

Ewing's Sarcoma



Sarcomas are rare types of cancer that develop in the supporting tissues of the body. There are two main types: Bone Sarcomas and Soft Tissue Sarcomas.

Ewing's sarcoma is a bone cancer (although it can also very rarely develop in the soft tissue) and is the second most common primary sarcoma that can develop in children, comprising 10-15% of childhood bone cancers.

The Ewing's family of tumours include:

- 🎗 Ewing's sarcoma of bone
- 🎗 Extrasosseous Ewing's - a tumour outside of the bone
- 🎗 Primitive Neuroectodermal Tumour (PNET)
- 🎗 Askin's Tumour (PNET of the chest wall).

Ewing's sarcoma occurs most commonly in the ribs, pelvis, chest, long bones of the legs and arms, skull, and vertebral column (spine). Extrasosseous Ewing Sarcoma appears in the soft tissue of the arms, legs, trunk, head, neck, abdominal cavity, or other areas.

Ewing's sarcoma is not very common in younger children; it occurs mostly in the teenage years and is slightly more prevalent in boys.

Causes of Ewing's Sarcoma

The primary cause of bone cancer is unknown, but the development of Ewing Sarcoma could possibly be related to rapid bone growth, which would explain why it occurs more in teenagers.

Signs and Symptoms

Some of the typical signs and symptoms of a Ewing Sarcoma are:

- 🎗 The most common symptom of bone cancer is pain
- 🎗 Swelling or stiffness in the legs, arms, back, chest or pelvis area between the hips
- 🎗 A fever for no reason

- ⚠ Sudden weight loss, fatigue, or anaemia
- ⚠ A bone that breaks for no known reason or after a minor fall or bump
- ⚠ A lump that may feel soft and warm in the chest, legs, pelvis, or arms

One must bear in mind, though, that many of the above symptoms could be indicative of other medical conditions, so it is recommended that you take your child to a doctor for a check-up if they exhibit any of these symptoms.

Tests and Diagnosis

Ewing sarcoma can be diagnosed or staged using the following tests and procedures:

- ⚠ **Physical Exam and History:** The doctor will perform a physical examination checking for signs of the disease such as lumps, and will also request a full medical history
- ⚠ **MRI (Magnetic Resonance Imaging):** A series of detailed pictures is taken of the inside of the body using a computer, a magnet and radio waves.
- ⚠ **CT scan (CAT scan):** This procedure takes a series of detailed pictures of the inside of the body using a computer linked to an x-ray machine; a dye may also either be swallowed or injected into a vein to allow the organs and tissues to show up more clearly on the pictures.
- ⚠ **PET Scan (Positron Emission Tomography Scan):** A tiny amount of radioactive glucose is injected into a vein and the PET scanner rotates around the body tracking where the glucose is being used; malignant tumours will show up brighter than other cells.
- ⚠ **A Biopsy:** Doctors perform either an incisional biopsy (a sample of tissue is removed through an incision in the skin) or a needle biopsy (tissue is removed using a needle); this is then studied under a microscope.

Other tests that may be done include x-rays, a complete blood count, blood chemistry studies, a bone scan, or bone marrow aspiration.

Treatment options

Treatment options consist of:

- ⚠ **Chemotherapy:** The use of anti-cancer drugs to destroy cancer cells is the preferred treatment for children, and may be done prior to and after surgery.
- ⚠ **Amputation:** In cases where it is not possible to just remove the tumour, amputation of the limb may be necessary, after which a prosthesis (false limb) can be fitted.
- ⚠ **Limb-sparing Surgery:** If at all possible, surgery to save the limb will be done either by replacing the affected bone with a specially designed artificial part (prosthesis) or by replacing the bone with bone taken from another part of the child's body (bone graft).

Radiotherapy: High-energy rays that destroy the cancer cells,

Some of the treatment may result in side effects such as nausea, vomiting, irritation or soreness of the skin from radiation, hair loss, risk of infection, fatigue, bruising and bleeding or diarrhoea. The doctor will explain all of this to you.

Awareness Ribbon Colour

The awareness ribbon colour for Ewing's Sarcoma is Yellow

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