One in Eight

Breast Cancer Risk Factors and Screening Tests

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Introduction

What is the breast cancer ?
is the most common invasive cancer in women, In 2012, nearly 1.7 million new cases were diagnosed worldwide, making it the second most common cancer over all, It is also the most common cancer in women - the incidence rate among females is twice as much as that of colorectal cancer and cervical cancer and approximately three times that of lung cancer(1). Globally, the incidence of breast cancer is highest among American women16% of women between the age of 40-60 years have breast-related problems. Of these 40% complain of breast lumps.[2]

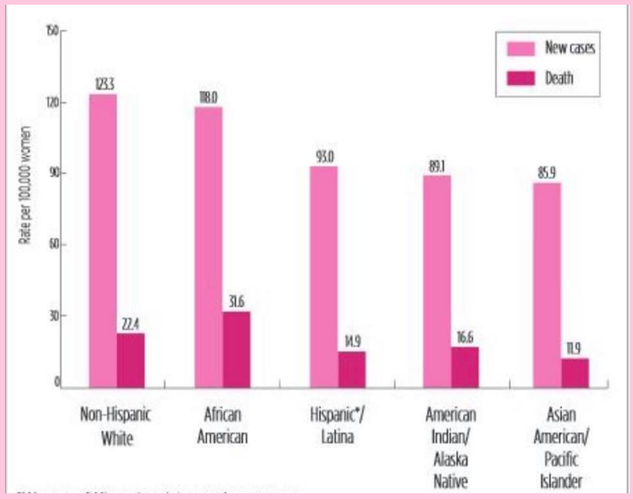

Figure 1: Rates of new cases (incidence) and death (mortality)from invasive breast cancer by race and ethnicity

Risk Factors

Studies have shown that your risk for breast cancer is due to a combination of factors. Most women have some risk factors, but most women do not get breast cancer.[3]

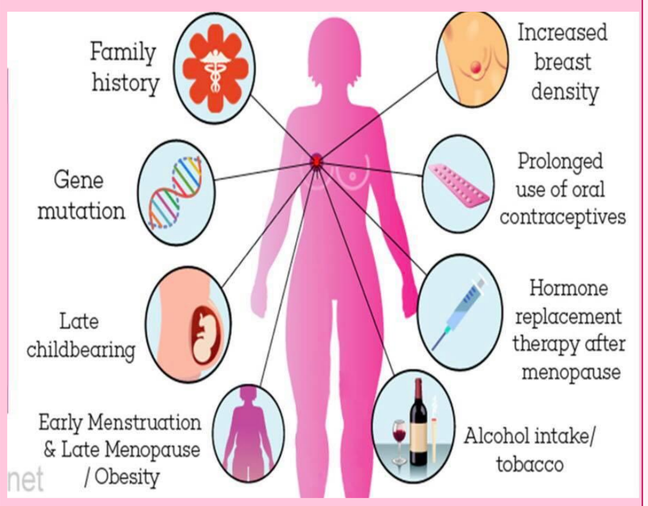

Figure 2: Common risk factors of breast cancer

Risk Factors You Cannot Change :

- Getting older.
- Genetic mutations.
- Reproductive history.
- Family history of breast cancer.
- Previous treatment using radiation therapy.
- Women who took the drug diethylstilbestrol (DES).

Risk Factors You Can Change :

- Not being physically active.
- Taking hormones.
- obesity.
- alcohol intake / tobacco usage.[4]

Screening Tests

Breast cancer screening is the regular examination of healthy, asymptomatic women.Breast cancer is the most common cancer among Canadian women, with an estimated 1 in 8 women expected to develop the disease during their lifetime.[1] In Ontario, an estimated 9,500 women are diagnosed with and 1,950 die from breast cancer annually,Screening can help find breast cancer early, when it is easier to treat.[5]

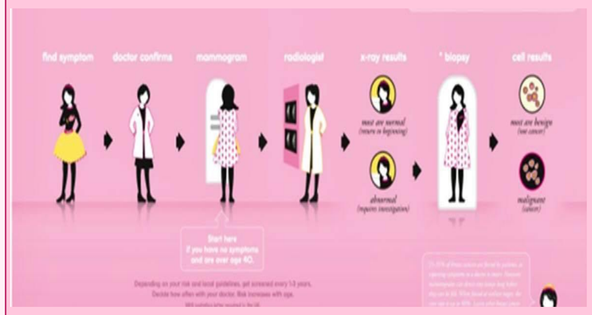

Figure3 : steps to detect breast cancer

Breast cancer detection :

- Breast self examination BSE.
- Clinical breast examination CBE.
- Mammography.
- Magnetic Resonance Imaging (MRI).
- Ultrasonography(4).

high-risk populations, screening with both MRI and mammography annually improves the sensitivity of screening (sensitivity range 84–94%) but decreases specificity (specificity range 77–95%) relative to screening with mammography alone.[5]

Ages	Risk	Screening Tests and Frequency
Women < 50	Average	Screening not recommended
Women 50–74	Average	Mammography every 2 years
Women 50–74	Higher than average[a]	Annual mammography
Women 30–69	High	Annual mammography and breast MRI, or screening breast ultrasound if MRI is contraindicated

Table 1:Breast Screening Program Guidelines

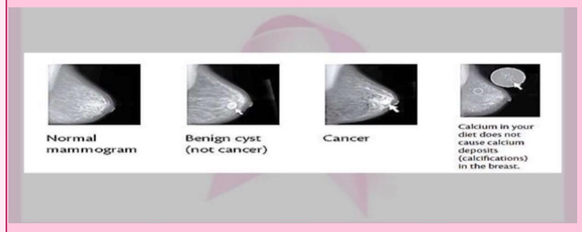

Figure 4 : Mammogram image gallery

Conclusion

Women considered at average risk for breast cancer generally have a less than 15% chance of developing the disease over a lifetime, whereas women considered at high risk generally have a genetic mutation or a greater than 25% (1 in 4) risk of developing the disease. Screening for BC is the process of looking for the disease before symptoms appear so it can be treated early

References

1) Canadian Cancer Society's Advisory Committee on Cancer Statistics. Canadian cancer statistics 2015 [Internet]. Toronto (ON): Canadian Cancer Society; 2015. [cited 2015 Aug]. Available from: http://www.cancer.ca/statistics [Ref list]
(2) https://www.medindia.net/patientinfo/breast-cancer.htm#1
(3) Cancer Care Ontario. Ontario Breast Screening Program 2011 report. Toronto (ON): Cancer Care Ontario; 2013. [Ref list]
(4) https://www.medindia.net/patientinfo/breast-cancer.htm#1
(5) Cancer Care Ontario. About the Ontario Breast Screening Program [Internet]. Toronto (ON): Cancer Care Ontario; 2014. [cited 2015 May]. Available from: https://www.cancercare.on.ca/pcs/screening/breastscreening/obsp/[Ref list]