

Breast Cancer

What is Cancer?

To understand cancer we have to have some appreciation of human biology. Our body is made up of minuscule entities called cells; these are the basic unit of life. Similar types of cells come together to form our *tissues* (e.g: muscle tissue, brain tissue etc), groups of tissues form our *organs* and then organs come together to form *systems* (e.g: cardiovascular system, nervous system). Cancer is a disease of the smallest unit of our body - the cell. It develops when cells within our body obtain a series of defects that result in their uncontrollable growth. These cells are thus able to grow and divide into multiple defective cells that form a mass called a tumour. This tumour takes over the tissue within which it formed and can then spread to surrounding tissue and ultimately to other parts of the body. This in essence is cancer - the rapid growth of cells within a tissue, which can spread to and destroy other tissues. Cancers are named according to where this process started so for instance lung cancer is the growth and spread of defective cells within lung tissue.

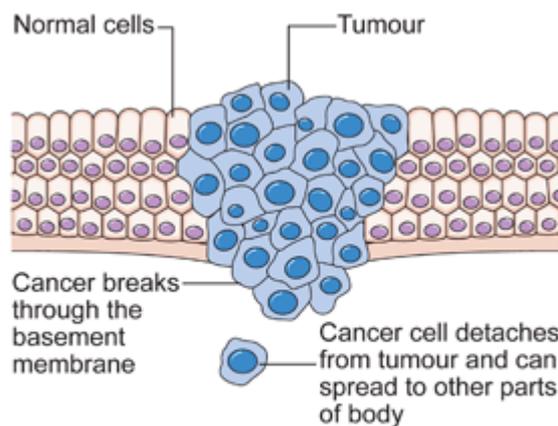


Diagram showing a malignant tumour
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(<http://www.cancerhelp.org.uk/help/default.asp?page=94>)

What is breast Cancer?

Again, to understand breast cancer it is helpful to have some appreciation of human biology. The diagram below shows a cross section of the breast illustrating the major structures within the breast. Within the breast we have structures called lobes, which house lobules that produce milk. Leading from the lobes to the nipple are passageways called milk ducts which carry milk from the lobules to the nipple when it is required. All

these structures sit in fatty tissue and surrounding the ducts and lobes are blood vessels and lymphatic vessels, which together have the function of removing and carrying material (nutrients, harmful material) to various structures in the breast. All the main structures in the breast (lobe, lobules, and milk ducts) are very important in breast cancer as they are lined with cells, which can become cancerous.

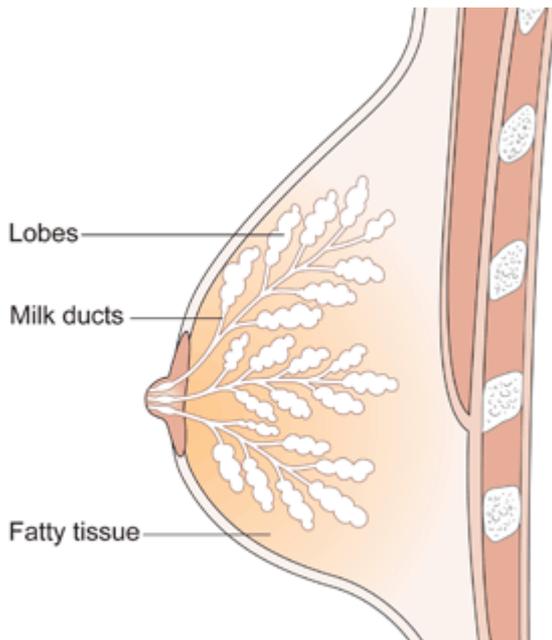


Diagram showing the lobes and ducts of a breast
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Breast cancer is not just one disease but a collection of different types of diseases. There are many types of breast cancers and as an example here are two of the most common types:

Ductal Breast Cancer - this type starts in the cells that line the milk ducts. 70-80% of cancer are of this type

Lobular Breast Cancer - this form develops in cells within the breast lobules. 8-10% of breast cancers are of this type

Other types of breast cancer include inflammatory breast cancer, Paget's Disease, Medullary breast cancer, Mucoïd Breast Cancer, Tubular Breast Cancer, Adenoid Cystic Carcinoma of the Breast, Papillary Breast Cancer, Metaplastic Breast Cancer, Angiosarcoma of the breast, Cytosarcoma Phyllodes, Lymphoma of the breast and Basal Breast Cancer.



Some facts about Breast Cancer

Breast cancer is now the most common cancer affecting women with one million new cases diagnosed throughout the world each year and approximately 40,000 new cases diagnosed each year in the UK. The incidence of breast cancer has increased dramatically over the past two decades with breast cancer rates in the UK increasing by more than 50% in this time period. What this means is that 1 in 9 women will develop breast cancer at some point in their life and 75-80% of these cases will be attributed to women who are post menopausal. The good news is that significant advances have been made which have increased our understanding of breast cancer leading to effective treatments and a breast cancer screening programme that has improved survival rates particularly for those cancers diagnosed at an early stage (Stage 1). This means that today more women are surviving breast cancer than ever before. Unfortunately for black women diagnosed with breast cancer we are yet to see the same improvement in survival rates that have been afforded to our white counterparts.

Conclusion

Breast cancer is the most common female cancer in the UK and worldwide. Black women have a significantly lower risk of developing breast cancer but a higher percentage of black women die from breast cancer because we tend to get a more aggressive form of breast cancer called triple negative breast cancer. For this reason it is important that we catch breast cancer early enough to ensure a better outcome. Knowing the signs and symptoms of breast cancer is one way we can ensure early diagnosis, the other way is for the health authorities to develop a more effective screening programme for black women. Ultimately we should be aiming for the prevention of breast cancer and we can make our own contribution towards this by adopting a healthy lifestyle - mind, body and soul.