FREQUENTLY ASKED QUESTIONS

The following questions are representative of questions that patients and family members ask when they visit the Bone and Cancer Foundation website or contact the Foundation by phone.
Additional questions and answers will be added periodically.

General questions

1. Can cancer in the bones cause them to break and fracture?

Yes, cancer in the bones can cause the bones to weaken and to fracture. Some cancer treatments, including hormone therapy, steroids, chemotherapy, and some kinds of radiation therapy may also cause the bones to weaken.

Many doctors recommend that patients be given tests to measure their bone density before, during and after cancer treatments so that any bone loss or weakness can be identified and treated.

2. How is cancer that has spread to the bones treated?

There are many effective ways to treat cancers that have spread to the bone. The treatments chosen will depend on the kind of cancer and the needs of the patient.

Treatments include radiation, hormone therapy, chemotherapy, surgery, and radiopharmaceuticals. Drug therapies, including treatment with bisphosphonates and pain medications, may also be used.

3. What is the distinct relationship between cancer that affects the bone and osteoporosis?

Cancers that affect the bone, as well as some treatments for those cancers, may weaken the bones and lead to osteoporosis. Bone density tests are recommended to measure any bone loss, and determine what treatments can be used to treat or stop the bone loss.

4. When cancer spreads to the bone, which bone or bones are most frequently affected?

When cancer spreads to the bone, the most common sites affected are the spine, pelvis, ribs, bones of the arm and thigh and the ends of the arms and legs nearest to the torso, where the blood supply is the greatest.

5. What is the difference between cancers that start in the bone and cancers that spread from another organ to the bone?

Tumors that start in the bone are called primary cancers, such as osteosarcoma. Cancers that start elsewhere in the body and spread (or metastasize) to the bone are called secondary cancers. Secondary cancers are of the same type as the original cancer, for example, breast cancer, prostate cancer, lung cancer etc.

6. Is there pain associated with cancer that spreads (metastasizes) to the bone?

Yes, pain is the most common symptom of cancer that metastasizes to the bone. However, not all bone metastases cause pain, so it is important to have follow up tests to detect any cancer that metastasizes to the bone.

7. What are types of surgical treatments for bone metastases? Are there alternatives to surgery?

The type of surgical treatment depends upon the location and size of the bone metastasis. Surgery may include removing all or part of the tumor and stabilizing the bone to prevent fractures. The stabilization may include placement of metal plates, rods, screws, wires, nails, pins, or prostheses to strengthen or provide structure to the bone. Another surgical option includes reconstruction of bones or joints using metal, plastic, allografts or a combination to replace the damaged bone.

There are also minimally invasive procedures used as alternatives to surgery. These treatments can help relieve pain quickly and improve the quality of life when surgery is not an option. They include:

Vertebroplasty – the injection of bone cement into the collapsed vertebra to stabilize the fracture and reduce pain.
Kyphoplasty – Small balloons are used to correct vertebral deformities, restore the height of the collapsed vertebra and create space for the deposit of the bone cement.
Radiofrequency ablation – A procedure used to treat cancer in multiple bone sites, when the tumor has not responded to radiation therapy.
Cyberknife treatment – A precise, non-invasive procedure that directs highly focused radiation beams to destroy tumors and relieve pain.

The treatments used will depend upon the type and location of the cancer.

8. Can radiation treatment prevent bone fractures?

Radiation is primarily used to relieve pain from the cancer and promote healing. It may also be able to prevent fractures of the bone, if the bone is treated early enough.

Prostate Cancer

1. How is prostate cancer that metastasizes to the bone treated?

The primary treatment for prostate cancer that metastasizes to the bone is hormone therapy to reduce testosterone levels. Chemotherapy may also be used if hormone therapy is not successful.

In addition to hormone and chemotherapy, bone metastasis due to prostate cancer can be treated with external beam radiation therapy, radiopharmaceutical drugs, bisphosphonates, surgery and pain medications.

For more information, about prostate cancer, please refer to the Bone and Cancer Foundation publication: *Questions & Answers about Prostate Cancer, Bone Metastases and Treatment-Related Osteoporosis*

Breast Cancer

1. What is the risk of breast cancer spreading to bones?

Approximately 18-20 percent of women diagnosed with breast cancer will have their cancer return within 10 years. Of this group of women, about 70 percent will have cancer that has spread to the bones.

It is important to keep in mind that cancer may recur at any time. That is why it is important to pursue the recommended follow-up tests to ensure that the cancer is detected early if it does return.

2. What bones will most often be affected by the spread of breast cancer to the bone?

Breast cancer can spread to any bone, but it most often affects bones that have the greatest blood supply. These bones include the ends of the arms and legs nearest the torso, the pelvis, the ribs and the spine.

3. What happens if breast cancer spreads to the bone?

Breast cancer that spreads to the bone may cause changes in the bone, bone pain or fractures. It can also cause pressure on the nerves in the spinal cord resulting in weakness or numbness in the arms or legs.

For additional information on Breast cancer, please refer to the publication of the Bone and Cancer Foundation: *Questions and Answers About Breast Cancer, Bone Metastases & Treatment-Related Bone Loss*

Osteonecrosis of the Jaw (ONJ)

1. Which patients are at risk of developing ONJ?

ONJ is a rare dental condition. When it does occur, it usually occurs in cancer patients who were treated with the intravenous bisphosphonates pamidronate (Aredia®) and zoledronic acid (Zometa®), and have had invasive dental procedures.

2. What are the treatments for ONJ?

There are no specific treatments for ONJ. At present, patients are treated with germ-fighting mouthwashes and antibiotics.

For addition information on Osteonecrosis of the Jaw, see the Bone and Cancer Foundation publication: *Osteonecrosis of the Jaw: Information for Cancer Patients*.

Vitamin D

1. What is the proper Vitamin D level for cancer patients?

In cancer patients, the Vitamin D (25-hydroxyvitamin D) level should be in the range of 30 to 60 ng/ml (nanogram/milliliter).

2. How long should supplements be taken for Vitamin D deficiency?

If the Vitamin D level is too low, supplements of 50,000 IU should be taken once a week for eight weeks. This level of Vitamin D dose will require a doctor's prescription. Two months after the treatment, Vitamin D levels should be tested again.

3. What are some of the causes Vitamin D deficiency?

Vitamin D deficiency is caused by reduced exposure to sunlight (including the use of sunscreens) and the lack of vitamin D from diet and supplements.

4. What are the symptoms of Vitamin D deficiency?

The symptoms of Vitamin D deficiency are fatigue and muscle and bone discomfort, as well as generalized aches and pains in the bones and muscles and feelings of weakness.

5. How much sunlight should you get to maintain sufficient Vitamin D levels?

It is recommended that most people get 10 – 15 minutes of sunlight three or four days a week between the hours of 10 am and 3 pm. People of color should receive more exposure for longer periods – up to 30 minutes daily.

6. What's the recommended dosage for Vitamin D supplements?

The recommended dosage of Vitamin D supplements is between 1,000 and 2,000 IU (international units) per day.

For more information on Vitamin D, see the Bone and Cancer Foundation publication: Vitamin D Deficiency: Information for Cancer Patients.

Lung Cancer

1. How often does lung cancer spread to the bone?

Lung cancer spreads to the bone approximately 30 to 40 percent of the time.

2. What bones will most often be affected by the spread of lung cancer to the bone?

Though lung cancer can spread to any bones in the skeleton, it most often affects the bones that have the greatest blood supply – the ends of the arms and legs nearest the torso, the pelvis, the ribs and the spine.

3. What are the symptoms when lung cancer spreads to the bone?

When lung cancer spreads to the bone, it can cause bone pain, bone thinning and fractures, and back pain caused by pressure on the nerves of the spine from compression fractures. Lung cancer in the bone can also cause new blood vessels to form that support the continued growth of the tumor.

Another possible symptom is hypercalcemia, which is increased release of calcium from the bone. Hypercalcemia can cause increased thirst and urination, constipation, irregular heart beat, loss of appetite, sleepiness, confusion, and in rare cases, coma.

For additional information, consult the Bone and Cancer Foundation publication:
What Lung Cancer Patients Need to Know about Bone Health

FAQs updated as of 3/2/2010.
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