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# Treating Breast Cancer: Adjuvant Therapy

If you have breast cancer, you will have many treatment choices. Before you decide which is best for you, weigh all of your choices. Talk with your healthcare providers and your loved ones. It's important to understand the exact kind of treatment you'll need, when you'll get it, and how long it will last. Your choices may include one or more types of adjuvant therapy. These are treatments given after breast surgery.

Most people with breast cancer have some type of surgery. This is done to take out as much of the cancer as possible. Adjuvant treatment might be advised after surgery. This is done to kill any cancer cells that might have been left behind. It can help reduce your risk that the cancer will come back. The treatment is usually started after you've healed from surgery.



## Radiation therapy

This treatment uses high-energy X-rays to kill cancer cells. You'll likely get radiation if you had a lumpectomy (breast-conserving surgery). You may have it if cancer was found in your lymph nodes or if your cancer cells have certain gene mutations. Radiation is often given in an outpatient radiation center. It's done once a day for 3 to 6 weeks.

## Chemotherapy

This treatment uses strong medicines that attack and kill cancer cells. Your healthcare provider will decide if chemotherapy is right for you. Factors include the size of your tumor and if and where it has spread. Most people get combination chemotherapy. This means more than one medicine is used. It's given in cycles that include treatment and a rest period for up to 6 months. Most of the time, chemo medicines are put right into your bloodstream through a vein. Chemo might be given in your provider's office. Or it may be given in an outpatient infusion center.

## Hormone therapy

Hormone therapy is used when cancer cells respond to estrogen and progesterone. These 2 hormones are normally made by the body. Your breast cancer cells are tested to see if they have receptors for these hormones. If they do, they're called ER (estrogen receptor)-positive or PR (progesterone receptor)-positive. When the hormones bind to these receptors, the cancer cells grow. Blocking the hormones stops this.

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To treat these types of tumors, 2 kinds of medicines may be used:

- **Selective estrogen receptor modulators (SERMs).** These keep estrogen from binding to hormone receptor-positive cancer cells and stop the cells from dividing.
- **Aromatase inhibitors.** These reduce estrogen production in women who have been through menopause. With less estrogen to bind to, hormone receptor-positive cancer cells are less likely to grow.

Hormone therapy is often used to help keep hormone-receptive breast cancer from coming back. It's most often taken as a pill for 5 to 10 years after surgery.

## Targeted therapy

Targeted therapy is done with medicines. Targeted medicines for breast cancer include monoclonal antibodies and tyrosine kinase inhibitors. These medicines work by stopping or slowing the growth of some breast cancers. They do this by blocking certain proteins in or on the cancer cells.

For breast cancer, the protein that's targeted is most often a growth factor protein called HER-2. Breast cancers that have a lot of the HER-2 protein are called HER-2 positive. Breast cancer cells are tested for HER-2 in a lab. Your healthcare provider may suggest you get targeted therapy along with chemotherapy if your breast cancer is HER-2 positive. It can be given along with chemotherapy or by itself. Treatment can last a few years. You can get it in your provider's office. Or you can be treated in an outpatient infusion center.

Another type of targeted therapy that may be used after surgery for certain types of breast cancer is a CDK4/6 inhibitor. It is given as a pill.

## Immunotherapy

Immunotherapy uses medicines that trigger the person's own immune system to find and destroy cancer cells. This type of therapy is useful against certain types of breast cancer. Immunotherapy is given through an IV every 2 to 3 weeks.