

Osteosarcoma is the most common form of bone cancer in children and adolescents. It mainly affects teenagers and is slightly more common in boys than in girls. The growth of sarcoma cells is suspected to have a link with the growth of the bones in general, as the number of cases increases during puberty when a teenager's body starts to grow very quickly.

The tumour normally consists of bone cells that have undergone a malignant mutation. These occur at the ends of the bones, mainly in the long bones such as the tibia and the femur in the leg and the humerus in the upper arm. The most common site is around the knee joint, but osteosarcoma can also occur in other bones in the body.

SYMPTOMS

Pain is the most obvious symptom of bone cancer. It is felt early in the development of the tumour, even when resting. At first the symptoms may be interpreted as joint problems, but medical advice should be sought if the pain persists for more than a couple of weeks.

Other symptoms include impaired function, tumour formation, painless swellings and fractures.

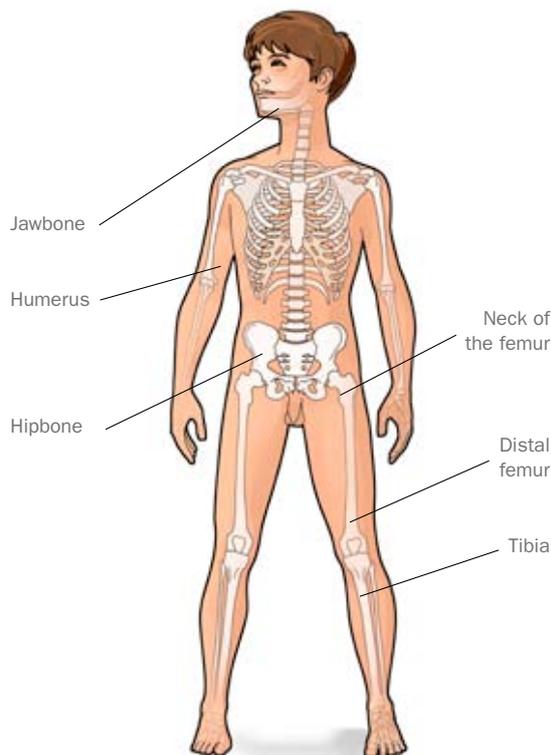
DIAGNOSIS

A standard X-ray can provide immediate confirmation of a suspected malignant tumour. CT and MRI scans can be used to examine the number of soft tissue components. A definitive diagnosis is made by taking a biopsy from the tumour.

TREATMENT

Osteosarcoma is not particularly sensitive to radiation. Instead treatment consists of particularly intensive chemotherapy to reduce the size of the tumour followed by surgery. The reason for this intensive therapy for osteosarcoma is that numerous studies have shown that this has better results. The location of the tumour determines the type of surgery.

Most centres worldwide aim to avoid amputation. In around 90 per cent of cases, modern surgical techniques make it possible to replace the part of the bone that is removed with a metal



prosthesis, a piece of the fibula in the lower leg or, sometimes, bone from a bone bank.

Osteosarcoma can spread and result in secondary tumours, or metastases, mainly in the lungs. There is a risk of osteosarcoma patients having metastases in the lungs at the time of diagnosis. Metastases do not necessarily affect the lungs alone and can also be found in other bones. Radiotherapy or surgery may be necessary to deal with lung metastases.

PROGNOSIS

Each year five to ten children in Sweden develop primary bone cancer, of which osteosarcoma is the most common form. The prognosis for osteosarcoma has improved greatly in recent years, and around 65 per cent of patients are now cured. Important prognostic factors are the tumour's spread at the time of diagnosis and its operability, which depends mainly on its primary localisation.