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Ewing sarcoma

Ewing sarcoma is a malignant bone tumor that forms in the bone or soft tissue around it. It affects mostly teens and young adults.

Causes

Ewing sarcoma can occur anytime during childhood and young adulthood. But it usually develops during puberty, when bones are growing rapidly. It is more common in White children than in Black or Asian children.

The tumor may start anywhere in the body. Most often, it starts in the long bones of the arms and legs, the pelvis, or the chest. It can also develop in the skull or the flat bones of the trunk.

The tumor often spreads (metastasizes) to the lungs and other bones. At the time of diagnosis, spread is seen in about one third of children with Ewing sarcoma.

In rare cases, Ewing sarcoma occurs in adults.

Symptoms

There are few symptoms. The most common is pain and sometimes swelling at the site of the tumor.

Because the tumor weakens the bone, children may also break a bone at the site of the tumor after a minor injury.

Fever may also be present.

Exams and Tests

If a tumor is suspected, tests to locate the primary tumor and any spread (metastasis) often include:

- Bone scan
- Chest x-ray
- CT scan of the chest
- MRI of the tumor
- X-ray of the tumor

A biopsy of the tumor will be done. Different tests are done on this tissue to help determine how aggressive the cancer is and what treatment may be best.

Treatment

Treatment often includes a combination of:

- Chemotherapy
- Radiation therapy
- Surgery to remove the primary tumor

Treatment depends on the following:

- Stage of the cancer
- Age and sex of the person
- Results of the tests on the biopsy sample

Support Groups

The stress of illness can be eased by joining a cancer support group. Sharing with others who have common experiences and problems can help you not feel alone.

Outlook (Prognosis)

Before treatment, outlook depends on:

- Whether the tumor has spread to distant parts of the body
- Where in the body the tumor started
- How large the tumor is when it's diagnosed
- Whether the lactate dehydrogenase (LDH) level in the blood is higher than normal
- Whether the tumor has certain gene changes
- Whether the child is younger than 15 years
- Child's sex
- Whether the child has had treatment for a different cancer before Ewing sarcoma
- Whether the tumor has just been diagnosed or has come back

The best chance for cure is with a combination of treatments that includes chemotherapy plus radiation or surgery.

Possible Complications

The treatments needed to fight this disease may have many complications. Discuss these with your health care provider.

When to Contact a Medical Professional

Contact your provider if your child has any of the symptoms of Ewing sarcoma. An early diagnosis can increase the possibility of a favorable outcome.

Alternative Names

Bone cancer - Ewing sarcoma; Ewing family of tumors; Primitive neuroectodermal tumors (PNET); Bone neoplasm - Ewing sarcoma; Ewing's sarcoma

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