

An Overview on Various Types of Pediatric Cancers

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DESCRIPTION

The types of cancers that the children get are called as Pediatric cancers, and are usually not same as those that occur in adults. Cancer can affect any part of the body. Genes play a role in increasing the likelihood of developing childhood cancer. Genetics refers to traits that are passed in between the members of a family who share the same DNA. It begins with genetic changes in individual cells, and then grows into masses (or tumours) that invade other parts of the body, causing damage and death if it is left untreated. Despite attempts to identify the causes of childhood cancer, very few childhood cancers are caused by environmental or lifestyle factors.

Some chronic infections, such as HIV, Epstein-Barr virus, and malaria, are risk factors for pediatric cancer. They are particularly relevant in the lower and middle income countries. Other infections can increase a child's risk of cancer in adulthood, so vaccinations (vaccine against hepatitis B to prevent liver cancer and against human papillomavirus cervical cancer) and other methods such as early detection and treatment of chronic infections that leads to cancer are important.

Children are most frequently diagnosed with the following cancers:

- Leukemia
- Brain and spinal cord tumors
- Neuroblastoma
- Wilms tumor
- Lymphoma (including Hodgkin and non-Hodgkin)
- Rhabdomyosarcoma
- Retinoblastoma
- Osteosarcoma and Ewing sarcoma

Other types of cancer are rare in children but can occur. In very rare cases, children can even get cancers which are more common in adults.

Leukemia

They are the cancers of bone marrow and blood, and are the most common childhood cancers. It accounts for approximately 28% of all childhood cancers. The most common types in

children are Acute Lymphoblastic Leukemia (ALL) and Acute Myelocytic Leukemia (AML). These leukemias can cause bone and joint pain, pale skin, bleeding and bruising, fever, weight loss, fatigue, weakness and some other symptoms. Acute leukemia can grow rapidly and must be treated (usually with chemotherapy) as soon as it is discovered.

Brain and spinal cord tumors

Tumors of the brain and spinal cord are the second most common cancers in children, accounting for approximately 26% of childhood cancers. There are many types of brain and spinal cord tumors, each has different treatments. Most brain tumors in Children start in the lower part of the brain, such as the cerebellum or brainstem. They may cause headache, nausea, vomiting, blurred or double vision, dizziness, seizures, trouble walking or handling objects, and other symptoms. In both children and adults, spinal cord tumours are less frequent than brain tumours.

Neuroblastoma

Neuroblastoma arises in early forms of nerve cells found in the developing embryo or fetus. About 6% of childhood cancers are neuroblastomas. Young children can develop this kind of cancer. Children older than 10 years old rarely develop it. A tumor can start anywhere, but it usually starts in the stomach (abdomen) swelling. It can also cause other symptoms, such as bone pain and fever.

Wilms tumor

Nephroblastoma, another name for Wilms tumour, can start in either one kidney or, very rarely, both. It is most common in children around at the age of 3-4 years and is rare in older children and adults. It may appear as a swelling or lump in the stomach (abdomen). People may also have other symptoms, such as fever, pain, nausea, and loss of appetite. Wilms tumor accounts for about 5% of childhood cancers.

Pediatric oncology is a medical specialty focused on the treatment of childhood cancers. It is crucial to be aware that this knowledge is available and that many types of children cancer

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can be successfully treated. Because it is generally not possible to prevent childhood cancer, the most effective strategies for reducing the burden of childhood cancer and improving outcomes focus on rapid and accurate diagnosis followed by effective which is to provide evidence-based, supportive care. Percentage of childhood cancers can be improved by detecting cancer in early stage.

Early detection consists of three components:

1. Recognition of symptoms by family members and care providers.

2. Clinical staging, diagnosis, and evaluation that is accurate and quick.
3. Access to immediate treatment.

Children with Down syndrome or genetic problems with the immune system are at increased risk of childhood cancer. Other potential cancer risks are radiation, chemotherapy drugs, and drugs that suppress the immune system. Treatments include surgery, radiation therapy, chemotherapy, targeted drug therapy, immunotherapy, and stem cell transplants.