

Breast cancer and its causes

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Cancer occurs when the gene that is responsible for regulating growth of the cells undergo mutations or abnormal changes. These genes reside in each of the cell's nucleus and acts as the 'control room'. In the process of cell growth in our body, the new cells replace the dead cells. But as time passes, mutation will 'turn on' specific genes and 'turn off' the others in a cell. After undergoing mutation, the cell will then divide without control and forms more of its kind and finally forming a tumor. Among many types of cancers such as colon cancer, pancreatic cancer, skin cancer, mouth, and many more, breast cancer is also one of the common cancer among the populations in this world. The presence and the progress of cancer treatment are detected using tumor markers. These tumor markers are substances found in the blood, body fluids, or tissues that are produced by cancer cells. If a certain tumor marker is found in the body, it can indicate that the cancer is still present and ongoing treatment may still be recommended.

Breast cancer is one of the common cancers found commonly in women, but that does not mean that men cannot get breast cancer too. Breast cancer starts when the mutated cells in the breast grow out of control to a tumor. When this tumor grows and invades the surrounding tissues around the breast area or metastasise to other parts of the body, then it is called as a malignant. Most of the breast cancers can occur in various parts of the breast. The most common one is the ductal cancer, where the malignant starts in the ducts that carry milk to the nipples. To understand the various types of breast cancers, first we should know the different parts of the breast.

A breast has 3 main parts, which are the ducts, lobules and the connective tissues. The ducts are the tubes that carry the milk to the nipple. The lobules contain the glands that produce milk to the ducts to carry out. Lastly, the connective tissues are the fatty and fibrous tissues that hold everything together. Breast cancers commonly occur in the ducts or lobules of the breast. Through the blood vessels and lymph vessels, the malignant can be spreader out. When this occurs to the other parts of the body, it is said to have metastasised.

Not every type of breast cancer causes lumps in the breast, some doesn't. The only way to find this is to undergo mammogram, this screening can detect cancer at earlier stage where even before the symptoms development. It is crucial to understand that not all lumps on the breast are malignant, they could be benign too. Those lumps that are not cancerous are also known as non- cancerous breast tumors, these tumors are growth that are abnormal, but they do not spread to the outside of the breast and cause life threatening problems. But some benign lumps can also enhance the chances of breast cancer in a woman. The leading causes of breast cancer are due to genetic abnormality which we also say as a “ mistake” in the genetic material. However, only 5-10% of cancers are due to an abnormality inherited from your maternity parents. Instead, 85-90% of breast cancers are due to genetic abnormalities that happen as a result of the ageing process. This is caused by the proto-oncogenes which helps the cells grow. If these cells mutate, they can increase growth of cells without any control, hence such mutations are referred to as oncogenes.