better, what makes it worse, and how it affects their life.

### TYPES OF PAIN

*Acute pain* is severe and lasts a relatively short time. It is usually a signal that body tissue is being injured and the pain generally disappears when the injury heals.

*Chronic* or *persistent pain* may range from mild to severe, and is present to some degree for long periods of time. Some people with chronic pain that is controlled by medicine can have breakthrough pain which is moderate to severe pain that “breaks through” the regular

pain medicine given for chronic pain. It is felt for a short time. Breakthrough pain may occur several times a day, even though the proper dose of pain medicine is given for the chronic or persistent pain.

## What Causes Pain?

People with cancer may have pain for a variety of reasons. The most common cause of pain in cancer patients is the cancer itself. Pain is caused when cancer spreads into soft tissues (muscle, connective tissue, etc.), organs, or bone; by nerve injury; cancer pressing on a nerve; or increasing pressure in the head. Surgery, radiation therapy, and chemotherapy can also cause pain. This is referred to as treatment-related pain. Patients who have had an arm or leg removed may still be able to feel pain (called *phantom pain*) in the missing limb. This pain is real, but doctors are not sure why it occurs. Several chemotherapy agents cause numbness, tingling, and burning while radiation can cause painful skin irritation.

Sometimes the pain has nothing to do with the cancer or its treatment. Patients with cancer can have headaches, muscle strains, and other aches and pains just like anyone else.

There are three main types of pain: visceral, somatic, and neuropathic.

- Visceral pain involves organs. Pain caused by tissue damage in an organ such as the liver is usually pain that cannot be pinpointed and may be described as throbbing, aching, or sharp.

- Somatic pain involves the bone and is usually in a specific area. It is described as sharp, aching, burning, or throbbing.
- Neuropathic pain is caused by injury to, or compression of, the structures of the peripheral or central nervous system. Nerve injury or compression can be due to an injury of a peripheral nerve, injury to the central nervous system such as the spinal cord, or a combination of injury to both a peripheral nerve and central nervous system.

It is important to know the type of pain present because different pain is treated differently.

## *What Are the Obstacles to Cancer Pain Relief?*

Although most cancer pain can be relieved, controlling cancer patients' pain effectively continues to be a problem. The reasons for this are related to knowledge, beliefs, and fears.

**Fear of addiction.** Many patients fear that taking opioids (narcotic-like medications), like morphine, will lead to addiction. But this very rarely happens. Just as patients with diabetes have changing needs for insulin, patients with cancer have changing needs for their pain medicines.

**Fear of side effects.** Patients often take less than the prescribed dose of pain medicines because they are concerned about the side effects that may occur. Most side effects, however, can be prevented or relieved.

**Inadequate knowledge.** Doctors' and nurses' personal beliefs interfere with adequate management of chronic cancer pain. In the past, doctors and nurses were not well trained to care for patients with chronic pain. They did not always know what medicines were used to control pain. They also were afraid of the possibility that patients would become addicted.

**Inadequate pain assessment.** Patients often do not mention pain unless asked about it. Some patients believe they must be strong and "tough it out." Patients may not report their pain when they are asked for fear of what the presence of pain may mean. Because they don't mention it, many patients' pain may go unrelieved.

**Legal obstacles.** When prescribing opioids, especially doses that some might consider high, doctors, pharmacists, and nurses fear actions by drug enforcement agencies. These actions may be exaggerated by professionals and should not be an obstacle to pain relief.

## *How Will the Doctor Know About the Patient's Pain?*

Before starting a plan to manage cancer pain, the doctor needs to know a lot of information about the patient's pain. Collecting this information is called pain assessment or finding out about the patient's pain. This information comes from the patient's physical examination, answers to questions about the patient's medical

history, and from family members and friends, especially when the patient is too uncomfortable or too tired to talk.

Patients are asked the following questions about their pain:

- How much does the pain hurt?
- Where is the pain?
- Is the pain
  - somatic – such as pain in skin, muscle, or bone described as aching, stabbing, throbbing, or pressure?
  - visceral – pain in organs or tissue described as gnawing, cramping, aching, or sharp?
  - neuropathic – pain caused by nerve damage described as sharp, tingling, burning, or shooting?
- When did it start?
- How long has it lasted?
- Has the pain changed in any way?
- Is there anything that makes the pain worse or better?
- Is the pain caused by cancer, cancer treatment, or something else?
- Are there any symptoms or side effects from treatment present?
- Do you have a support system available?
- Do you have a history of any mental health problems?
- What do you know or believe about pain and pain control?

After all questions are answered, and the physical examination is done, x-rays and blood tests are done if needed to give more information about the pain. For example if the pain is bone pain and a fracture could be present, an x-ray of the bone is done.

## *Pain Assessment Tools*

Pain assessment tools help patients describe their pain. The pain scale is one tool commonly used to describe the *intensity* of the pain or how much pain the patient is feeling. The pain scales include the numerical rating scale, the visual analog scale, the categorical scale, and the pain faces scale (see figure on page 9).

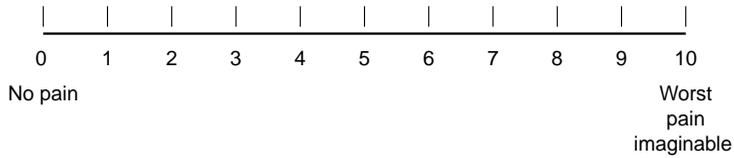
On the numerical rating scale, the person is asked to identify how much pain they are having by choosing a number from 0 (no pain) to 10 (the worst pain imaginable).

The visual analog scale is a straight line with the left end of the line representing no pain and the right end of the line representing the worst pain. Patients are asked to mark on the line where they think their pain is.

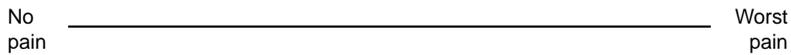
The categorical pain scale has four categories: none, mild, moderate, and severe. Patients are asked to select the category that best describes their pain.

The pain faces scale uses six faces with different expressions on each face. Each face is a person who feels happy because he or she has no pain or feels sad because he or she has some or a lot of pain. The person is asked to choose the face that best describes how he or she is feeling. This rating scale can be used by people age 3 years and older.

### Numerical Scale



### Visual Analog Scale

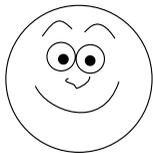


Directions: Ask the patient to indicate on the line where the pain is in relation to the two extremes. Qualification is only approximate; for example, a midpoint mark would indicate that the pain is approximately half of the worst possible pain.

### Categorical Scale

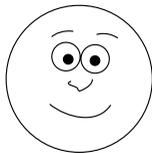
None (0) Mild (1-3) Moderate (4-6) Severe (7-10)

### Pain Faces Scale



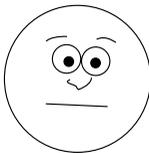
0

Very happy, no hurt



2

Hurts just a little bit



4

Hurts a little more



6

Hurts even more



8

Hurts a whole lot



10

Hurts as much as you can imagine (don't have to be crying to feel this much pain)

Adapted with permission from Whaley L, Wong, D. *Nursing Care of Infants and Children*, ed 3, p. 1070. ©1987 by C.V. Mosby Company. Research reported in Wong D, Baker C. *Pain in children: Comparison of assessment scales. Pediatric Nursing* 14(1):9-17, 1988.

**Representative samples of pain intensity rating scales.**

## How is Cancer Pain Treated?

Once the doctor has assessed the pain, a treatment plan is developed and discussed with the patient. Cancer pain can be treated in several ways, including treating the underlying cancer with chemotherapy, radiation therapy, surgery, or other therapy. Medicines (also called drug therapy) are the main way to treat cancer pain. They include the use of *opioids* (or *narcotics*, the strongest pain relievers available), *non-opioids* (pain relieving medicines that are not opioids, such as acetaminophen and non-steroidal anti-inflammatory drugs, or NSAIDs), and *adjuvant analgesics* (medicines for purposes other than treatment of pain but that help in relieving pain in some situations). Other therapies such as relaxation techniques or biofeedback, physical therapy, anesthesia procedures, and surgical procedures can also be very useful in treating some patients' cancer pain (see chart on page 11).

### TREATMENT WITH MEDICINES

**Non-opioids.** Non-opioids include medicines such as acetaminophen (also called Tylenol®), and NSAIDs such as ibuprofen. These medicines are excellent in relieving bone pain, superficial pain, muscle pain, and some other types of pain. They are the first choice for mild pain. They are also often used with other types of pain medicines to provide greater pain relief.

A maximum daily dose (the amount of medicine taken) is recommended for each of these medicines and taking more can cause significant side effects such as organ damage. Many NSAIDs are now available. They differ

in doses, frequency, cost, and to some extent, in their effect and safety.

Side effects will vary, but in general most NSAIDs are associated with gastrointestinal toxicity, with the most serious effects being ulcers and bleeding. They also slow blood clotting, so they must be used cautiously in patients with bleeding or clotting disorders.

Some non-opioids are available without prescription. For others, a prescription is needed. Always follow the doctor's instructions when taking these medicines.

**Opioids.** Opioids, the strongest pain relieving medicines, are available only by prescription. They include medicines such as codeine, oxycodone, morphine, fentanyl, and hydromorphone, all excellent medicines for the treatment of cancer pain (see chart on page 11).

Opioids are sometimes classified as weak or strong depending on their effectiveness in relieving pain. The weak opioids are used for less severe pain. They often have a non-opioid analgesic (pain-relieving medicine) mixed with them. This mixture limits the dose of the opioid that can be given.

Strong opioids are used for severe pain. Opioids such as morphine, hydromorphone, oxycodone, fentanyl, methadone, and levorphanol may have side effects that can limit the dose of the drug that can be given. Therefore, managing the side effects is critical in effective pain control with any of the opioids. These medicines can be given in a variety of ways.

Opioids are categorized by how quickly they begin to work and how long they are effective. The length of time they are effective is called their duration of action. For example, *sustained-release morphine* (meaning the medicine is released in the body over a longer

## Commonly Used Opioids

- Codeine
- Fentanyl
- Hydrocodone
- Hydromorphone
- Levorphanol
- Morphine
- Methadone
- Oxymorphone
- Oxycodone

**Weak Opioids:** Opioids that can relieve mild to moderate pain, pain with a 4–6 score; usually mixed with other medicines such as acetaminophen or aspirin. Weak opioids include hydrocodone, and codeine. Examples of weak opioids mixed with acetaminophen or aspirin include Tylenol® with codeine, Fiorinal® with codeine, and Phenaphen® with codeine.

**Strong Opioids:** Opioids that can relieve severe pain, pain with a score of greater than 7; the medicine of choice is morphine; other examples include fentanyl, methadone, levorphanol, hydromorphone, and oxycodone.

period of time) relieves pain for a long time, so a patient takes this medicine less often. *Immediate-release oral morphine* (meaning the medicine is released quickly into the body) is a short-acting opioid, which relieves breakthrough pain quickly. It does not last for long so it is usually used with a long-acting opioid for persistent or chronic pain.

Some opioids such as propoxyphene and meperidine are not recommended for cancer-related pain. Meperidine is *short-acting*, meaning that the dose must be repeated frequently. It breaks down into another substance which can collect in the body to cause tremors, muscle twitches, and seizures. Propoxyphene can cause serious drug interactions, liver toxicity, tremors, and seizures.

**Adjuvant analgesics.** Adjuvant analgesics are medicines that have a purpose other than treatment of pain but that help relieve pain in some situations. Adjuvant analgesics used to help relieve cancer pain include the following:

- Antidepressants. Some antidepressants have been found to relieve pain as well as decrease depression. They may relieve neuropathic pain. A prescription is needed for these medicines.
- Anticonvulsants. These medicines are generally used for seizure disorders and are useful in relieving tingling and burning pain, such as neuropathic pain. A prescription is needed for these medicines.
- Steroids. Steroids may be used to relieve pain associated with swelling and with bone pain. A prescription is needed for these medicines.

- **Local anesthetics.** Local anesthetics can be put on the skin, injected into the spinal canal, and in some cases, be taken by mouth. They are useful for relieving tingling, burning-type pain. A prescription is needed for these medicines.

## OTHER TREATMENT METHODS

**Surgery.** Surgery is used to prevent or control complications of cancer or cancer-related emergencies such as a blockage of the bowel, or compression of vital organs such as the lungs or the spinal cord. Surgery also can be used to reduce the size of the tumor so other treatments will be more effective in treating the cancer.

**Radiation Therapy.** Radiation therapy is often used to relieve pain caused by cancer that has spread to the bone. The majority of patients with bone metastasis will have significant relief of their pain with radiation therapy.

**Chemotherapy.** Chemotherapy may be used to reduce the size of a tumor that is causing pain. Hormones also have an important role in controlling some symptoms. For example, in patients with breast or prostate cancer, hormone therapy can reduce the size of a tumor in painful locations such as the bone or soft tissue.

**Nerve Blocks.** For localized pain that does not respond to other measures or when taking oral medication leads to unacceptable side effects, a local anesthetic, usually combined with a steroid, is injected into a nerve, nerve root, or spinal cord space to block pain. In other selected circumstances, the nerves may be surgically cut to block the pain. In instances

when a nerve cannot be blocked, anesthesia can be achieved by injecting opioids into the spinal spaces using a pump to deliver a constant amount of drug.

**Non-Medical Therapies.** Other non-medical therapies can be effective in relieving pain and improving the patient's ability to function and carry out activities. These therapies include imagery, heat and cold therapy, massage, relaxation, distraction, hypnosis, physical therapy, learning to position for comfort, learning coping skills, and emotional support and counseling.

Imagery involves imagining a pleasant scene, maybe a beach where a person once vacationed or a beautiful mountain retreat. Heat may be applied to areas of pain and for some, cold, such as ice, can be applied to the pain area with good relief. Massage is very relaxing and may relieve muscle spasms and contractions. Relaxation also reduces muscle tension. Distraction involves focusing attention on something other than the pain. Hypnosis is a state of high concentration between sleeping and waking. In a relaxed state, the person is more receptive to suggestion and thus can block the awareness to pain. Transcutaneous electric nerve stimulation (TENS) is a technique that applies a mild electric current to the skin where the pain occurs. The current produces a pleasant sensation and relieves some types of pain. Acupuncture inserts thin needles into the body at points in specific parts of the body to control pain sensations. Physical therapy helps return function and improve mobility. Learning positioning techniques can help relieve pressure on parts of the body and improve circulation. Emotional support and counseling can help relieve anxiety or depression

## *Patient and Family Education*

### **IMPORTANT MESSAGES FOR THE PATIENT AND FAMILY:**

- Your doctor and nurse are concerned about your pain.
- There is no benefit to suffering with pain.
- Pain can usually be well controlled with medicines taken by mouth.
- If these medicines do not work, many other options are available.
- Morphine or morphine-like medicines are often used to relieve pain.

When these drugs are used to treat cancer pain, addiction is rarely a problem.

If these medicines are used now, they will still work later.

- Communication with the doctors and nurses is critical.
- Doctors and nurses cannot tell how much pain a patient has unless they are told.
- Doctors and nurses want to know about any problems the pain medicine might be causing, since there are probably ways to make these better.
- The doctor or nurse wants to know if there are any problems getting the medicine or if the patient has concerns about taking them. They have dealt with these issues before and can help.

which can make the pain seem worse. Having pain can also cause people to feel hopeless, helpless, inadequate, and afraid. These feelings, which are normal, can be relieved with counseling and/or medicines. You may discuss these options with your cancer care team and ask for a referral. Information on patient and family education and psychosocial support can be found in the charts on pages 13 and 14, respectively.

It is important for the patient to be able to talk about his or her feelings with someone. This person may be a doctor, nurse, social worker, family or friend, a mental health professional, or other people with cancer. The doctor or nurse will be able to identify mental health professionals with experience in counseling patients with cancer.

## *What Are the Side Effects of Pain Medicines and How Are They Managed?*

The side effects of opioids are easily managed. When first starting to take these medicines, some patients may become drowsy and others may develop some nausea. Vomiting is not common. For most patients, these side effects can be easily managed and usually disappear within 1–3 days. Many different anti-nausea medicines are available today to lessen and control any nausea or vomiting that might occur. To lessen drowsiness, opioids are started at low doses and adjusted or *titrated* (a gradual increase in dose to reach the point of maximum pain relief with the minimum side effects). In older patients, the starting dose is usually lowered.

## *Psychosocial Support for the Person with Cancer Pain*

### **SUPPORT FOR ADEQUATE PAIN MANAGEMENT**

- Psychosocial support is an important part of effective pain control.
- Effective pain control improves the patient's quality of life.
- Pain can be managed by the primary health care team.
- Pharmacy and pharmaceutical companies should be contacted for financial support if payment is a problem for the patient.
- Families may have to speak up and ask for pain management if the patient is not able to.

### **EMOTIONAL SUPPORT**

- Emotional support shows the patient that pain is a problem to be addressed.
- Emotional responses to the pain experience are normal.

- The cancer care team will work with the patient and family to address the pain problem.
- A plan of action will be developed.
- The cancer care team is committed to relieving the patient's pain.
- There is always something else that can be done to try to manage the patient's pain.

### **SKILLS NEEDED**

- Coping skills to control emotional responses, provide pain relief, and enhance a sense of personal control.
- Coping skills for pain emergency such as breathing exercises and distraction techniques.
- Coping skills for chronic pain which includes the above plus relaxation techniques, guided imagery, and hypnosis.

Opioids cause constipation to some degree in most people. Constipation usually occurs after several days of taking opioids and can continue the entire time the medicine is taken. Constipation can be quite painful and may

require hospitalization; therefore, it is important to prevent it, if possible. Constipation can be prevented and/or controlled by the following measures:

- Increase intake of liquids,
- Increase dietary fiber, adding such foods as fruits, vegetables, and bran,
- Exercise after getting the doctor's permission,
- Use medicines, such as laxatives and stool softeners, as discussed with the doctor or nurse.

Some people mistakenly think they are allergic to opioids if they become nauseated. Nausea alone usually is not an allergic response. But nausea with a rash or itching may be an allergic reaction. If this occurs, patients should stop taking the medicine and tell their doctor at once. Itching, although rare, may occur at first and can be treated with diphenhydramine (Benadryl®).

Families are often concerned about a slowing of breathing that they associate with a hastening of death. Opioids can slow down breathing but it does not mean that death is near.

Rarely, a patient may experience confusion or “fuzzy thinking”, which can be persistent. This can continue to a change in mental function and disorientation, which means that patients do not know where they are or what day of the week it is. The mind wanders and speech is not understandable. These symptoms are called delirium, and the cause of this effect is not clearly understood. It may be necessary to switch to another medicine or reduce the dose of the current drug and add an adjuvant analgesic.

Always report any change in mental status to the cancer care team.

## MEDICINE TOLERANCE

People who take opioids for pain sometimes find that over time they need to take larger doses. This may be because the pain has increased or because they have developed medicine *tolerance*, also called drug tolerance. Medicine tolerance occurs when the body gets used to the medicine being taken; the medicine does not relieve the pain as well as it once did. Many people do not develop a tolerance to opioids. If tolerance does develop, usually small increases in the dose or a change in the kind of medicine will help relieve the pain. People sometimes confuse tolerance with addiction. The two are very different. Tolerance can occur over time, indicating that the body requires more medicine to achieve the same level of comfort. A need to increase the dose of medicine is not a sign of addiction.

## STOPPING AN OPIOID MEDICINE

Stopping opioids suddenly sometimes causes symptoms including a flu-like illness, excessive perspiration, or diarrhea. Opioids are stopped gradually to reduce the chances of any noticeable symptoms occurring. If symptoms do occur, they can be treated and tend to disappear in a few days to a few weeks. The doctor will discuss with the patient the best way to stop taking these medicines.

## How Are Pain Medicines Given?

### DOSING

Among patients there are enormous differences in the amount (*dose*) of medicine needed to relieve pain, even among patients with similar types of pain. The goal of pain medicine therapy is to provide the maximum benefit to the patient with the least amount of medicine and with the fewest side effects possible. In general, the starting dose will be low, and the amount will be increased until the pain is adequately relieved. This dose adjustment is called titration, that is, adjusting the dose to achieve acceptable pain control. Titration refers to increasing or decreasing the medicine dose. Doctors carefully adjust the doses of pain medicines so there is little possibility of taking too much.

### ADMINISTERING MEDICINES

Some people think that if their pain becomes severe, they will need to receive *intramuscular* (IM) injections or “shots.” Actually, injections are not commonly used to relieve cancer pain. Giving medicines by mouth (oral administration), is recommended for most patients because it is convenient, well tolerated, and usually is the least expensive. In addition to oral tablets, there are other ways the medicine can be given:

- **Skin patch.** A bandage-like patch placed on the skin, which slowly but continuously releases the medicine through the skin for 2–3 days. One opioid medicine, fentanyl, is available

as a skin patch. Giving medicine in this way is less likely to cause nausea and vomiting.

- **Rectal suppositories.** Medicine that dissolves in the rectum and is absorbed by the body.
- **Injections.** Medicines can be given under the skin using a small needle as a *subcutaneous* (SQ) injection; or into the muscle through a needle as an *intramuscular* (IM) injection, although these are not recommended when repeated injections are needed; as an *intravenous* (IV) injection, or directly into the vein through a needle or thin plastic catheter; as an *intrathecal* injection, giving medicine directly into the fluid around the spinal cord; or as an *epidural* injection, giving the medicine into the space between the spinal canal and bones of the back. When the *intrathecal* or *epidural* routes are used, opioids may be delivered continuously from a small pump. In situations in which this method will be used over a long period of time, the pump can be placed under the skin.
- **Patient-controlled analgesia (PCA).** When pain relief is needed, the patient can receive a preset dose of pain medicine by pressing a button on a computerized pump that is connected to a small tube in the body. The medicine is injected into the vein (*intravenously*), just under the skin (*subcutaneously*), or into the spinal area.

The way the medicine is given is influenced by several factors, such as patients having difficulty taking pills, the presence of irritating side effects, or pain that is not controlled with an opioid given by mouth. Patients who are having difficulty taking their medicines should ask their doctor about a different method of administration.

## SCHEDULING

When the pain occurs day after day, medicines are given on an around-the-clock (ATC) schedule to ensure that the body always has a supply. In the past, medicines were given only on an as needed basis, or PRN, with the patient waiting until they were in pain. This type of schedule allowed periods of severe pain. Around-the-clock dosing is preferred. This means giving the medicine on a regular basis, whether the patient is in pain or not. In some situations patients are instructed to take a pain medicine as needed. This is usually along with an ATC medicine that they are already taking.

## *Are There Clinical Trials Studying New Pain Treatments?*

All drugs used to treat pain, cancer, or other diseases must undergo clinical trials in order to determine their safety and effectiveness before the Food and Drug Administration (FDA) can approve them for use.

When studying promising new or experimental treatments, researchers want to know:

- Does this new type of treatment work better than other treatments already available?
- What side effects does the treatment cause?
- Do the benefits outweigh the risks, including side effects?
- Which patients will the treatment most likely help?

During cancer treatment, the doctor may suggest taking part in a clinical trial of a new treatment for pain. Scientists conduct clinical trials only when they believe that the treatment being studied may be better than other treatments.

The purpose of the study is to find out if the new treatment will work better than the standard treatment and if the side effects are worse or less. The new therapy may have some side effects, which the doctor will discuss with the patient before the clinical trial is started.

Taking part in any clinical trial is completely voluntary. Doctors and nurses explain the study in detail and provide a consent form to read and sign. This form states that the patient understands the risks and wants to participate. Even after signing the form and the trial begins, the patient may leave the study at any time, for any reason.

Taking part in the study will not keep anyone from getting other medical care they may need. Patients should always check with their

health insurance company to find out whether it will cover the costs of taking part in a clinical trial.

Participating in a clinical trial evaluating new, improved methods for managing cancer pain may help the patient directly, and it may

help other people with cancer pain in the future. For these reasons, members of the National Comprehensive Cancer Network and the American Cancer Society encourage participation in clinical trials.

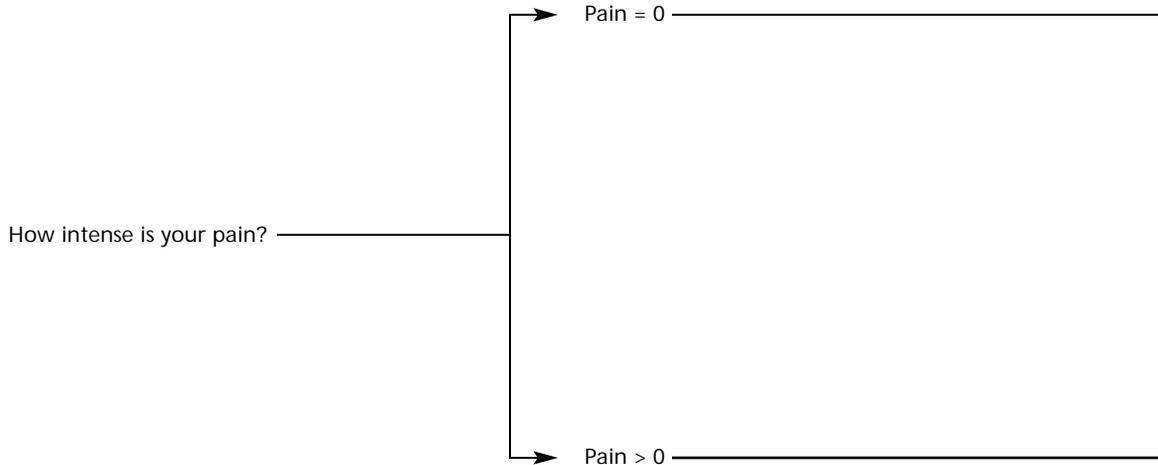
# *Assessment and Treatment Guidelines*

## *'Decision Trees'*

The “decision trees”, or algorithms, on the following pages represent decisions about treatment of cancer pain based on how bad the pain is. Each tree shows step-by-step how you and your doctor can make treatment choices.

Keep in mind, this information is not meant to be used without the expertise of your own doctor who is familiar with your situation, medical history, and personal preferences.

The NCCN guidelines are updated as new significant data become available. To ensure you have the most recent version, consult the web sites of the ACS ([www.cancer.org](http://www.cancer.org)) or NCCN ([www.nccn.org](http://www.nccn.org)). You may also call the NCCN at 1-888-909-NCCN or the ACS at 1-800-ACS-2345 for the most recent information on these guidelines or on cancer in general.



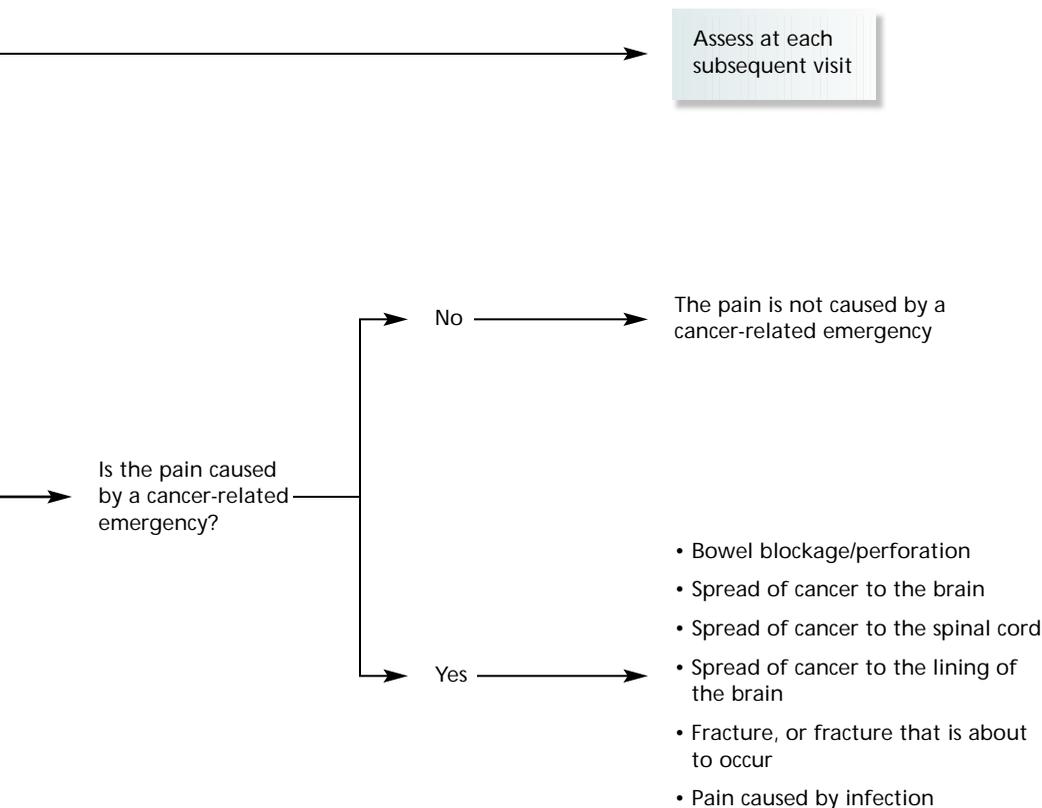
*Keep in mind this information is not meant to be used without the expertise of your own physician who is familiar with your situation, medical history, and personal preferences.*

**ASSESSING THE PATIENT’S PAIN  
(DOES THE PATIENT HAVE PAIN?)**

Since all patients can have cancer pain but not all patients do, the first step in making a

decision about treatment is to find out if the patient is having pain. The patient is asked to rate their pain using a visual rating scale of 1–10 (see numerical scale on page 9). A score of 0 indicates that no pain is present and a rating

# Decision Tree for Assessment of Cancer-Related Pain



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of 10 indicates the pain is the worst it can be. If the patient has no pain, he or she will be asked about it on each subsequent visit to the doctor. If the patient is in pain, the doctor will

do a thorough assessment, or evaluation, so appropriate treatment can be planned.

The immediate goal of the first pain assessment is to find out if the pain is present

because of a medical emergency. If one is present, it will require immediate treatment. Because tumors can invade bone, nerves, and tissue, there are several cancer pain emergencies that must be treated quickly. These include:

- a fracture (break in a bone) or near fracture of a bone that is able to carry weight, such as a vertebra in the back or the hip bone;
- a bowel blockage or perforation (hole in the wall of the bowel) caused by tumor growth;

## NOTES

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## Decision Tree for Assessment of Cancer-Related Pain (continued)

- metastasis, or spread of the cancer to the brain, spinal cord, or the lining of the brain; and
- pain caused by an infection in just one part of the body, or one that involves the entire body (septicemia).

The patient will be asked several questions about their pain. (see *How Will The Doctor Know About The Patient's Pain?* on pages 7 and 8). The patient's completed numerical rating scale will help the doctor understand how intense, or bad, the pain is.

### NOTES

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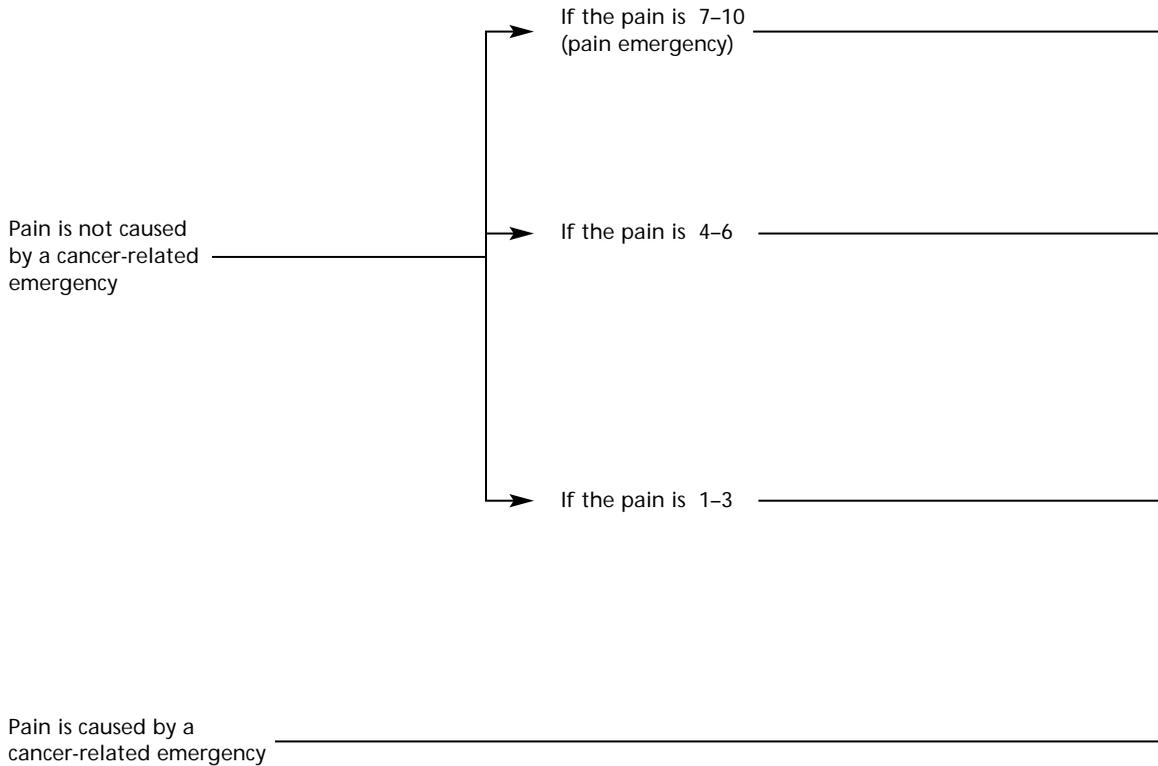
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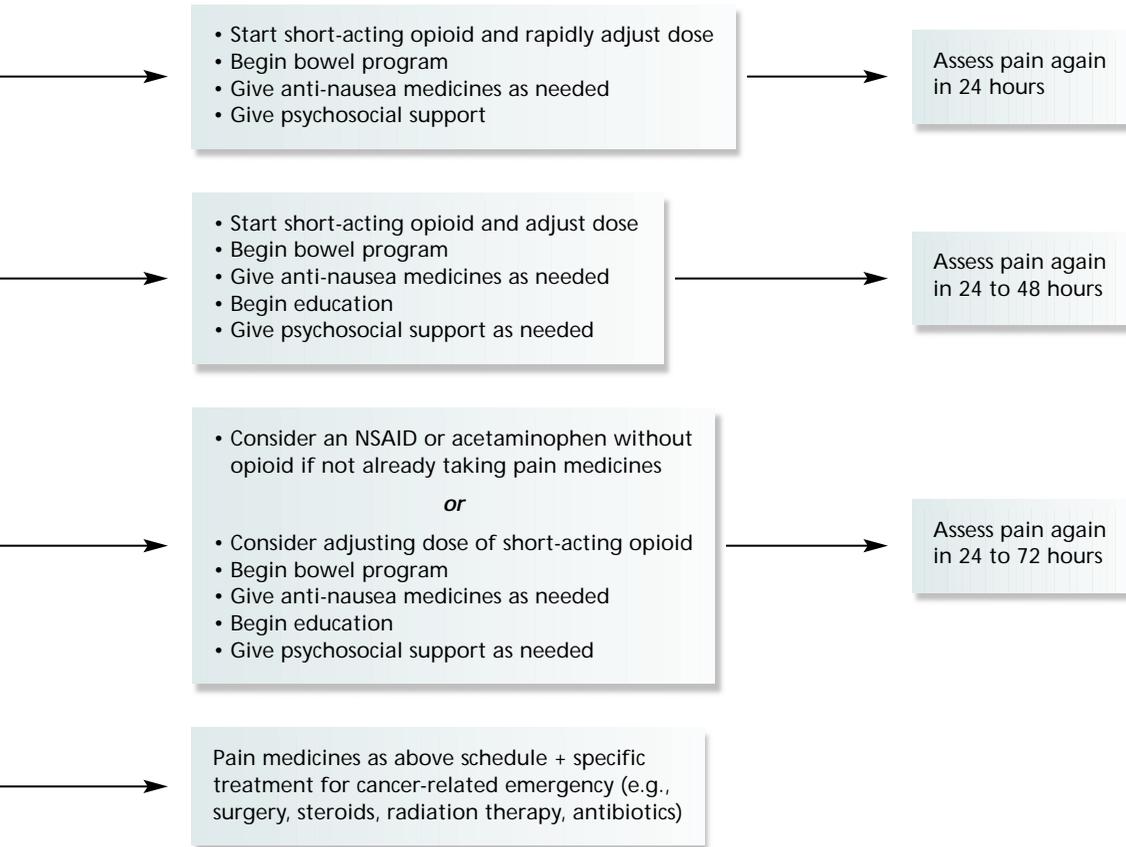
**INITIAL TREATMENT**

Once the assessment is completed, the pain treatment is planned. Treatment options will be discussed with the patient. If it is a pain emergency, the cause of the pain will be treated. If no emergency situation is present, and the

patient’s pain is greater than 7 on the visual pain scale, the patient will be given a short-acting opioid and the dose will be increased rapidly. A bowel program will be started to lower the chances of constipation. A medicine may be given to prevent nausea and vomiting, a side effect from the opioid. During this time

# Decision Tree for Initial Treatment of Cancer-Related Pain

## INITIAL TREATMENT



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the patient will need the support of the cancer care team, family, and friends (refer to *Psychosocial Support for the Person with Cancer Pain* on page 14). In about 24 hours the pain will be reevaluated using the pain rating scale.

If the pain is rated from 4 to 6, a short-acting opioid will be given with dose titrated, or

adjusted (either increased or decreased) until the pain is relieved. The bowel preparation and “as needed” anti-nausea medicines will be started. Pain will be reassessed, or re-evaluated, in about 24 to 48 hours by the doctor or nurse.

If the pain is rated from 1 to 3, an NSAID or a short-acting opioid is an option. A bowel

regimen will be started and anti-nausea medicines will be given “as needed”. An education program should be started to establish a common language for talking about pain with the health care team (refer to *Patient and Family Education* on page 13). One goal of the education program is to understand why patients do not always get effective pain control and to make sure

patients have the information they need to follow the prescribed plan. Beliefs that create the greatest problems for patients in taking their pain medicines are fear of addiction, concerns about side effects, concerns about tolerance, and the need to be stoic. Patients also should know what medicines they should stop taking and when to call the doctor.

## NOTES

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## Decision Tree for Initial Treatment of Cancer-Related Pain (continued)

Pain that is caused by a cancer-related emergency will be treated with analgesics, or pain medicines, according to the above treatment plan. Specific treatment will also be given for the emergency (for example, surgery, radiation therapy, antibiotics, or steroids).

In about 24 to 72 hours after the pain treatment is begun, the patient will complete another visual pain scale. Further changes in the pain treatment will be made based on how well the patient's pain is being controlled with the pain medicine.

### NOTES

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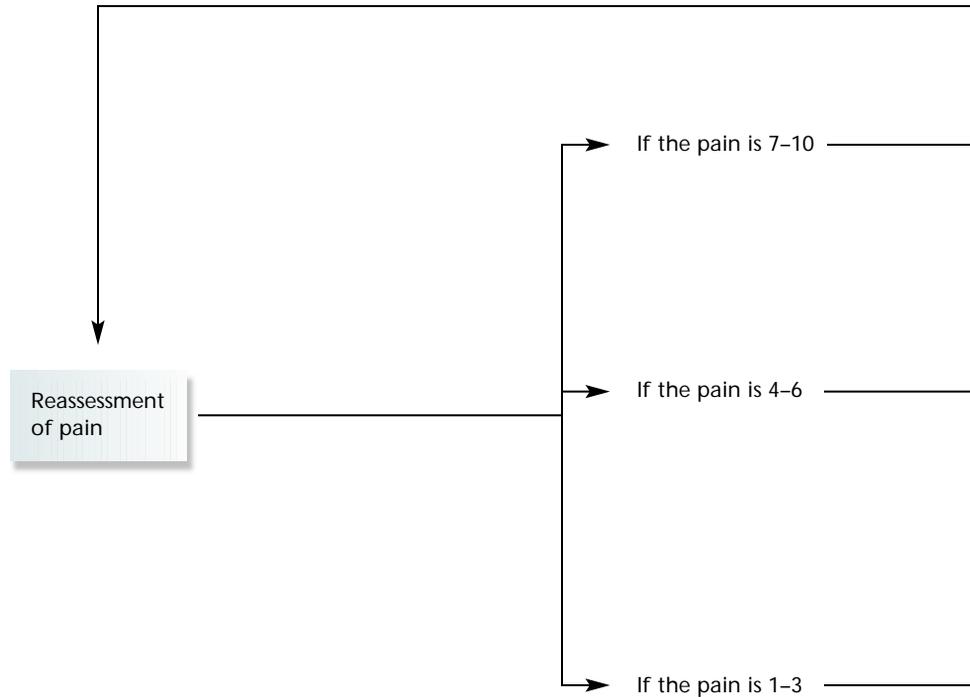
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**SUBSEQUENT TREATMENT**

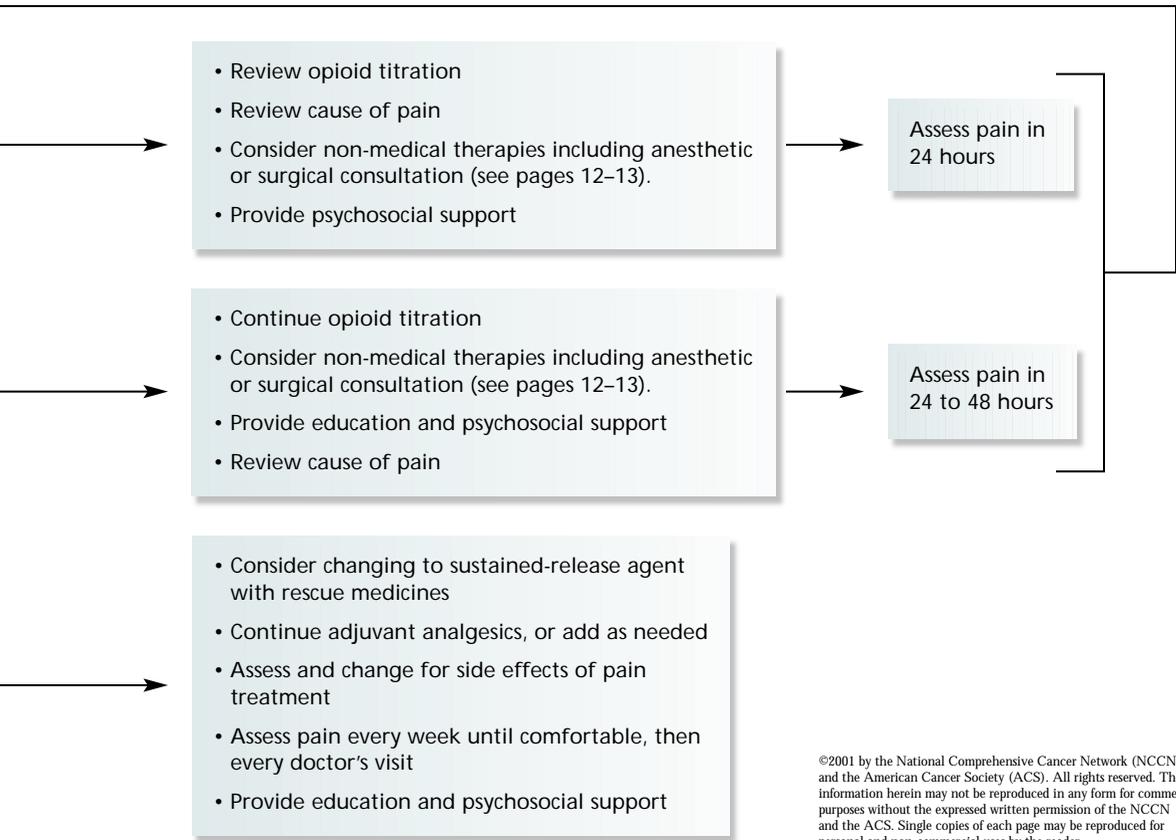
A score of 7 to 10 means that the pain is not better or it has gotten worse. Since the goal of pain treatment is to reach a lower score on the pain scale, the doctor will reconsider the original cause of pain. This means that the doctor will look once again at the medical history and consider if the original cause of pain is still causing the current pain.

Next, the patient’s pain medicine dose will be adjusted. For example, more of the medicine may be given or a different medicine may be

given. Additional treatments for specific types of pain may be added to the current pain medicines. For example, NSAIDs might be added with bone pain or pain with inflammation. Anti-depressants might be added for burning neuropathic pain. Non-medical therapies will also be considered (see pages 12–13). The pain will be re-evaluated in about 24 hours.

If the patient’s pain score is 4 to 6, the doctor will continue to adjust the medicine dose. Other treatments (as mentioned above) may also be added. After changes have been made in the pain treatment plan, the patient’s pain will be

# Decision Tree for Subsequent Treatment of Cancer-Related Pain



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assessed in about 24 to 48 hours to see if it is any better.

If the pain is rated 3 or less, the pain medicine may be switched to a sustained-released oral medicine, which means the patient can take the medicine less often. Medicine will be given if the patient has breakthrough pain. Other medicines that have been added to the pain treatment plan will be continued if they are still needed for the pain. Education and support will be continued as needed. The side effects of pain medicines will be considered and medicines will be changed if needed to

reduce side effects. Pain will be assessed every week until the patient is comfortable, then with every visit to the doctor.

The goal of pain treatment is to continue to reduce the amount of pain the patient has to a level less than 4. Pain is assessed after each change in treatment. Patient and family education and psychosocial support, important components of cancer pain treatment, are continued throughout treatment. After each pain assessment, pain treatment will be adjusted based on the intensity of the pain using the pain scale.

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**Acute pain**

Pain that is severe, but lasts a relatively short time.

**Addiction**

A psychological dependence on a medicine; uncontrollable drug craving, seeking, and use. Substance abusers, or addicts, take drugs to satisfy physical, emotional, and psychological needs, not to solve medical problems.

**Analgesics**

Medicines that are used to relieve pain.

**Adjuvant analgesics**

A medicine that has a primary purpose other than treatment of pain but helps in relieving pain in some situations.

**Breakthrough pain**

A brief and often severe pain that occurs even though a person may be taking pain medication regularly.

**Chronic pain**

Pain that can range from mild to severe, and is present for a long time.

**Controlled-release morphine**

An opioid medicine that has an 8 to 12 hour effect; also called a long-acting or sustained-release opioid.

**Dose**

The amount of medicine taken.

**Dose titration**

Adjustment of medication dose either upward or downward.

**Epidural**

As an injection into the spinal column, but outside of the spinal cord.

**Frequency**

How often medicine is taken.

**Immediate-release morphine**

An opioid that is effective in a shorter period of time; also called a short-acting medicine and a rapid-onset opioid; used to relieve breakthrough pain.

**Infusion**

A method of giving pain medication into a vein; unlike an injection, which is pushed in by a syringe, an infusion flows in by gravity. Some continuous infusions are given using a mechanical pump.

**Intramuscular (IM) injection**

Into a muscle.

**Intrathecal (IT) injection**

Into fluid around the spinal cord.

**Intravenous (IV) injection**

Into a vein.

**Intensity**

How much the pain hurts.

**Local anesthetic**

A medicine that blocks the feeling of pain in a specific location in the body.

**Long-acting or sustained-release medicines**

Medicines that work for long periods of time and are taken at regular intervals.

**Narcotic**

See opioids.

**Nerve block**

Pain medicine is injected directly into or around a nerve or into the spine to block pain.

**Non-opioids**

Pain medicines that do not contain an opioid; acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs), such as aspirin and ibuprofen.

## **Onset of action**

The length of time it takes for a medicine to start to work.

## **Opioids**

The strongest pain relievers available; a prescription is needed for these medicines.

Weak opioids – opioids that can relieve mild to moderate pain.

Strong opioids – opioids that can relieve severe pain.

## **Persistent pain**

Pain that is present for long periods of time, in most cases, all day long.

## **Pain threshold**

The level at which a person becomes aware of pain.

## **Patient-controlled analgesia (PCA)**

A method in which a person with the pain controls the amount of pain medicine that is taken. When pain relief is needed, the person can receive a preset dose of the pain medicine by pressing a button on a computerized pump that is connected to a small tube in the body.

## **Phantom pain**

Pain or other unpleasant feeling felt in a missing (phantom) body part.

## **Rapid-onset opioids**

Opioids that relieve pain quickly.

## **Rescue medicines**

Medicines used to relieve breakthrough pain, or pain that has “broken through”, or is not relieved by the regular pain medicine.

## **Short-acting medicines**

Medicines that work quickly and stay in the body for short periods of time (also called “rescue” medicines).

## **Subcutaneous injection (SQ)**

Given by a needle inserted just under the skin.

## **Titrate**

To adjust (see dose titration).

## **Tolerance**

When the body gets used to the medicine so that either more medicine is needed to control pain or different medicine is needed.











The Cancer Pain Treatment Guidelines for Patients were developed by a diverse group of experts and were based on the NCCN clinical practice guidelines. These patient guidelines were translated, reviewed, and published with help from the following individuals.

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