

# Chemotherapy in Breast Cancer

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## INTRODUCTION

Breast cancer most commonly presents as a lump that feels different from the rest of the breast tissue. More than 80% of cases are discovered when a person detects such a lump with the fingertips. The earliest breast cancers, however, are detected by a mammogram. Lumps found in lymph nodes located in the armpits may also indicate breast cancer.

Indications of breast cancer other than a lump may include thickening different from the other breast tissue, one breast becoming larger or lower, a nipple changing position or shape or becoming inverted, skin puckering or dimpling, a rash on or around a nipple, discharge from nipple/s, constant pain in part of the breast or armpit and swelling beneath the armpit or around the collarbone. Pain ("mastodynia") is an unreliable tool in determining the presence or absence of breast cancer, but may be indicative of other breast health issues.

Another symptom complex of breast cancer is Paget's disease of the breast. This syndrome presents as skin changes resembling eczema; such as redness, discoloration or mild flaking of the nipple skin. As Paget's disease of the breast advances, symptoms may include tingling, itching, increased sensitivity, burning, and pain. There may also be discharge from the nipple. Approximately half the women diagnosed with Paget's disease of the breast also have a lump in the breast.

Inflammatory Breast Cancer presents with similar effects. Inflammatory Breast Cancer is a rare (only seen in less than 5% of breast cancer diagnosis) yet aggressive form of breast cancer characterized by the swollen, red areas formed on the top of the Breast. The visual effects of Inflammatory Breast Cancer is a result of a blockage of lymph vessels by cancer cells. This type of breast cancer is seen in more commonly diagnosed in younger ages, obese women and African American women. As inflammatory breast cancer does not present as a lump there can sometimes be a delay in diagnosis.

In rare cases, what initially appears as a fibroadenoma (hard, movable non-cancerous lump) could in fact be a phyllodes tumor. Phyllodes tumors are formed within the stroma (connective tissue) of the breast and contain glandular as well as stromal tissue. Phyllodes tumors are not staged in the usual

sense; they are classified on the basis of their appearance under the microscope as benign, borderline or malignant.

Malignant tumors can result in metastatic tumors—secondary tumors (originating from the primary tumor) that spread beyond the site of origination. The symptoms caused by metastatic breast cancer will depend on the location of metastasis. Common sites of metastasis include bone, liver, lung, and brain. When cancer has reached such an invasive state, it is categorized as a stage 4 cancer, cancers of this state are oftentimes fatal. Common symptoms of stage 4 cancer include unexplained weight loss, bone and joint pain, jaundice and neurological symptoms. These symptoms are called non-specific symptoms because they could be manifestations of many other illnesses. Rarely breast cancer can spread to exceedingly uncommon sites such as peripancreatic lymph nodes causing biliary obstruction leading to diagnostic difficulties.

Most symptoms of breast disorders, including most lumps, do not turn out to represent underlying breast cancer. Less than 20% of lumps, for example, are cancerous, and benign breast diseases such as mastitis and fibroadenoma of the breast are more common causes of breast disorder symptoms.

## RISK FACTORS

**Main article:** Risk factors of breast cancer.

## RISK FACTORS CAN BE DIVIDED INTO TWO CATEGORIES

### Modifiable risk factors

Things that people can change themselves, such as consumption of alcoholic beverages.

### Fixed Risk Factors

Things that cannot be changed, such as age and biological sex.

The primary risk factors for breast cancer are being female and older age. Other potential risk factors include genetics, lack of childbearing or lack of breastfeeding, higher levels of certain hormones, certain dietary patterns, and obesity. One study

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indicates that exposure to light pollution is a risk factor for the development of breast cancer.

## MEDICAL CONDITIONS

Breast changes like atypical ductal hyperplasia and lobular carcinoma in situ, found in benign breast conditions such as fibrocystic breast changes, are correlated with an increased breast cancer risk. Diabetes mellitus might also increase the risk of breast cancer. Autoimmune diseases such as lupus erythematosus seem also to increase the risk for the acquisition of breast cancer. Hormone therapy to treat menopause is also associated with an increase risk of breast cancer.

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