

Genetic Changes in Breast Cancer

The most likely cause of genetic change in breast cancer is a familial gene that is inherited from mother to daughter. This gene, is usually mutated, and produces a mutant protein that normally helps to regulate the cell cycle. Since it is mutated, it can not regulate the cell cycle properly, and thus, cells grow without control and produce tumors.

Tumors then, move through the blood stream and begin growing in other areas of the body. Once a tumor begins to increase in size, it requires nutrients and oxygen in order to survive. It obtains its own blood supply in order to get all of the nutrients and oxygen that it needs.

This cancer can be treated in several ways, including chemotherapy that acts by.....

Remember:

Get Checked, and get Checked Often!!!!!!



**Made for you by the
students at:**

Delcastle High School

What You Need to Know About Breast Cancer



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New Castle County VoTech

Breast Cancer

Breast Cancer is one of the leading causes of cancer related death in women today. For the year 2007, there is an expected xxxxxx number of women that will be diagnosed with breast cancer, and about xxxxx are expected to die from the disease this year.

Risk Factors

The risk factors for breast cancer include a family history of the disease, obesity, lack of exercise, and a diet high in fat.

Symptoms

Symptoms associated with breast cancer are finding lumps in the breast that indicated tumor growth.

Detection

Breast Cancer is usually detected through a regular self-exam, or by a doctor through the use of a mammogram.

Treatment

Breast cancer can be treated in several ways; It can be treated with chemotherapy or radiotherapy. However, if the cancer is extensive, it may be treated by a mass lumpectomy where the breast is actually removed to inhibit the ability for the cancer to spread further.

Prevention

Types of prevention include regular exercise and appropriate diet. However, when breast cancer is genetically linked, that is, it is familial, there are few ways to prevent it. Rather, it is important to get screened early and regularly for breast cancer if you have a family history of the disease.

Biology of Cancer

It is important to understand how cancer actually affects cells in the body to understand how treatments are developed for certain cancers. All cancers have tumors, or masses of abnormal cell growth that are indicative of a cancer. The way that these masses occur is through the dis-regulation of the cell cycle. Normally, a cell goes through many stages in order for it to reproduce. It must first obtain nutrients and grow in size, then synthesize its DNA, grow some more, and then it can begin

dividing, which is call mitosis. Cell division is normally controlled by "check-points". In each of these check points, the cell check to make sure that all of the nutrients it need to divide are provided, that the DNA (the genetic material inside of all cells) has synthesized, and that the DNA is free of any problems.

Cancer cells, on the other hand, break all of the rules. These cells will continue replicating even through they have not been given the correct signals to continue through the cell cycle.

In cancer, DNA is often damaged or mutated to create a cancer cell. Several types of mutation include inversion, translocation and missense mutations. Inversions are when Translocations are..... And missense mutations are.....

There are many different causes of genetic changes. These include: viruses, radiation

