Learn more about bone pain and its treatment
Introduction

This booklet has general information about metastasis (the spread of cancer), bone metastasis, bone pain and treatments. While your doctors are working on treating your cancer they are also looking to take care of other health problems. Pain can be a real problem. You can help your doctor help you by talking about pain.

What are metastases?

Cancer cells can spread from the original tumor (cancer) and be carried to other parts of the body. When the cancer cells start growing in these new areas, these are metastatic sites (sometimes also called metastases or lesions). The most common places for cancer to spread are the lymph nodes, lungs, bones, liver, and brain.¹

Sometimes there are no symptoms from metastatic cancer. Metastases are often found by x-rays, scans and other tests. Metastatic cancer may be treated with chemotherapy, radiation, hormone therapy, surgery, or other approaches.¹
Bone metastases and bone pain

Some cancers are more likely to spread to the bone than others. Prostate cancer and breast cancer are examples of tumors that tend to spread to bone when they metastasize.¹

The most common symptom of bone metastases is bone pain. However, not all bone pain is caused by metastases and not all bone metastases are painful. A doctor will find out the cause of bone pain and decide on the proper treatment.² Some of the tests used to decide whether pain is from bone metastases are x-rays and bone scans.

Bone pain may come and go at first, then worsen over time. At first, the pain may be worse at night or when resting.² Some people have more pain when they move.³

Your right to pain relief

You can have pain during any part of the cancer treatment experience. Tell your doctor if you are having pain. You should not have to trade off treatment of cancer for treatment of pain. Your doctor understands the need to take care of both.

Pain does not mean that you are sicker or your treatment will be stopped. Living with the pain does not help make you better. In fact, you may feel more ready to fight the cancer when your pain is under control.

There are a number of ways to treat pain. These may be used alone or together to keep pain under control. What you are given for pain may change over time. Ask for additional or different pain treatments if you need them. You have the right to ask that everything reasonable be done to manage your pain.
Measuring pain

Your health care team will ask you questions about your pain. They may ask you about the kind of pain—sharp, dull, burning, etc. They will also ask how bad the pain is (“pain intensity”). This tells them if pain treatments are helping or if the pain is getting worse. Most often, the pain intensity is measured on a scale of zero (no pain) to ten (worst pain possible).

Preparing for your office visit

To make the most of your time with the doctor and nurse, and to help them better control your pain, it may be helpful to think about these questions prior to your visit.

• Where do I feel pain?
• How bad is the pain?
• What does the pain feel like (aching, burning, throbbing, stabbing, other sensations)?
• Has the pain changed over time? How?
• What makes the pain better or worse?
• What effect does the pain have on my ability to sleep?
• What effect does the pain have on my appetite?
• How has the pain prevented movement or mobility?
• Does pain limit any of my daily activities?
• Are my current pain treatments working?
Treating bone pain

Treatments specifically meant to address the pain of bone metastases include: analgesics (pain medicines), external beam radiation, and radiopharmaceuticals. These can be used alone or in combination.

Analgesics

Pain medicines may be added or given in higher doses when there is bone pain. Sometimes nonsteroidal anti-inflammatory drugs (NSAIDs), such as acetaminophen and ibuprofen, are enough. When these aren’t enough, morphine or morphine-like drugs (sometimes called opioid analgesics) may be added.

External beam radiation

For bone pain limited to a few places, the doctors may use external radiation. Radiation treatment of bone metastases usually takes 2 to 3 weeks of daily treatments.

Radiopharmaceuticals

A radiopharmaceutical combines a radioactive isotope with a drug that targets bone. After it is injected, the drug carries most of the radiation to the areas of the bone where the cancer has spread. The rest of the medication not in the bone, including radiation, is washed out of the body. Radiopharmaceuticals are used to deliver radiation therapy to multiple areas of bone metastases at the same time.

The rest of this booklet is about one radiopharmaceutical, Quadramet® (samarium Sm 153 lexidronam injection).
What is Quadramet®?

Quadramet® is a radiopharmaceutical indicated for relief of pain in patients who have been confirmed to have metastatic bone lesions that can be seen on bone scans.

Quadramet® was made to accumulate in areas of bone turnover which commonly occurs when tumors spread to bone. The radiation in Quadramet® has a short half-life, which means that it only lasts for about a week. (Although the radiation is gone quickly, the pain relief effects can last for months.) There’s more information on radiation safety in the “precautions” section of this booklet.

Quadramet® is given by injection into a vein, usually as an outpatient procedure. Although the injection itself only takes a few minutes, it takes time for the effects of the treatment to be felt. In patients whose pain decreases, relief will usually begin about one week after injection. In a small number of people (about 7% in clinical studies), pain will briefly get worse (pain flare). This pain is usually mild and goes away on its own. During the flare the pain can be treated with analgesics. The greatest pain relief will usually happen 3 to 4 weeks after the injection of Quadramet®.4

What are the benefits of Quadramet®?

Quadramet® has lowered pain scores of people in randomized clinical trials.4-6 Not all patients respond to Quadramet®. If you have pain relief, your doctor may suggest that you lower your dose of pain medications. (Lowering doses of opioids should be done with the help of a doctor or nurse.) Pain relief may last for an average of 16 weeks following a single injection.6

Most patients who have relief can get another injection if there is bone pain that recurs after the first injection.7

What are the side effects of Quadramet®?

The most common side effect with Quadramet® is bone marrow toxicity (white blood cell and platelet counts decrease). This may increase the risk of infections or bleeding. In clinical trials, bone marrow toxicity occurred in 47% of patients. Other types of side effects occurring in at least 5% of patients and more commonly than with a placebo included pain flare (7.0% vs 5.6% for placebo), diarrhea (6.0% vs 3.3%), infection (7.0% vs 4.4%), spinal cord compression (6.5% vs 5.5%), heart rhythm problems (5.0% vs 2.2%) and blood in the urine (5.0% vs 3.3%).4
What other safety information should be considered?

Due to the effects of Quadramet® on blood cells, the doctor will take into account if there were problems with other treatments that can lower blood counts before Quadramet® is selected. Because chemotherapy and radiation therapy may have similar side effects, Quadramet® should not be given at the same time as such treatments unless the clinical benefits outweigh the risks as determined by a doctor.

Caution should be exercised in treating people with cancer whose platelet counts are falling or who have other clinical or laboratory findings that may indicate conditions in which the blood’s ability to clot is reduced or impaired.

People taking Quadramet® should have blood counts checked periodically for about 8 weeks, or until their blood counts are returning toward normal values.

Women of childbearing age should have a negative pregnancy test before administration of Quadramet®. If Quadramet® is administered to a nursing mother, formula feeding should be substituted for breast feeding. Due to the radioactive nature of the product, men and women receiving Quadramet® should use an effective method of contraception after administration.

Quadramet® should not be used in patients who have known allergic reactions to the components of Quadramet® or other similar phosphonate compounds.

What precautions must be taken after Quadramet® administration?

**Radiation safety**

- For several hours following administration, radioactivity will be present in the urine
- To help protect yourself and others around you, care must be taken for 12 hours following administration
  - Whenever possible, a toilet should be used, rather than a urinal, and the toilet should be flushed several times after each use
  - Spilled urine should be cleaned up completely and hands washed thoroughly
  - If blood or urine gets onto clothing, the clothing should be washed separately, or stored for 1-2 weeks to allow for decay of the radioactivity
  - Drinking a minimum of 500 mL (8 oz) of fluids and urinating as often as possible during the first few hours after the injection minimizes radiation exposure in the bladder
Another word about pain

Your doctors and nurses want to help you. Speak up about your pain so that you and your healthcare team can work together to get it under control.

Notes and contact information

For more information about Quadramet®, please visit www.quadramet.com, www.cytogen.com or call us at 1-800-833-3533 and select option 5.

Additional helpful information

These web sites are maintained by third parties. Cytogen Corporation is not responsible for the content of these or any other third party sites.

General cancer and pain resources:

- American Cancer Society (cancer.org)
- American Pain Foundation (painfoundation.com)
- Cancer Care, Inc. (cancercare.org)
- Cancer Information Service of the National Cancer Institute (cancer.gov)

Breast cancer resources:

- BreastCancer.Org (breastcancer.org)
- National Breast Cancer Coalition (natlbcc.org)
- Y-ME National Breast Cancer Organization (y-me.org)

Prostate cancer resources:

- National Prostate Cancer Coalition (4npcc.org)
- Prostate Cancer Foundation (prostatecancerfoundation.org)
- Us Too! (ustoo.com)

Multiple myeloma resources:

- Multiple Myeloma Research Foundation (multiplemyeloma.org)
- Leukemia and Lymphoma Society (leukemia.org)
References:


