

Breast cancer Early detection

# Global situation

- OVER 1 MILLION CASES ANNUALLY
- OVER 400,000 DEATHS ANNUALLY IN THE WORLD
- 4.4 MILLION WOMEN LIVING WITH THE DISEASE

# Breast cancer-Sri Lankan situation

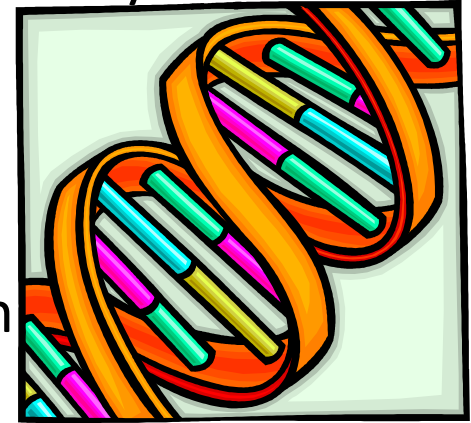
## Among females

- ▶ Commonest cancer
- ▶ 2440 new cases were detected in 2010
- ▶ Age standardized incidence rate was 22.2 per 100,000 population
- ▶ 25% of newly detected cancers among women
- ▶ About 6 -7 new breast cancer cases are detected daily

# What causes Breast Cancer

Breast cancer is always caused by a genetic abnormality  
(A mistake in the genetic material)

This can be due to aging, chemical (e.g., benzene) or a physical agent (e.g., radiation), or we are born with a defective gene (e.g., mutated BRCA1 or BRCA2 gene).



Only 5 – 10 % of cancers are due to hereditary reasons

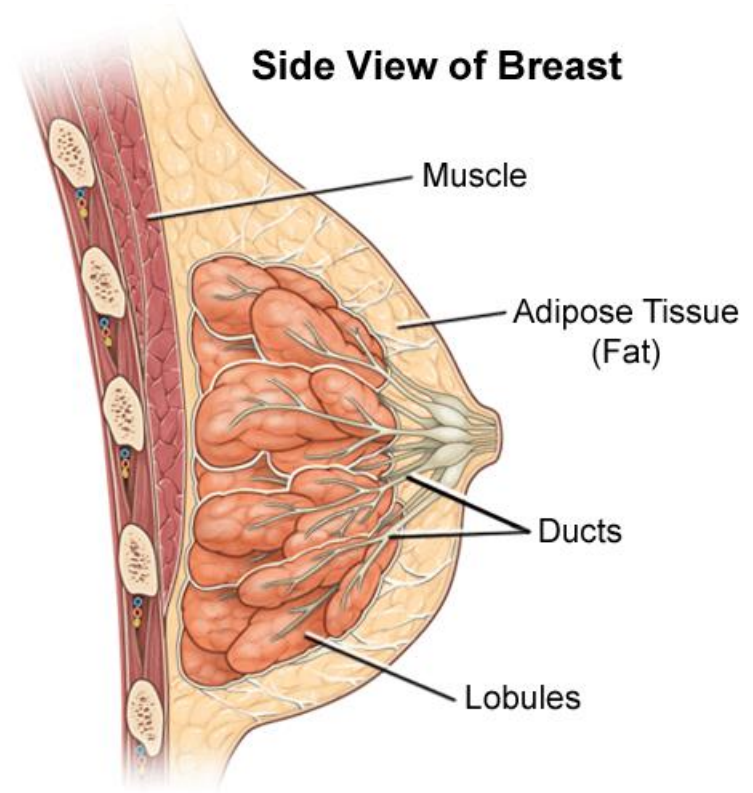
About 90% of breast cancers are due to genetic abnormalities that happen as a result of the aging process, and the “wear & tear” of life in general

# Anatomy of Female Breast

The breast is a glandular organ

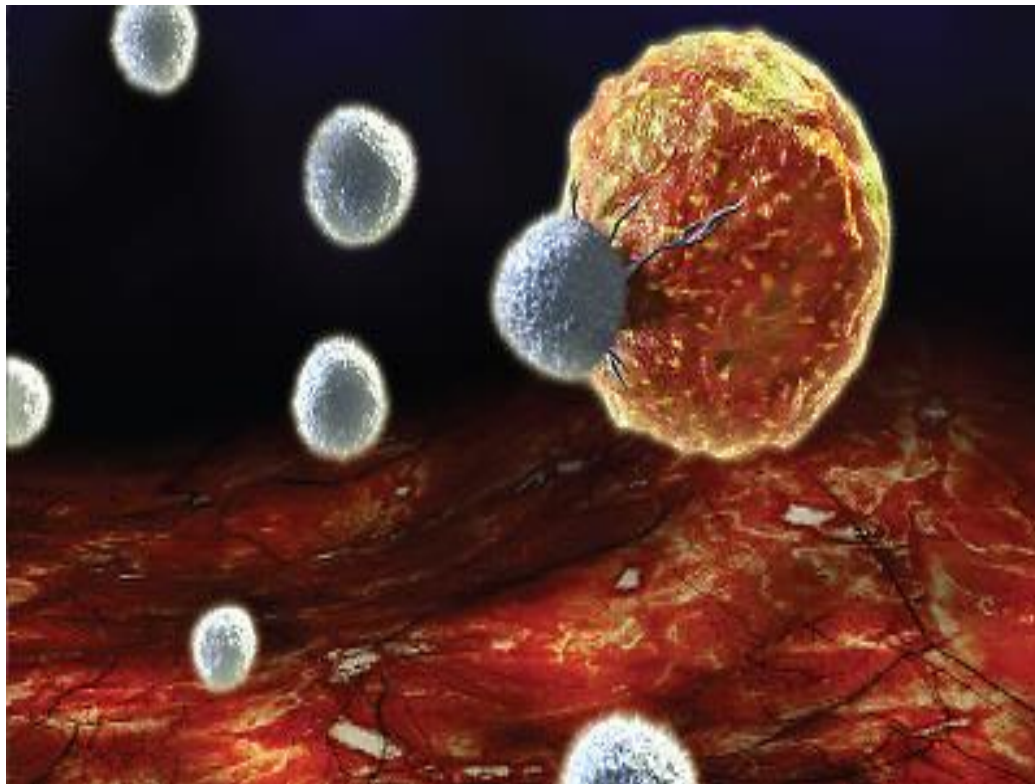
It is made up of network of mammary ducts

Each Breast has 15 -20 mammary ducts that lead to lobes which consisted of lobules



# Breast Cancer

- An abnormal uncontrollable division of cells in the glands or ducts will result in breast cancer



# Risk factors for breast cancer

# Gender

- Being a female is the most important risk factor for breast cancer.
- Although men can get breast cancer, it is about 100 times more common in women





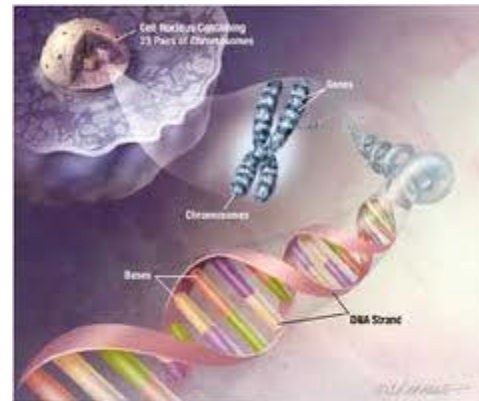
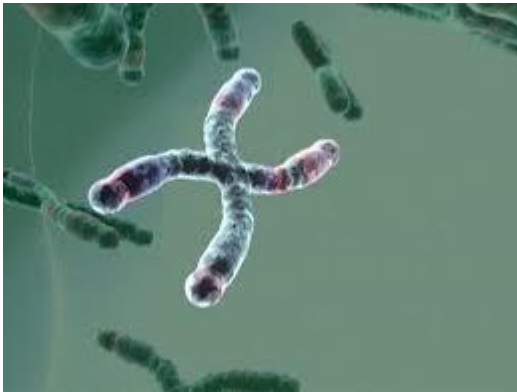
# Aging

Age : The chance of getting breast cancer goes up as a woman gets older  
over 80% of all female cancers occur  
among women aged 50 + years



# Some Genetic Abnormalities

- Some hereditary abnormalities in genes will be responsible for 5 – 10% of breast cancers



- Eg: BRCA1, BRCA2, tp53

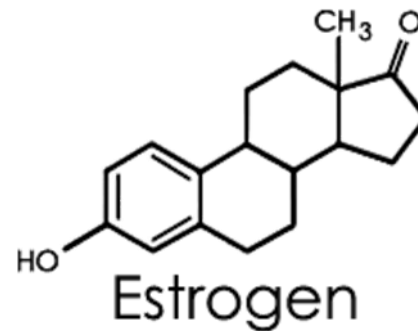
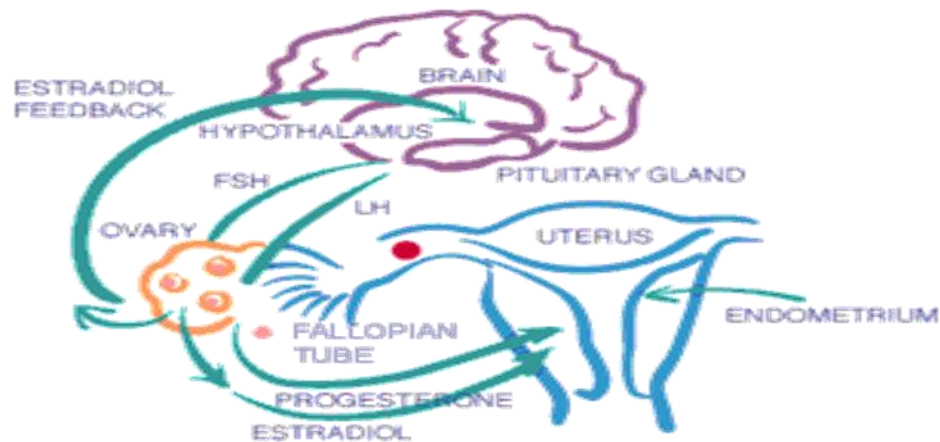
# Family History

- If blood relatives from mother's or father's side having breast or ovarian cancer the risk of developing breast cancer is high (eg: mother, sister, mother's mother, mother's sister father's mother, father's sister)



# Long term exposure to Estrogen Hormone

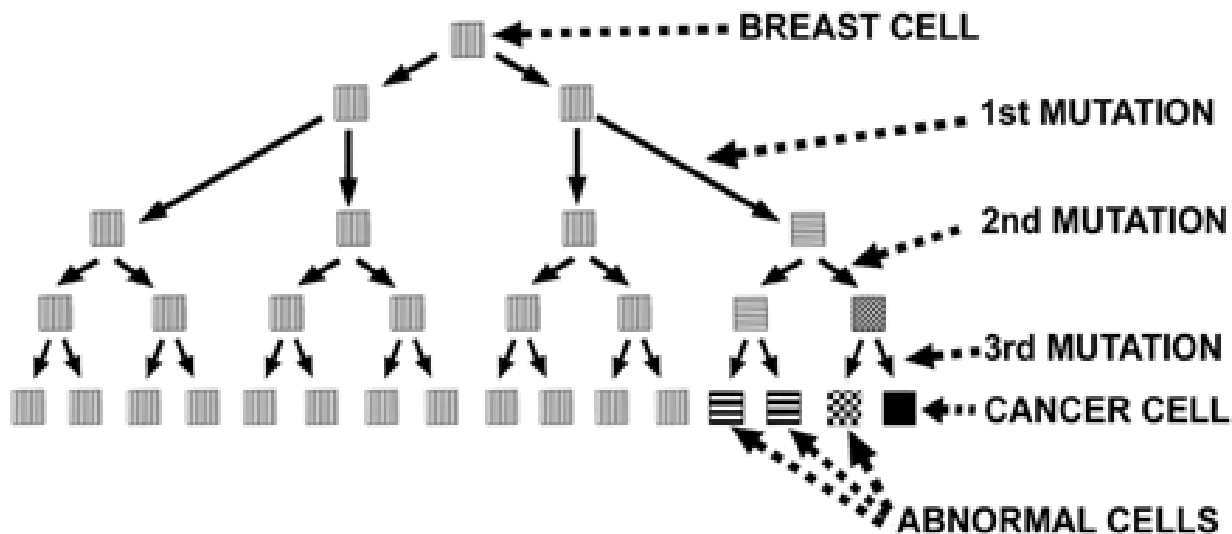
- Estrogen is produced by the ovaries and it help to proliferate breast tissue



# Menstrual cycles

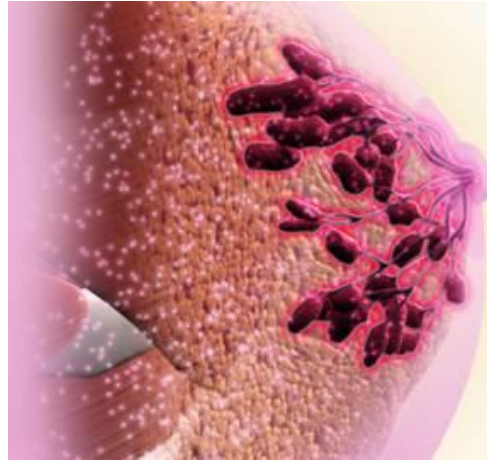
- Attain menarche before the age of 12
- Late menopause (after 55)

## Estrogen Stimulation of Breast Cell Growth



Each box represents a breast cell lining a milk duct. As each cell divides into two cells, a mistake (mutation) can occur resulting in a defective cell. Further mutations can ultimately result in a cancer cell. Estrogen stimulates cell division of both normal and abnormal cells.

# Women who delivered their first child after the age of 30



- During pregnancy there is a rapid growth in breast tissue, if this rapid growth occurs after 30 there might be slightly higher chance of abnormal proliferation

# Women who don't have children

- Women without children are having a bit higher risk of developing breast cancer compared to women with children



# Lactation

- Women who are not breast feeding are at higher risk of breast cancer compared to women who breast fed their children. Especially if breast feeding is continued for 1 ½ - 2 years.





# women who take hormone as medications

- Women who take Oral contraceptive pills containing estrogen for long period without medical advices
- Women who take Hormone Replacement Therapy for long period without medical advices
- Especially for women who are having other risk factors



# Obesity

- Women who are obese especially after menopause have a slightly higher risk of developing breast cancer



# Consumption of Alcohol

- Heavy consumption of alcohol slightly increase the breast cancer risk

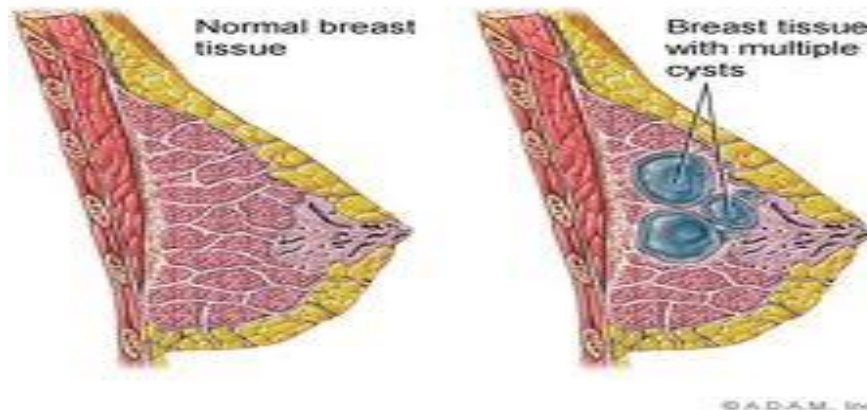


# RADIATION EXPOSURE **Early in life**

- Exposure to a large amounts of radiation early in life, such as radiation treatment to the chest area for childhood cancer, increases the risk of breast cancer
- Very low doses of radiation (such as from X-rays and other medical imaging) do not have much, if any, impact on breast cancer risk

# PERSONAL HISTORY OF BREAST CANCER OR OTHER BENIGN BREAST CONDITIONS

- Breast cancer survivors have a higher risk of getting a new breast cancer compared to women who have never had breast cancer
- Women who had Ductal carcinoma in situ (DCIS) and some other benign breast conditions have an increased risk of breast cancer during their life time



# Clinical Features

- Lump, lumpiness or thickening in the breast or axillae
- Changes in the nipple (changes in the shape, asymmetry, inversion which are recent onset rash, wound, abnormal secretion)
- Colour change, dimpling or skin changes in any part of the breast
- Recently noticed asymmetry of breasts, changing of shape, swelling or discomfort in axillary areas
- Unusual and frequent pain in one part of the breast

Recently noticed asymmetry of breast/ shape of the breast



Pain less fixed nodule or thickened area





# Dimpling



# Rash or red areas on the breast



Inflammatory  
breast  
cancer



# Erythema on the breast



# Nipple discharge/ soreness or skin changes



Appearance similar to peel of an orange



# Recently inverted nipple

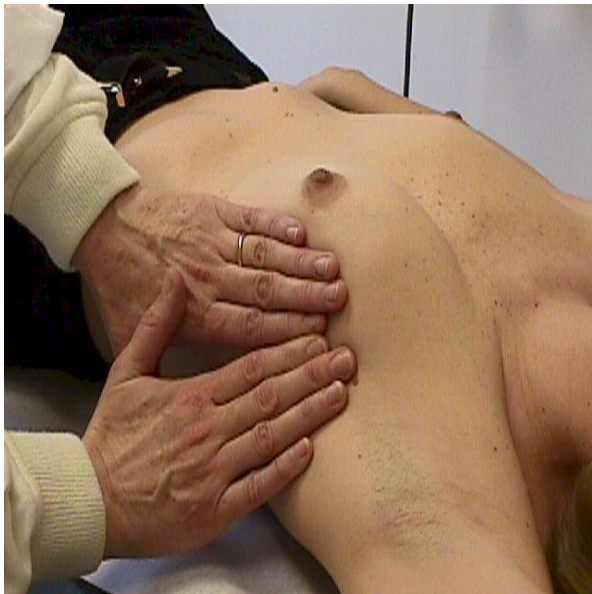


# Breast Cancer - Early Detection

Early diagnosis means a better chance of successful treatment

The three methods commonly used for early detection are

- ▶ Breast self examination
- ▶ Clinical breast examination
- ▶ Mammogram/Ultrasound





## கீயடூர் கிஓகால

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