

# About Bone Cancer

## A Quick Guide

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This is a brief summary of 'About bone cancer' from our website. You will find more detailed information on there. In this information there are sections on

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- Types of bone cancer
- Should I see a bone cancer specialist?
- What to ask your doctor

You can view this information in a larger print on our website.

### The bones

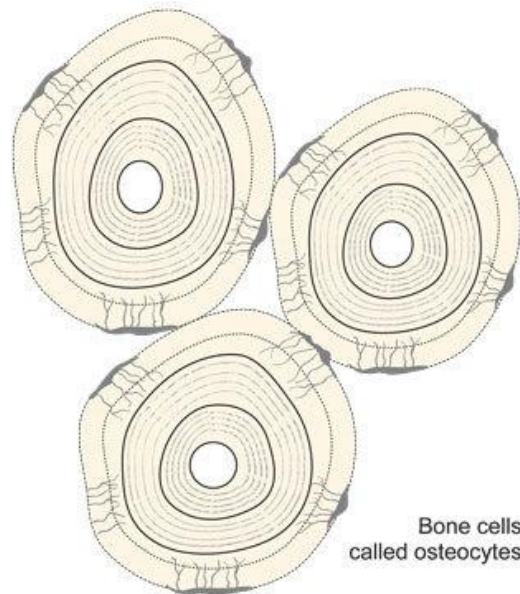
There are more than 200 bones in the human body. Bones support and protect the body, as well as allowing us to move.

Bone is a framework made of supporting tissue, called connective tissue. Bone contains minerals such as calcium. This framework gives the bone its strength. Throughout the framework are the bone cells.

There are 3 main types of cells in our bones

- Osteoblasts – build up the bone framework
- Osteoclasts – break down bone
- Osteocytes – are osteoblasts that have become part of the bone framework

These cells all work together to keep your bones healthy and maintain their shape.



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### Primary bone cancer

Primary bone cancer is cancer that has started in the cells of the bones. There are several different types of primary bone cancer.

### **Cancer that has spread to the bones (secondary bone cancer)**

Most people with cancer in their bones have cancer that has spread there from another part of the body. The cancer may have started in the breast, for example. Breast cancer cells have travelled to the bones and started to grow there. This is called secondary bone cancer. If you have secondary bone cancer this is not the right information for you. You need to look at the information for your primary cancer.

### **Risks and causes of bone cancer**

Primary bone cancer is a very rare cancer. It is most common in young people, which is unusual for cancers. Osteosarcoma is the most common type of bone cancer and is generally diagnosed in teenagers or young adults. It is very rare before the teenage years. Numbers rise again after the age of 60. This is mainly because people with Paget's disease of the bone have a slightly increased risk of bone cancer and Paget's disease occurs mainly in people over the age of 60.

Another type of bone cancer is called Ewing's sarcoma. It is also most common between 10 and 20 years old. Other, rarer, types of bone cancer are most often diagnosed in middle age.

### **Injuries and knocks**

People may think that a knock or injury to a bone can cause cancer. But it is more likely that an injury shows up a cancer that is already there. Or that a bone affected by cancer may be weakened and so is more likely to become damaged in an accident.

### **Other causes of bone cancer**

We don't know exactly what causes bone cancer, but we do know of several factors that increase the risk of developing it. These factors include exposure to radiation, treatment with some chemotherapy drugs, certain bone diseases, and some rare inherited genetic conditions.

### **Screening for bone cancer**

Screening means testing people for early stages of a disease before they have any symptoms.

Before screening for any type of cancer can be carried out, doctors must have an accurate test to use. The test must be reliable in picking up cancers that are there. And it must not give a positive result in people who do not have cancer. If screening were to be introduced for bone cancer, the test would have to be simple, quick, and not too expensive. We don't currently have such a test.

It is helpful to screen people who are at a higher risk of primary bone cancer, such as people who have a condition that makes it more likely they will develop bone cancer. Doctors are aware of these conditions and people who have them are likely to have regular X-rays. If you are worried about your risk, you could talk it over with your GP.

### **Symptoms of bone cancer**

The exact symptoms of bone cancer will vary, depending on the size of the cancer and where it is in the body. Common symptoms include:

- Pain
- Swelling
- Problems with movement

The area around the bone tumour may be painful or tender. The pain is often worse at night. Swelling may not show up until the bone tumour is quite large. You cannot always feel, or see a lump. If the cancer is near a joint, the lump can get in the way and make it more difficult for you to move.

Other less common symptoms that you may have with bone cancer include tiredness, fever or sweats, and weight loss. Very rarely a weakened bone may break (called a pathological fracture).

**Remember** – all these symptoms can be caused by conditions other than cancer. This is a rare disease, and it is much more likely that some other problem is causing your symptoms. But you must have your symptoms checked by your doctor. If it is a cancer, the sooner it is diagnosed the better. If it isn't, there may well be other treatment that will relieve or cure your symptoms.

### **Types of bone cancer**

A primary bone cancer is one that starts in the bones. A secondary cancer in the bones has spread from somewhere else in the body. All the information in this section is about primary bone cancer. If you have secondary bone cancer, you need the section for your original cancer type.

### **Osteosarcoma**

The most common type of primary bone cancer in teenagers and young adults is osteosarcoma. You can get it at any age. Osteosarcomas can grow anywhere in the skeleton, but the commonest places are around the knee or upper arm.

### **Ewing's sarcoma**

This bone cancer is most often diagnosed in teenagers. It most often starts in the pelvis or leg bones. Ewing's tumours can also develop in the soft tissues. The treatment for these soft tissue tumours is the same as for Ewing's bone tumours.

### **Chondrosarcoma**

This is most often diagnosed in middle age and usually grows slowly. Chondrosarcoma can start in the pelvis, the thigh, the upper arm, shoulder blades or ribs.

### **Rare types of sarcoma**

Very rare types of bone sarcoma are chordoma and spindle cell sarcomas. Spindle cell sarcomas include the following types: undifferentiated sarcoma of bone, malignant fibrous histiocytoma, fibrosarcoma, and leiomyosarcoma.

### **Should I see a bone cancer specialist?**

Only about 550 primary bone cancers are diagnosed in the UK each year. It can be very difficult for GPs to decide who may have a suspected bone cancer and who has something more minor.

### **What your GP should do first**

If you go to the doctor with bone pain or other signs that something is wrong, the doctor will send you to the hospital for an X-ray. X-rays are a way to diagnose a bone cancer early. If you don't hear from the surgery about your result, contact them to ask for it.

Guidelines from The National Institute for Health and Care Excellence (NICE) give details of particular signs on an X-ray that mean you should see a specialist urgently. These are bone destruction, new bone formation, or swelling over or around the bone. If your X-ray is normal but you still have symptoms, your GP may repeat the X-ray, or send you to see a specialist anyway.

### **If you are still worried**

If you think your GP is not taking your symptoms seriously enough, you could take this information along to discuss with them.

### **What to ask your doctor about bone cancer**

- How will I know if I have bone cancer?
- Can I be screened for bone cancer?
- I have knocked my leg playing football- will this cause a bone cancer?
- What can cause bone cancer?
- My brother had bone cancer- am I likely to get it?
- Are there any guidelines about when someone should see a bone cancer specialist?

## Notes

**For more information**, visit our website <http://www.cruk.org/about-cancer>

You will find a wide range of detailed, up to date information for people affected by cancer, including a clinical trials database that you can search for trials in the UK. Our information is based on the best current scientific evidence and reviewed regularly by leading clinicians and experts in health and social care.

For answers to your questions about cancer call our Cancer Information Nurses on 0808 800 4040 9am till 5pm Monday to Friday.

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