

PATHOMORPHOLOGY OF BREAST CANCER

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According to the World Health Organization (WHO), in 2022, around 670,000 women died from breast cancer worldwide. Just alone in the USA, an estimated 43,170 women passed away due to breast cancer in 2023. There is a 1 in eight chance that women will get breast cancer in their lives. Breast cancer is the fifth leading cause of death for women all over the world.

It is important to understand a little bit about Breast cancer, In simple words a cancer is abnormal growth or uncontrolled cell growth which typically leads to the formation of a tumor Now these tumors can be classified into benign or malignant to make it simple benign are localized and do not spread or they are Non-metastatic (they don't spread to other area or organ of the body) meanwhile malignant are opposite of benign they are not localized they are metastatic they can spread to other area of the body Breast cancer can be either benign or malignant.

The uncontrolled growth of cells leads to the formation of a tumor which can vary in size and can be either benign or malignant. It can be really dangerous if it's malignant and if not treated early on it can spread to another part of the body after which recovery can be difficult.

There are a lot of reasons how that can lead to this both physiological and pathological such as normal cell division and differentiation, Hormonal influences, and pathological reasons being genetic mutation, infection, environmental factors, chronic inflammation, infection, etc

Risk factors: Let's talk about the risk factors of Breast cancer.

1. **1. Gender:** Now it might come as a surprise but breast cancer can also be developed in males although it is much more rare around 1 in 883 men whereas in women it can be 1 in 8 women.



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2. **Age:** The risk of breast cancer increases with age there are several reasons for that such as mutation, DNA damage (which can lead to disruption of normal cell function resulting in cancer), Hormonal changes, Decreased immunity, etc

3. **Genetics:** A gene mutation such as BRCA1 and BRCA2 puts a person at a higher risk for Breast cancer.

4. **Family History:** if someone in the family has Breast cancer it can put a person at higher risk for it.

5. **Hormonal Factors:** Long-term use of Hormone replacement therapy (HRT) which is used for menopause and also some birth control pills can put a person at higher risk of developing Breast cancer.

6. **Reproductive history:** Early menstruation (before age 12) or late menopause (after age 55) increases the risk because of long exposure to estrogen. Having children late in life or having no children at all increases the risk.

7. **Lifestyle:** Regular consumption of alcohol as well as the normal diet a saturated diet can also contribute to Breast cancer and other disease.

8. Obesity and lack of physical activity can also increase the risk as well.

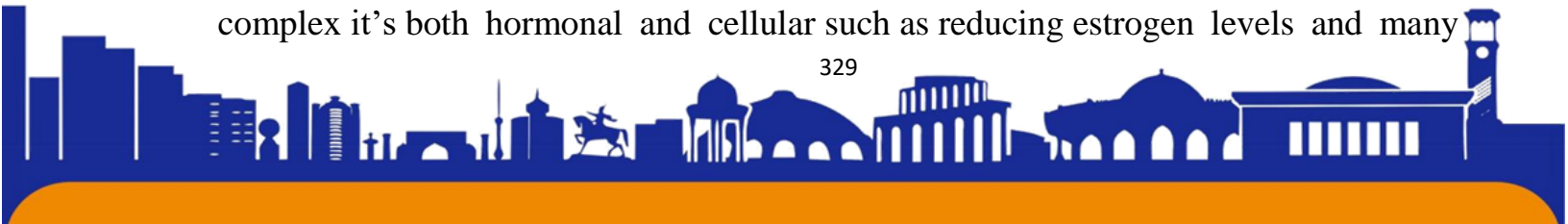
It is important to have a healthy lifestyle and be cautious of these risks whether you find them in yourself or the ones you know spreading awareness is crucial.

Even though there are a lot of risk factors there still are a lot of ways we can reduce these risks by adapting to a healthy lifestyle and simple things that are still effective which can not only reduce the risk of Breast cancer but also other diseases. Here are some ways that can reduce the risk of Breast cancer:

Maintaining a healthy weight: Being overweight can put u at risk, especially after menopause maintaining a healthy weight through diet and exercise can reduce the risk.

Exercise: exercise is just overall so important for us humans our bodies are meant for physical tasks doing so makes it easy for our bodies to function increasing blood flow and so on that is why it also reduces so many risks for diseases including Breast cancer.

Breastfeeding: It is noticed that mothers who breastfeed their babies longer have reduced risk of breast cancer now many factors can be affecting this which are complex it's both hormonal and cellular such as reducing estrogen levels and many





more.

Limit Alcohol consumption: As we already talked about alcohol can increase the risk of breast cancer since it increases estrogen levels it can also damage DNA estrogen is the hormone that stimulates cell growth and if DNA is damaged the chances of abnormal growth of cells increase drastically that's why limiting alcohol or stopping it completely can be helpful in the long run.

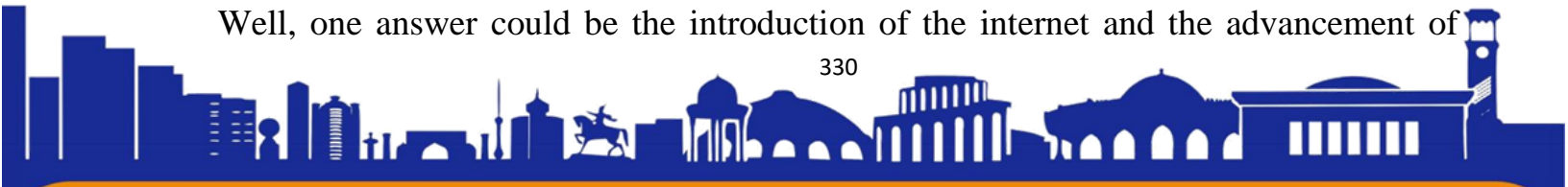
These are some of the changes we can make in our lives to reduce the risk of breast cancer these changes contribute to a healthy lifestyle which in the long run can prevent someone from having such a disease and will make your life much better.

Symptoms of breast cancer can include a lump in the breast or underarms, changes in breast size or shape, nipple changes (such as inversion or discharge), and skin changes (such as redness or dimpling). Treatment for breast cancer typically involves a combination of surgery, radiation therapy, chemotherapy, hormone therapy, and targeted therapy, depending on the type and stage of cancer.

There are many types of breast cancer and the most common types can vary depending on factors such as geographical location, population demographics, and advancements in detection methods but these are the most common types based on the number of people getting affected:

1. **Invasive Ductal Carcinoma (IDC):** This is the most common type of breast cancer, accounting for approximately 80% of all breast cancer cases.
2. **Invasive Lobular Carcinoma (ILC):** ILC accounts for about 10-15% of invasive breast cancers.
3. **Ductal Carcinoma In Situ (DCIS):** DCIS represents around 20-25% of all newly diagnosed breast cancer cases in the United States.
4. **Triple-negative Breast Cancer (TNBC):** TNBC accounts for about 10-15% of all breast cancer cases.
5. **HER2-Positive Breast Cancer:** Approximately 15-20% of breast cancers are HER2-positive.
6. **Inflammatory breast cancer (IBC):** IBC is rare, accounting for around 1-5% of all breast cancer cases.

Nowadays it is really easy to identify or self-diagnose oneself but it can backfire and a person can misdiagnose themselves but why would people diagnose themselves? Well, one answer could be the introduction of the internet and the advancement of





technology. We have so much information in hand all the time but people need to realize medicine is a complicated field and it's easy to misdiagnose oneself and end up getting more harm.

The relationship between a patient and a doctor is really important a lot of patients are embarrassed to share so much information with their doctor or they would rather not go to the doctor at all it is important to realize how essential the relationship between the doctor and the patient is, of course, it goes for both parties a doctor should make the patient comfortable and the patient should not be ashamed or embarrassed to share information a lot of patients feel ashamed to share information related to their private parts we just need to understand this if we can find it early we can treat it if we keep ignoring the signs it can lead to irreversible state if we find the cancer at early stage we can get rid of it before it spreads to other parts of the body.

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