

Breast Cancer - Metaplastic - Treatment Options [1]

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ON THIS PAGE: You will learn about the different ways doctors use to treat people with this type of cancer. To see other pages, use the menu on the side of your screen.

This section outlines treatments that are the standard of care (the best proven treatments available) for this specific type of cancer. When making treatment plan decisions, patients are also encouraged to consider clinical trials as an option. A clinical trial is a research study to test a new approach to treatment to evaluate whether it is safe, effective, and possibly better than the standard treatment. Clinical trials may test such approaches as a new drug, a new combination of standard treatments, or new doses of current therapies. Your doctor can help you review all treatment options. For more information, see the [Clinical Trials](#) [3] and [Latest Research](#) [4] sections.

Treatment overview

In cancer care, different types of doctors often work together to create a patient's overall treatment plan that combines different types of treatments. This is called a [multidisciplinary team](#) [5].

Because metaplastic carcinoma of the breast is rare, the best course of treatment has not yet been determined. As explained in the [Overview](#) [6], metaplastic breast cancer is a type of breast cancer called triple-negative. Therefore, metaplastic breast cancer is treated in the same way that other types of triple-negative breast cancers are treated. It has been suggested in multiple studies, however, that a woman's prognosis is related to a combination of factors, including the size of the tumor, the number of positive lymph nodes under the arm, and the tumor biology as determined by molecular tests.

The biology and behavior of a breast cancer affects the treatment. Some tumors are small but grow fast, while others are large and grow slower. When planning the treatment for breast cancer, the doctor will consider many factors, including:

- The stage and grade of the tumor
- The patient's age and general health
- The patient's menopausal status

- The presence of known mutations in inherited breast cancer genes, such as *BRCA1* or *BRCA2*

Even though the doctor will specifically tailor the treatment for each patient and the breast cancer, there are some general steps for treating breast cancer.

For small, early-stage metastatic cancers, doctors generally recommend surgery to remove the tumor. To make sure that the entire tumor is removed, the surgeon will also remove a small area of tissue around the tumor. Although the goal of surgery is to remove all of the tumor that can be seen, cancer cells that cannot be seen may be left behind in the breast or elsewhere.

After surgery for early-stage breast cancer, the next step is to lower the risk of recurrence and to get rid of any remaining cancer cells. This is called adjuvant therapy. Adjuvant therapies for metastatic cancer include chemotherapy and radiation therapy. See below for more information on these types of treatment. Whether you need adjuvant therapy depends on the chance that cancer cells remain in the breast or elsewhere in the body. Although adjuvant therapy lowers the risk of recurrence, it does not necessarily eliminate all risk.

When surgery to remove the cancer is not possible, or the tumor is larger in size, chemotherapy is used to shrink the tumor before surgery. This is called neoadjuvant chemotherapy. Radiation therapy is usually only recommended after surgery. However, in some situations, radiation therapy may be used to control the tumor's growth when surgery is not possible.

Descriptions of the most common treatment options for metastatic breast cancer are listed below. Treatment options and recommendations depend on several factors, including the stage of cancer, possible side effects, and the patient's preferences and overall health. Your care plan may also include treatment for symptoms and side effects, an important part of cancer care. Take time to learn about all of your treatment options and be sure to ask questions about things that are unclear. Also, talk about the goals of each treatment with your doctor and what you can expect while receiving the treatment. Learn more about [making treatment decisions](#) [7].

Surgery

Surgery is the removal of the tumor and surrounding tissue during an operation. It is also used to examine the surrounding axillary or underarm lymph nodes. A surgical oncologist is a doctor who specializes in treating cancer using surgery. Generally, the smaller the tumor, the more options for surgery a patient has. Surgery for breast cancer includes the following:

- A lumpectomy is the removal of the tumor and a small, cancer-free margin of tissue around the tumor. Most of the breast remains. Follow-up radiation therapy to the remaining breast tissue is generally recommended. A lumpectomy may also be called breast-conserving surgery, a partial mastectomy, or a segmental mastectomy.
- A mastectomy is the surgical removal of the entire breast. There are several types of mastectomies. Talk with your doctor about whether the skin can be preserved, called a skin-sparing mastectomy, or the skin and the nipple, called a total skin-sparing mastectomy.

After a mastectomy or lumpectomy, breast reconstruction is an option; see below for more information on that type of surgery.

Lymph node removal and analysis

Cancer cells can be found in the axillary lymph nodes in some cancers; this information is used to determine treatment and prognosis. It is important to find out whether any of the lymph nodes near the breast contain cancer.

Sentinel lymph node biopsy. The sentinel lymph node biopsy procedure allows for the removal of one to a few lymph nodes, avoiding the removal of multiple lymph nodes in an axillary lymph node dissection (see below) for patients whose sentinel lymph nodes are free of cancer. The smaller lymph node procedure lowers the risk of swelling of the arm called lymphedema [8] and decreases the risk of numbness, as well as arm movement and range-of-motion problems, which are long-lasting issues that can severely affect a person's quality of life.

In a sentinel lymph node biopsy, the surgeon finds and removes about one to three sentinel lymph nodes from under the arm that receive lymph drainage from the breast. The pathologist then examines these lymph nodes for cancer cells. To find the sentinel lymph node, the surgeon injects a dye and/or a radioactive tracer into the area of the cancer and/or around the nipple. The dye or tracer travels to the lymph nodes, arriving at the sentinel node first. The surgeon can find the node when it turns color if the dye is used or gives off radiation if the tracer is used.

If the sentinel lymph node is cancer-free, research has shown that it is likely that the remaining lymph nodes will also be free of cancer and no further surgery is needed. If the sentinel lymph node shows that there is cancer, then the surgeon may perform an axillary lymph node dissection to remove more lymph nodes to look for cancer, depending on the stage of the cancer, the features of the tumor, and the amount of cancer in the sentinel lymph nodes. It is recommended that patients with signs of cancer in the axillary lymph nodes receive an axillary lymph node dissection, regardless of whether a sentinel lymph node biopsy is done. Find out more about ASCO's recommendations for sentinel lymph node biopsy [9].

Axillary lymph node dissection. In an axillary lymph node dissection, the surgeon removes many lymph nodes from under the arm, which are then examined by a pathologist for cancer cells. The actual number of lymph nodes removed varies from person to person. Recent research has shown that an axillary lymph node dissection may not be needed for all women with early-stage breast cancer with small amounts of cancer in the sentinel lymph nodes. Women having a lumpectomy and radiation therapy who have a smaller tumor and no more than two sentinel lymph nodes involved with cancer may avoid a full axillary lymph node dissection, which helps reduce the risk of side effects and does not decrease survival. If cancer is found in the sentinel lymph node, whether more surgery is needed to remove additional lymph nodes depends on each person's situation.

Most patients with invasive cancer will have either a sentinel lymph node biopsy or an axillary lymph node dissection. A sentinel lymph node biopsy alone should not be done if there is obvious evidence of cancer in the lymph nodes before any surgery. In this situation, a full axillary lymph node dissection is preferred.

Reconstructive (plastic) surgery

Women who have a mastectomy may want to consider breast reconstruction, which is surgery to create a breast using either tissue taken from another part of the body or synthetic implants. Reconstruction is usually performed by a plastic surgeon. A woman may be able to have reconstruction at the same time as the mastectomy, called immediate reconstruction, or at some point in the future, called delayed reconstruction. In addition, reconstruction may be done at the same time as a lumpectomy to improve the look of the breast and to match the breasts, this is called oncoplastic surgery, and many breast surgeons can do this without the help of a plastic surgeon. Surgery on the healthy breast is also often done so both breasts have a similar appearance. Talk with your doctor for more information.

External breast forms (prostheses)

An external breast prosthesis or artificial breast form provides an option for women who plan to delay or not have reconstructive surgery. Breast prostheses can be made to provide a good fit and natural appearance for each woman.

Summary of surgical options

To summarize, surgical treatment options include the following:

- Removal of cancer in the breast: Lumpectomy or partial mastectomy almost always followed by radiation therapy *or* mastectomy, with or without immediate reconstruction
- Lymph node evaluation: Sentinel lymph node biopsy and/or axillary lymph node dissection

Women are encouraged to talk with their doctors about which surgical option is right for them. More aggressive surgery, such as a mastectomy, is not always better and may cause more complications. The combination of lumpectomy and radiation therapy has a slightly higher risk of the cancer coming back in the same breast or near the breast and new cancers in the breast, but the long-term survival of women who choose lumpectomy is the same as those who have a mastectomy. Learn more about [cancer surgery](#) [10].

Radiation therapy

Radiation therapy is the use of high-energy x-rays or other particles to destroy cancer cells. A doctor who specializes in giving radiation therapy to treat cancer is called a radiation oncologist. The most common type of radiation treatment is called external-beam radiation therapy, which is radiation given from a machine outside the body. When radiation treatment is given using implants, it is called internal radiation therapy or brachytherapy. A radiation therapy regimen (schedule) usually consists of a specific number of treatments given over a set period of time (see below for additional information).

After surgery, adjuvant radiation therapy is given regularly for a number of weeks to get rid of any remaining cancer cells near where the tumor was located or elsewhere within the breast. Radiation therapy after lumpectomy helps reduce the risk of cancer recurrence in the breast.

Adjuvant radiation therapy is also recommended for some women after a mastectomy, depending on the size of the tumor, the number of cancerous lymph nodes under the arm, and width of the cancer-free margin around the tumor removed by the surgeon.

Neoadjuvant radiation therapy is radiation therapy given before surgery to shrink a large tumor, which makes it easier to remove, although this option is not often used.

Radiation therapy can cause side effects, including fatigue, swelling of the breast, and skin changes. Other side effects may include upset stomach and loose bowel movements. Most side effects go away soon after treatment is finished. A small amount of the lung can be affected by the radiation, although the risk of pneumonitis, or a radiation-related inflammation of the lung tissue, is low. In the past, with older equipment and techniques, women who received radiation therapy to the left side of their chest had a small increase in the long-term risk of heart disease. Modern techniques are now able to spare most of the heart from radiation damage.

Many types of radiation therapy may be available to you; however, many of these methods have not been well-studied in women with metaplastic breast cancer. Talk with your doctor about the options, advantages, and disadvantages of each option.

Radiation therapy schedule

Standard radiation therapy after a lumpectomy is external-beam radiation therapy given Monday through Friday for five to six weeks. This often includes radiation therapy to the whole breast the first four to five weeks, followed by a more focused treatment to where the tumor was located in the breast for the remaining treatments.

This focused part of the treatment, called a boost, is standard for women with invasive breast cancer to reduce the risk of a recurrence in the breast. If there is evidence of cancer in the underarm lymph nodes, radiation therapy may also be given to the lymph node areas in the neck or underarm near the breast or chest wall. Usually, patients who have a mastectomy do not require radiation therapy. However, for patients with large cancers, several cancerous lymph nodes, or growth of cancer into the skin or chest wall, radiation may still be recommended after a mastectomy. Radiation therapy following a mastectomy can be given after reconstruction, and is usually given five days a week for five to six weeks.

There has been growing interest in newer regimens that shorten the length of treatment from six to seven weeks to periods of three to four weeks. In one method called hypo-fractionated radiation therapy, a higher daily dose is given to the whole breast each day so that the overall length of treatment is shortened to three to four weeks. This approach can also be combined with a boost to the tumor site either during or after the whole breast radiation treatments. Even shorter schedules have been studied and are in use in some centers, including accelerated partial breast radiation for five days, and others are researching a three-week schedule.

Partial breast irradiation

Partial breast irradiation (PBI) is radiation therapy that is given directly to the tumor area, usually after a lumpectomy, instead of the entire breast, as is usually done with standard radiation therapy. Targeting radiation directly to the tumor area more directly usually shortens the amount of time that patients need to receive radiation therapy. However, only some patients may be able to have PBI. Although early results have been promising, PBI is still being studied. It is the subject of a large, nationwide clinical trial, and the results on the safety and effectiveness compared with standard radiation therapy are not yet ready. This study will help find out which patients are the most likely to benefit from PBI.

PBI can be done with standard external-beam radiation therapy that is focused on the area where tumor was removed and not on the entire breast. PBI may also be performed using brachytherapy. Brachytherapy is the use of plastic catheters or a metal wand placed temporarily in the breast. Breast brachytherapy can involve short treatment times, ranging from one dose to one week, or it can be given as one dose in the operating room during surgery immediately after the tumor is removed. These forms of focused radiation are currently used only for patients with a smaller, less-aggressive, and node-negative tumor.

Intensity-modulated radiation therapy

Intensity-modulated radiation therapy (IMRT) is a more advanced way to give external-beam radiation therapy to the breast. The intensity of the radiation directed at the breast is varied to better target the tumor, spreading the radiation more evenly throughout the breast. The use of IMRT lessens the radiation dose and the possible damage to nearby organs, such as the heart and lung, and lower the risks of some immediate side effects, such as peeling of the skin during treatment. This can be especially important for women with medium to large breasts who have a higher risk of side effects, such as peeling and burns, compared with women with smaller breasts. IMRT may also help to lessen the long-term effects on the breast tissue that were common with older radiation techniques such as hardness, swelling, or discoloration.

Even though IMRT has fewer short-term side effects, many insurance providers may not cover IMRT. It is important to check with your health insurance company before any treatment begins to make sure it is covered.

Learn more about [radiation therapy](#) [11].

Chemotherapy

Chemotherapy is the use of drugs to destroy cancer cells, usually by stopping the cancer cells' ability to grow and divide. Chemotherapy is given by a medical oncologist, a doctor who specializes in treating cancer with medication.

Systemic chemotherapy is delivered through the bloodstream to reach cancer cells throughout the body. Common ways to give chemotherapy include an intravenous (IV) tube placed into a vein using a needle or in a pill or capsule that is swallowed (orally).

Chemotherapy may be given before surgery to shrink a large tumor and reduce the risk of recurrence, called neoadjuvant chemotherapy. It may also be given after surgery to reduce the risk of recurrence, called adjuvant chemotherapy. Chemotherapy is also given if a patient has a metastatic breast cancer recurrence.

A chemotherapy regimen (schedule) consists of a specific treatment schedule of drugs given at repeating intervals for a set period of time. Because it is unknown if metastatic carcinoma of the breast behaves like ductal or lobular cancer, some doctors will recommend slightly different chemotherapy.

For early-stage cancer, chemotherapy is usually given as a combination of drugs or as one drug after another. Chemotherapy after surgery is recommended for almost all women with metastatic cancer, because the disease often grows quickly and chemotherapy works well for this type of breast cancer. Currently, researchers are looking at adding carboplatin (Paraplatin) or cisplatin (Platinol) to improve how well standard chemotherapy works for metastatic and other triple-negative breast cancers.

Common drugs for breast cancer include:

- Capecitabine (Xeloda)
- Carboplatin
- Cisplatin
- Cyclophosphamide (Neosar)
- Docetaxel (Docefrez, Taxotere)
- Doxorubicin (Adriamycin)
- Pegylated liposomal doxorubicin (Doxil)
- Epirubicin (Ellence)
- Eribulin (Halaven)
- Fluorouracil (5-FU, Adrucil)
- Gemcitabine (Gemzar)
- Paclitaxel (Taxol)
- Protein bound paclitaxel (Abraxane)
- Vinorelbine (Navelbine)
- Ixabepilone (Ixempra)
- Methotrexate (multiple brand names)

Common chemotherapy regimens for the treatment early-stage, triple-negative breast cancer include:

- Doxorubicin/cyclophosphamide (AC) followed by paclitaxel or docetaxel
- Docetaxel/cyclophosphamide (TC)
- Docetaxel/doxorubicin/cyclophosphamide (TAC)

The side effects of chemotherapy depend on the individual and the drug and the dose used, but they can include fatigue, risk of infection, nausea and vomiting, hair loss, loss of appetite, and diarrhea. These side effects usually go away once treatment is finished. Rarely, long-term side effects may occur, such as heart damage, nerve damage, or secondary cancers, but studies have shown that these side effects do not shorten a person's life.

Learn more about [chemotherapy](#) [12] and [preparing for treatment](#) [13]. The medications used to treat cancer are continually being evaluated. Talking with your doctor is often the best way to learn about the medications prescribed for you, their purpose, and their potential side effects or interactions with other medications. Learn more about your prescriptions by using [searchable drug databases](#) [14].

Getting care for symptoms and side effects

Cancer and its treatment often cause side effects. In addition to treatment to slow, stop, or eliminate the cancer, an important part of cancer care is relieving a person's symptoms and side effects. This approach is called palliative or supportive care, and it includes supporting the patient with his or her physical, emotional, and social needs.

Palliative care can help a person at any stage of illness. People often receive treatment for the cancer and treatment to ease side effects at the same time. In fact, patients who receive both often have less severe symptoms, better quality of life, and report they are more satisfied with treatment.

Palliative treatments vary widely and often include medication, nutritional changes, relaxation techniques, and other therapies. You may also receive palliative treatments similar to those meant to eliminate the cancer, such as chemotherapy, surgery, and radiation therapy. Talk with your doctor about the goals of each treatment in the treatment plan.

Before treatment begins, talk with your health care team about the possible side effects of your specific treatment plan and supportive care options. And during and after treatment, be sure to tell your doctor or another health care team member if you are experiencing a problem so it is addressed as quickly as possible. Learn more about [palliative care](#) [15].

Remission and the chance of recurrence

A remission is when no cancer is seen after imaging studies such as CT and bone scans and there are no symptoms. This may also be called "no evidence of disease" or NED.

After treatment for early-stage breast cancer, there is always a risk for recurrence. This uncertainty leads to many survivors feeling worried or anxious that the cancer will come back. Metaplastic cancer, as well as other types of triple-negative breast cancer, is most likely to come back within the first five years after diagnosis. While many remissions are permanent, it's important to talk with your doctor about the possibility of the cancer returning. Understanding the

risk of recurrence and the treatment options may help you feel more prepared if the cancer does return. Learn more about [coping with the fear of recurrence](#) [16].

If the cancer does return after the original treatment, it is called recurrent cancer. It may come back in the breast, which is called a local recurrence; in the chest wall, called a regional recurrence; or in another part of the body, including distant organs such as the lungs, liver, and bones.

Generally, a recurrence is found when a person has symptoms. These symptoms depend on where in the body the cancer returns and may include:

- A lump under the arm or along the chest wall
- Bone pain or fractures, which may be a sign that the cancer has spread to the bone
- Headaches or seizures, which may be a sign that the cancer has spread to the brain
- Chronic coughing or trouble breathing, a sign that the cancer has spread to the lungs
- Abdominal pain or yellow skin and eyes from a condition called jaundice, which is a sign that the disease may have spread to the liver

When this occurs, a cycle of testing will begin again to learn as much as possible about the recurrence, including whether the cancer's stage has changed. A biopsy of the recurrent site is often recommended to be certain of the diagnosis and to check for tumor characteristics that might have changed from the time of the original diagnosis. After testing is done, you and your doctor will talk about your treatment options. Often the treatment plan will include the therapies described above such as surgery, chemotherapy, and radiation therapy, but they may be used in a different combination or given at a different pace. Your doctor may also suggest clinical trials that are studying new ways to treat this type of recurrent cancer.

The treatment of recurrent breast cancer depends on the previous treatment(s), the time since the original diagnosis, and the characteristics of the tumor. A local recurrence is usually considered curable with further treatment.

- For women with a local recurrence within the breast after initial treatment with lumpectomy and adjuvant radiation therapy, the recommended treatment is mastectomy. Usually the cancer is completely removed with this treatment. Chemotherapy is often given as well to increase the chance that the cancer will not recur in other places in the body.
- For women with a local or regional recurrence in the chest wall after an initial mastectomy, surgical removal of the recurrence followed by radiation therapy to the chest wall and lymph nodes is the recommended treatment, unless radiation therapy has already been given because radiation therapy cannot usually be given at full dose to the same area more than once. Again, chemotherapy is often given as well to try to prevent further recurrences.

People with recurrent cancer often experience emotions such as disbelief or fear. Patients are encouraged to talk with their health care team about these feelings and ask about support services to help them cope. Learn more about [dealing with cancer recurrence](#) [17].

Metastatic breast cancer

If cancer has spread to another location in the body, it is called metastatic cancer or metastatic

recurrent cancer. Symptoms of metastatic breast cancer may be related to the location of metastasis and may include changes in vision, changes in energy levels, feeling ill, or extreme fatigue. A metastatic recurrence is generally not considered curable, but it is often treatable. Some patients live years after a metastatic recurrence of breast cancer.

Patients with this diagnosis are encouraged to talk with doctors who are experienced in treating this stage of cancer, because there can be different opinions about the best treatment plan. Learn more about seeking a [second opinion](#) [18] before starting treatment, so you are comfortable with the treatment plan chosen. This discussion may include [clinical trials](#) [3].

The goal of treatment for advanced disease is to lengthen a patient's life and maintain or improve a patient's quality of life for as long as possible. Your health care team may recommend a treatment plan that includes chemotherapy, which is generally the primary treatment for metastatic triple-negative breast cancer. Targeted therapies in clinical trials (see [Latest Research](#) [4]) should always be considered, and are preferred over standard therapy in most situations. Radiation therapy and surgery may be used in certain situations for women with a distant metastatic recurrence. Often radiation is used to treat painful bone metastases. Supportive care will also be important to help relieve symptoms and side effects.

Although metastatic breast cancer most often spreads to organs such as the liver or lung, it may spread to the bone, as well. The medications discussed below are available to help control bone destruction and reduce bone pain associated with cancer that has spread to the bone.

Drugs that block bone destruction

- Bisphosphonates are drugs that block the cells that destroy bone, called osteoclasts. Bisphosphonates are commonly used in low doses to prevent and treat osteoporosis. Osteoporosis is the thinning of the bones. In women with breast cancer that has spread to bone, higher doses of bisphosphonates have been shown to reduce the side effects of cancer in the bone, including broken bones and pain. Pamidronate (Aredia) and zoledronic acid (Zometa) are two intravenous bisphosphonates used to treat breast cancer bone metastasis. These drugs may also be able to reduce breast cancer recurrence, particularly in bone, when given after treatment in postmenopausal women, although the research on this effect is conflicting.
- Denosumab (Xgeva) is another osteoclast-targeted therapy called a RANK ligand inhibitor. Recent studies have shown that denosumab works well to treat breast cancer bone metastases, and may be better than bisphosphonates at controlling the symptoms of bone metastases. Denosumab is also effective at treating osteoporosis and is being studied as a cancer treatment for early-stage breast cancer.

Learn more about [drugs that block bone destruction](#) [19].

For most patients, a diagnosis of metastatic cancer is very stressful and, at times, difficult to bear. Patients and their families are encouraged to talk about the way they are feeling with doctors, nurses, social workers, or other members of the health care team. It may also be helpful to talk with other patients, including through a support group.

If treatment fails

Recovery from cancer is not always possible. If treatment is not successful, the disease may be called advanced or terminal cancer.

This diagnosis is stressful, and it may be difficult to discuss. However, it is important to have open and honest conversations with your doctor and health care team to express your feelings, preferences, and concerns. The health care team is there to help, and many team members have special skills, experience, and knowledge to support patients and their families. Making sure a person is physically comfortable and free from pain is extremely important.

Patients who have advanced cancer and who are expected to live less than six months may want to consider a type of palliative care called hospice care. Hospice care is designed to provide the best possible quality of life for people who are near the end of life. You and your family are encouraged to think about where you would be most comfortable: at home, in the hospital, or in a hospice environment. Nursing care and special equipment can make staying at home a workable alternative for many families. Learn more about [advanced cancer care planning](#) [20].

After the death of a loved one, many people need support to help them cope with the loss. Learn more about [grief and loss](#) [21].

The next section helps explain clinical trials, which are research studies. Use the menu on the side of your screen to select About Clinical Trials, or you can select another section, to continue reading this guide.

Links:

- [1] <http://www.cancer.net/cancer-types/breast-cancer-metaplastic/treatment-options>
- [2] <http://www.cancer.net/about-us>
- [3] <http://www.cancer.net/node/18612>
- [4] <http://www.cancer.net/node/18615>
- [5] <http://www.cancer.net/node/24932>
- [6] <http://www.cancer.net/node/18603>
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