

Bone cancer

The human body contains more than 200 bones. Our bones support our body and protect organs such as the heart and lungs. Bones are made of cells called osteocytes, osteoclasts and osteoblasts, which are bound together by a calcium-like material to give the bone its strength. Bones are filled with a spongy material called bone marrow, which makes blood cells.

Bone cancer is a rare form of cancer. Although bone looks and feels quite hard, it includes living cells. These cells can develop tumours, or cancer. The tumour may start in the bone (primary cancer) or may start in another part of the body and spread to the bone (secondary cancer).

Symptoms of bone cancer

The signs and symptoms of bone cancer include:

- Painful bones and joints – the pain is often worse at night
- Swelling of bones and joints
- Problems with movement
- Susceptible to fractures.

Other less common symptoms can include:

- Unexplained weight loss
- Tiredness
- Fever and sweating.

Remember, bone cancer is very rare so if you have any of these symptoms, it is more likely to be caused by another condition. Always see your doctor if you have symptoms that last for longer than two weeks.

Diagnosis of bone cancer

Diagnosing bone cancer involves a number of tests, including:

- **X-rays and bone scans** – will show the exact location and size of the cancer (these are always done prior to biopsy).
- **Bone biopsy** – a small sample of cells is removed from the bone and examined in the laboratory for the presence of cancer cells. If the cells are cancers, further tests may be done by a pathologist to determine the exact type of cancer.
- **Magnetic resonance imaging (MRI) scan** – is similar to a CT scan, but uses magnetism instead of x-rays to build three-dimensional pictures of your body. These are more commonly being used to investigate possible bone tumours.

Primary bone cancer

Primary bone cancer, or cancer that starts in the bone, is quite rare. About 60 people develop bone cancer in Victoria each year. Rates for males and females are very similar.

The most common type of primary bone cancer is osteosarcoma. This cancer usually affects young adults. It can affect any bone but the arms, legs and pelvis are more commonly affected. Other less common forms of primary bone cancer include Ewing sarcoma, malignant fibrous histiocytoma and chondrosarcoma.

The causes of primary bone cancer are not known; however, we do know that if you have certain other bone diseases you may be at a higher risk. Some examples include Paget's disease of the bone or Ollier's disease. Certain genetic factors can also increase your risk.

Treatment for primary bone cancer

Most people with primary bone cancer will need a combination of different treatments. Surgery can be used to remove the cancer, surrounding bone tissue and nearby lymph nodes. In severe cases, the affected limb may need to be amputated, but this is rare.

Treatment may also include radiotherapy (x-rays to target and kill the cancer cells) and chemotherapy (anti-cancer drugs). These may be given before surgery, to shrink the cancer, and/or afterwards to destroy any remaining cancer cells.

Secondary bone cancer

Secondary bone cancer is the most common bone cancer. It is a cancer that starts somewhere else in the body and spreads (metastasises) to the bone. The most common cancers that spread to the bone are cancers of the breast, prostate, lung, kidney and thyroid.

Treatment for secondary bone cancer

Treatment depends on the treatment for the original cancer, but usually includes chemotherapy, radiotherapy or hormone therapy. Surgery may be needed to strengthen the affected bone. You may also need regular pain-killing drugs and bone strengthening drugs called bisphosphonates.

Complementary and alternative therapies

When used alongside your conventional cancer treatment, some of these therapies can make you feel better and improve quality of life. Others may not be so helpful and in some cases may be harmful.

When a cure isn't possible

If bone cancer has been diagnosed in its later stages, or if it is a secondary bone cancer, the cancer may have spread to the point where a cure is no longer possible. Treatment then focuses on improving quality of life by relieving the symptoms (this is called 'palliative' treatment). This may include medications to relieve pain, nausea and vomiting.

Caring for someone with cancer

Caring for someone with cancer can be a difficult and emotional time. If you or someone you know is living with or caring for someone with cancer, it may be helpful to download and read some of the Cancer Council Victoria booklets that are available.

Where to get help

- Your doctor
- The Cancer Council of Victoria Information and Support Line Tel. 13 11 20
- Multilingual Cancer Information Line, Victoria Tel. (03) 9209 0169

Things to remember

- Primary bone cancer starts in the bone and accounts for less than one per cent of people with bone cancer.
- Secondary bone cancer is the most common form of bone cancer and is caused by the spread of cancer cells from a cancer somewhere else in the body, such as the breast, prostate or lungs.
- Treatment options for bone cancer may include surgery, radiotherapy, chemotherapy and hormone therapy.

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