**HOT Batch 7 Paragraphs**

**Bone Cancer**

There are several types of bone cancer.

Osteosarcoma is the most common bone cancer. It starts in bone cells that make new bone tissue. It usually forms at the end of long bones, such as the leg bones, but can form in any bone. It is most common in teenagers and in adults older than 65 years. Malignant fibrous histiocytoma of bone is a very rare bone cancer. It is treated like osteosarcoma.

Ewing sarcoma includes several types of bone tumors. Ewing sarcoma tumors usually form in the hip bones, the ribs, or in the middle of long bones. The disease occurs most often in teenagers and young adults. Ewing tumors are most common in bone but can also form in soft tissue.

Having past treatment with radiation can increase the risk of osteosarcoma. A small number of bone cancers are caused by inherited conditions. Signs and symptoms of bone tumors include a lump, swelling, and pain.

Bone cancer is rare. Most bone tumors are benign (not cancer).

**Brain Tumors**

The brain and spinal cord make up the central nervous system (CNS). Brain and spinal cord tumors are growths of abnormal cells in tissues of the brain or spinal cord. Tumors that start in the brain are called primary brain tumors. A tumor that starts in another part of the body and spreads to the brain is called a metastatic brain tumor.

Brain and spinal cord tumors may be either benign (not cancer) or malignant (cancer).

Both benign and malignant tumors cause signs and symptoms and need treatment. Benign brain and spinal cord tumors grow and press on nearby areas of the brain but rarely spread into other parts of the brain. Malignant brain and spinal cord tumors are likely to grow quickly and spread into other parts of the brain.

There are many types of brain and spinal cord tumors. They form in different cell types and different areas of the brain and spinal cord. The signs and symptoms of brain and spinal cord tumors depend on where the tumor forms, its size, how fast it is growing, and the age of the patient.

Brain and spinal cord tumors can occur in both adults and children. The types of tumors that form and the way they are treated are different in children and adults. In adults, anaplastic astrocytomas and glioblastomas make up about one-third of brain tumors. In children, astrocytomas are the most common type of brain tumor.

The prognosis (chance of recovery) depends on many factors, including age, tumor size, tumor type, and where the tumor is in the CNS.

**Cancer of Unknown Primary**

Cancer of unknown primary is a rare disease in which cancer cells have spread in the body but the place the primary cancer began is unknown.

There are a number of reasons why the primary cancer may not be found. The primary tumor may be too small to find, or the body’s immune system may have already destroyed it. It’s also possible that the primary tumor was removed during surgery for another condition and doctors didn’t know the cancer was there.

A physical exam and tests and procedures are done to try to find the primary tumor. It is important to know the type of cancer so the best treatments for that type of cancer can be used. If the primary tumor is found, treatment is based on that type of cancer.

If the primary tumor cannot be found, treatment is based on what the doctors can learn about the cancer cells. Important information may include the place in the body where the cancer cells were found, the type of cancer cell, and how different the cancer cells are from normal cells. Signs and symptoms caused by the cancer of unknown primary, and the results of the tests and procedures, are also used to plan treatment.

Since cancer of unknown primary is cancer that has already spread in the body, current treatments often do not cure the cancer.

**Malignant Mesothelioma**

Malignant mesothelioma is a disease in which malignant (cancer) cells form in the thin layer of tissue that covers the lung, chest wall, or abdomen. It may also form in the heart or testicles, but this is rare.

The type of malignant mesothelioma depends on the cell in which it began. The most common type of malignant mesothelioma is epithelial mesothelioma, which forms in the cells that line organs. The other types begin in spindle-shaped cells called sarcomatoid cells or are a mixture of both cell types. Epithelial mesothelioma may grow more slowly and have a better prognosis than other types.

The major cause of malignant mesothelioma is being exposed to asbestos over a period of time. This includes people who were exposed to asbestos in the workplace and their family members.

After a person is exposed to asbestos, it usually takes at least 20 years for malignant mesothelioma to form.

**Thymoma and Thymic Carcinoma**

Thymomas and thymic carcinomas are rare tumors that form in cells on the outside surface of the thymus. The thymus is a small organ that lies in the upper chest under the breastbone. It is part of the lymph system and makes certain types of white blood cells that help the body fight infection.

The tumor cells in a thymoma look like the normal cells of the thymus, grow slowly, and rarely spread beyond the thymus.

The tumor cells in a thymic carcinoma look very different from the normal cells of the thymus. They grow more quickly and have usually spread to other parts of the body when the cancer is found. Thymic carcinoma is harder to treat than thymoma.

People with thymoma often also have autoimmune disorders such as myasthenia gravis and rheumatoid arthritis.

Thymoma and thymic carcinoma may not cause early signs or symptoms. The cancer may be found during a chest x-ray or CT scan that is done for another reason.

**Soft Tissue Sarcoma**

Soft tissue sarcoma is a cancer that starts in soft tissues of the body, including muscle, tendons, fat, lymph vessels, blood vessels, nerves, and tissue around joints. The tumors can be found anywhere in the body but often form in the arms, legs, chest, or abdomen.

Signs of soft tissue sarcoma include a lump or swelling in soft tissue. Sometimes there are no signs or symptoms until the tumor is big and presses on nearby nerves or other parts of the body.

Both children and adults can develop soft tissue sarcoma. Treatment often works better in children and they may have a better chance of being cured than adults.

There are many types of soft tissue sarcoma, based on the type of soft tissue cell in which the cancer formed. Different types may be treated differently.

Rhabdomyosarcoma is the most common type of soft tissue sarcoma in children. It begins in muscles that are attached to bones and help the body move. Most rhabdomyosarcomas are diagnosed in children younger than 10 years. Rhabdomyosarcomas usually form lumps near the surface of the body and are found early.

Gastrointestinal stromal tumors are soft tissue sarcomas that form in soft tissues of the gastrointestinal tract, usually in the stomach or small intestine. They are most common in adults, and may be benign (not cancer) or malignant (cancer). Gastrointestinal stromal tumors often do not cause early symptoms.

Ewing sarcoma, Kaposi sarcoma, and uterine sarcoma are other types of soft tissue sarcoma.

Radiation therapy and certain diseases and inherited conditions can increase the risk of soft tissue sarcoma.