

## When Cancer Spreads to the Bone

### What is bone metastasis?

As a cancerous tumor grows, cancer cells may break away and be carried to other parts of the body by the blood or lymphatic system. This is called metastasis, or metastases when there are multiple areas in the bone with cancer. One of the most common places cancer spreads is to the bones, especially cancers of the breast, prostate, kidney, thyroid, and lung. When a new tumor develops in the bones as a result of metastasis, it is not called bone cancer. Instead, it is named after the area in the body where the cancer started. For example, lung cancer that spreads to the bones is called metastatic lung cancer.

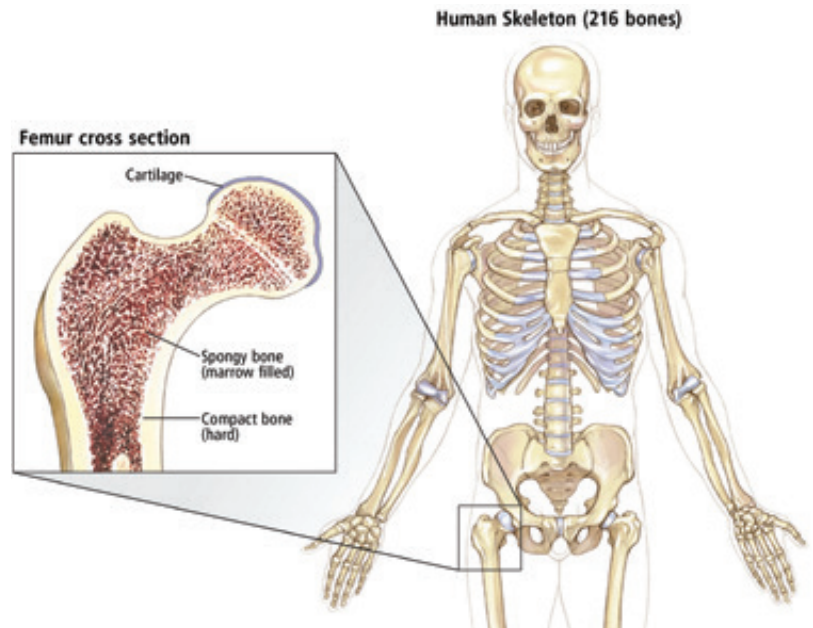


ILLUSTRATION BY ROBERT MORREALE/VISUAL EXPLANATIONS, LLC © 2004 AMERICAN SOCIETY OF CLINICAL ONCOLOGY

### What are the symptoms of bone metastasis?

When cancer spreads to the bones, the bones can become weak or fragile. Bones most commonly affected include the upper leg bones, the upper arm bones, the spine, ribs, pelvis, and skull. Bone pain is the most common symptom. Bone breaks, called fractures, may also occur. If a tumor presses on the spinal cord, a person may feel weakness or numbness in the legs, arms, or abdomen. Constipation or bladder incontinence, the inability to control urination, is also possible. Bones damaged by cancer may also release high levels of calcium into the blood, called hypercalcemia, causing nausea, fatigue, thirst, frequent urination, and confusion.

### How are bone metastases detected?

Bone metastases may be found when the primary cancer is diagnosed. Or, if a person is having symptoms, a doctor may recommend having specific tests depending on the types of symptoms and where pain is felt. Imaging tests that may be recommended include x-rays, bone scans, computerized tomography (CT) scans, positron emission tomography (PET) scans, and magnetic resonance imaging (MRI) scans. Laboratory tests may be used to check blood or urine for high levels of substances that damaged bones release into the body. A bone biopsy may be done if other tests cannot determine whether cancer has spread to the bones.

### How are bone metastases treated?

Treatment of bone metastases aims to stop or slow the growth of a tumor, prevent further bone damage, and manage pain or other symptoms. The treatment or combination of treatments used depends on the type of primary cancer that was diagnosed, the location and number of tumors, the person's overall health, and which treatments the person has already received.

Bone-modifying drugs, which are medications that slow bone thinning, reduce pain, and decrease hypercalcemia, may be given. A bone metastasis that is located only in 1 area is commonly treated with radiation therapy to relieve pain and strengthen the bone. Surgery may be used to remove a tumor or prevent or treat a bone fracture, and a special cement can be injected into a bone to stabilize it. Chemotherapy, hormone therapy, and the use of radioactive drugs are treatment options if bone metastases are found in more than 1 area. You and your doctor may also consider a clinical trial. The side effects of these treatments can often be prevented or managed with the help of your health care team. This is called palliative care and is an important part of the overall treatment plan.

## Questions to ask the doctor

Regular communication is important in making informed decisions about your health care. Consider asking the following questions of your health care team:

- Which bone or bones has my cancer spread to?
- Can you explain my test results to me?
- What does this mean for my prognosis (chance of recovery)?
- Would you explain my treatment options?
- What clinical trials are available for me? Where are they located, and how do I find out more about them?
- Which treatments, or combination of treatments, do you recommend? Why?
- What is the goal of each treatment? Is it to eliminate the cancer, help me feel better, or both?
- Should I see my dentist before beginning bone-strengthening treatment?
- Would you explain the options for managing my pain with medication?
- In addition to medication, what other strategies can I use to manage bone pain?
- How can a palliative care specialist help me keep my quality of life while I am getting treatment?
- What follow-up tests will I need?
- How will bone metastases affect my daily life? What changes will I need to make to my daily routine to reduce the risk of bone fractures and to manage pain?
- Will bone metastasis prevent me from exercising, participating in sports, or doing any other activities? Is it safe to continue with my current activity level?
- What long-term side effects may be associated with my cancer treatment?
- If I'm worried about managing the costs of my cancer care, who can help me?
- Where can I find emotional support for me and my family?
- Whom should I call with questions or problems?
- Is there anything else I should be asking?

---

The ideas and opinions expressed here do not necessarily reflect the opinions of the American Society of Clinical Oncology (ASCO) or The Conquer Cancer Foundation. The information in this fact sheet is not intended as medical or legal advice, or as a substitute for consultation with a physician or other licensed health care provider. Patients with health care-related questions should call or see their physician or other health care provider promptly and should not disregard professional medical advice, or delay seeking it, because of information encountered here. The mention of any product, service, or treatment in this fact sheet should not be construed as an ASCO endorsement. ASCO is not responsible for any injury or damage to persons or property arising out of or related to any use of ASCO's patient education materials, or to any errors or omissions.

To order more printed copies, please call 888-273-3508 or visit [www.cancer.net/estore](http://www.cancer.net/estore).



### AMERICAN SOCIETY OF CLINICAL ONCOLOGY

2318 Mill Road, Suite 800, Alexandria, VA 22314 | Toll Free: 888-651-3038 | Phone: 571-483-1300

[www.asco.org](http://www.asco.org) | [www.cancer.net](http://www.cancer.net) | [www.conquercancerfoundation.org](http://www.conquercancerfoundation.org)

© 2016 American Society of Clinical Oncology. For permissions information, contact [permissions@asco.org](mailto:permissions@asco.org).

## TERMS TO KNOW

### Bone biopsy:

Removal of a tissue sample from the bone that is then examined under a microscope to check for cancer cells

### Bone scan:

An imaging test used to find areas of abnormal bone that can be caused by injury, cancer, infection, or inflammation

### Chemotherapy:

The use of drugs to destroy cancer cells

### Clinical trial:

A research study that tests a new treatment or drug

### Hormone therapy:

Treatment that blocks hormones that cause cancer cells to grow

### Oncologist:

A doctor who specializes in treating cancer

### Osteonecrosis of the jaw:

Weakening and bone loss; a rare side effect of some bone-modifying drugs

### Osteoporosis:

A condition where the bones become thinner and more porous

### Radiation therapy:

The use of high-energy x-rays to destroy cancer cells

### Radiopharmaceutical therapy:

The use of radioactive drugs to destroy cancer cells

### Secondary (metastatic) tumor:

A tumor that started in one part of the body and has spread to another

MADE AVAILABLE THROUGH

