Cancer Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body Cancer can start almost anywhere in the human body, which is made up of trillions of cells.

Transgenic plants A transgenic plant is a modified organism where genes are transferred from one organism to another through genetic engineering techniques". The purpose of producing a transgenic plant is to obtain a species that has ideal traits, high yield and quality

ELISA enzyme-linked immunosorbent assay ELISA is a plate based technique used to detect and quantify peptides, antibodies, proteins and hormones.

Working principle of bioreactor A bioreactor is a vessel-like device that provides a uniform background for microorganisms to grow and maintains an uninterrupted balance in the biochemical reactions carried out by these microorganisms to produce desired metabolites

Symptoms of hepatitis Abdominal pain. Dark urine. Fever. **Cancer** very high fever weight loss Fatigue

Definition treatment causes of cancer

What is cancer?

Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body Cancer can start almost anywhere in the human body, which is made up of trillions of cells Cancer is a large group of diseases that occur when abnormal cells divide rapidly and can spread to other tissue and organs

What causes cancer?

The main cause of cancer is mutations, or changes to the DNA in your cells. Genetic mutations can be inherited. They can also occur after birth as a result of environmental forces.Cancer is a genetic disorder. It happens when genes that manage cell activity mutate and create abnormal cells that divide and multiply, eventually disrupting how your body works.

Symptoms

Fatigue Lump Weight changes, including unintended loss or gain Skin changes, such as yellowing, darkening or redness of the skin Persistent cough or trouble breathing Difficulty swallowing Persistent indigestion or discomfort after eatingnt, unexplained muscle or joint paint, unexplained fevers or night sweats Unexplained bleeding or bruising

Treatments

Chemotherapy

Chemotherapy is a type of cancer treatment that uses drugs to kill cancer cells. Learn how chemotherapy works against cancer, why it causes side effects, and how it is used with other cancer treatments.

Hormone Therapy

Hormone therapy is a treatment that slows or stops the growth of breast and prostate cancers that use hormones to grow.

Immunotherapy

Immunotherapy is a type of cancer treatment that helps your immune system fight cancer.

Photodynamic Therapy

Photodynamic therapy uses a drug activated by light to kill cancer and other abnormal cells.

Radiation therapy (also called radiotherapy) is a cancer treatment that uses high doses of radiation to kill cancer cells and shrink tumors.

Case study on cancer and it's types

Carcinoma

A carcinoma is a cancer found in body tissue known as epithelial tissue that covers or lines surfaces of organs, glands, or body structures. For example, a cancer of the lining of the stomach is called a carcinoma. Many carcinomas affect organs or glands that are involved with secretion, such as breasts that produce milk. Carcinomas account for 80-90% of all cancer cases.

Sarcoma

A sarcoma is a malignant tumor growing from connective tissues, such as cartilage, fat, muscle, tendons, and bones. The most common sarcoma, a tumor on the bone, usually occurs in young adults. Examples of sarcoma include osteosarcoma (bone) and chondrosarcoma (cartilage).

Lymphoma

Lymphoma refers to a cancer that originates in the nodes or glands of the lymphatic system, whose job it is to produce white blood cells and clean body fluids, or in organs such as the brain and breast. Lymphomas are classified into two categories: Hodgkin's lymphoma and non-Hodgkin's lymphoma.

Leukemia

Leukemia, also known as blood cancer, is a cancer of the bone marrow that keeps the marrow from producing normal red and white blood cells and platelets. White blood cells are needed to resist infection. Red blood cells are needed to prevent anemia. Platelets keep the body from easily bruising and bleeding.

Myeloma

Myeloma grows in the plasma cells of bone marrow. In some cases, the myeloma cells collect in one bone and form a single tumor, called a plasmacytoma. However, in other cases, the myeloma cells collect in many bones, forming many bone tumors. This is called multiple myeloma.

Causes of hypertension

For most adults, there's no identifiable cause of high blood pressure. This type of high blood pressure is called primary hypertension or essential hypertension. It tends to develop gradually over many years. Plaque buildup in the arteries, called atherosclerosis, increases the risk of high blood pressure. This type of high blood pressure is caused by an underlying condition. It tends to appear suddenly and cause higher blood pressure than does primary hypertension.

Treatment Eating a heart-healthy diet with less salt Getting regular physical activity Maintaining a healthy weight or losing weight Limiting alcohol Not smoking Getting 7 to 9 hours of sleep daily

Causes of diabetes

Type 1 diabetes Doctors don’t know exactly what causes type 1 diabetes. For some reason, the immune system mistakenly attacks and destroys insulin-producing beta cells in the pancreas.Genes may play a role in some people. It’s also possible that a virus sets off an immune system attack.

Type 2 diabetes

Type 2 diabetes stems from a combination of genetics and lifestyle factors. Having overweight or obesity increases your risk, too. Carrying extra weight, especially in your belly, makes your cells more resistant to the effects of insulin on your blood sugar.

Gestational diabetes

Gestational diabetes occurs as the result of hormonal changes during pregnancy. The placenta produces hormones that make a pregnant person’s cells less sensitive to the effects of insulin. This can cause high blood sugar during pregnancy

Treatment

Rapid-acting insulin: starts to work within 15 minutes and its effects last for 2 to 4 hours

Short-acting insulin: starts to work within 30 minutes and lasts 3 to 6 hours

Intermediate-acting insulin: starts to work within 2 to 4 hours and lasts 12 to 18 hours

Long-acting insulin: starts to work 2 hours after injection and lasts up to 24 hours

Ultra-long acting insulin: starts to work 6 hours after injection and lasts 36 hours or more

Premixed insulin: starts working within 15 to 30 minutes (depending on whether a rapid-acting or short-acting insulin is part of the mix) and lasts 10 to 16 hours