Learn About Triple Negative Breast Cancer (TNBC)

For people who have stage 1, 2 or 3 breast cancer

Read this resource to learn:

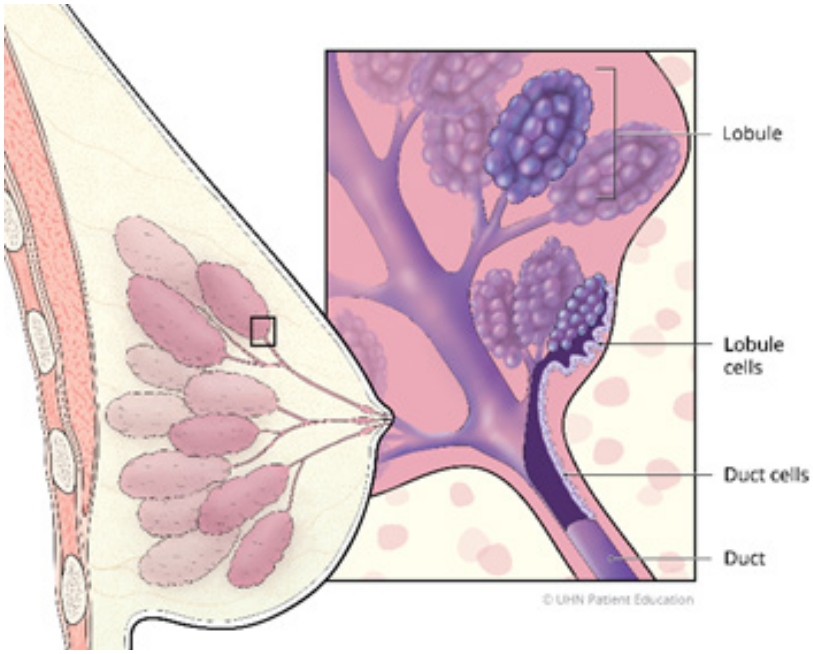
- What is breast cancer
- What is Triple Negative Breast Cancer (TNBC)
- How is Triple Negative Breast Cancer diagnosed
- What are lymph nodes and why are they tested for cancer
- What are the treatments options for Triple Negative Breast Cancer (TNBC)

What is breast cancer?

Breast cancer is cancer that starts in the breast. It can start in one breast or both breasts. Breast cancer starts when cells in the breast start to grow and divide out of control. Anyone can get breast cancer. However breast cancer is more common in people assigned female at birth, as they have more breast tissue than people assigned male at birth.

Breast cancer can start in many areas of the breast. The most common areas are the ducts that carry milk to the nipples, or the milk-producing glands called lobules.

The structure of the female breast



The image on the left shows the ducts and lobules inside the chest where is it common for breast cancer to develop.

The structure of the male breast

The image to the left shows the ducts inside the chest where breast cancer commonly develops. People assigned male at birth do not have many lobules or no lobules in the breast tissue.

What is triple negative breast cancer?

Many breast cancer cells have receptors for the hormones estrogen or progesterone, or for a protein called HER2. Receptors are a type of protein found on cells. These receptors pick up signals from these hormones that tell the cancer cells to grow.

“Triple-negative” means that the breast cancer cells do not have any of these receptors.

Triple negative breast cancers are:

- Estrogen receptor-negative (ER-negative)
- Progesterone receptor-negative (PR-negative)
- HER2-negative

Read the brochure “Learn about breast cancer receptor status and how it guides treatment”for more information about receptors and receptor status.

How common is triple negative breast cancer?

Triple negative breast cancer (usually shortened to TNBC) is less common than other breast cancers. For example, out of 100 people with breast cancers, about 10 to 15 people will have TNBC breast cancer.

This type of cancer tends to spread faster than other breast cancers. Most TNBCs are a type of invasive ductal carcinoma. Invasive ductal carcinoma starts in the milk ducts and spreads to the nearby breast tissue.

For more information read the brochures “Learn About Invasive Ductal Carcinoma (IDC)” and “Invasive Lobular Carcinoma (ILC)”.

How is triple negative breast cancer (TNBC) diagnosed?

Your doctor will do these tests to find TNBC and help your cancer care team develop a treatment plan for you . The tests include:

- **Physical exam:** Your doctor examines and feels your chest to find any lumps or changes in the breast tissue or lymph nodes closest to the breast.
- **Ultrasound:** Uses sound waves to build a picture of the breast. For more information read Preparing for Your Breast Ultrasound
- **Mammogram:** Takes x-ray pictures of the breast to find lumps and any abnormalities.
- **MRI (magnetic resonance imaging)**: Creates detailed images of the inside of your body. For more information read Preparing for your Magnetic Resonance Imaging (MRI) Resource
- **Biopsy:** A radiologist removes a small sample of tissue from the breast for testing. A radiologist is a medical doctor specially trained to diagnose diseases using medical imaging (for example, x-rays, and ultrasounds). The sample is send to a pathologist who checks to see if cancer is present. A pathologist is a medical doctor specially trained to study tissue and fluid samples to help make a diagnosis.

  If cancer cells are foundin the sample, the pathologist will check the receptor status of the cancer cells.

You will have a biopsy of the lymph nodes if the ultrasound shows there may be cancer in the lymph nodes. Lymph nodes are small, bean-shaped organs that are part of the body’s immune system.

Will I need extra tests?

Extra tests are done if imagining shows:

- your tumour is a certain size
- there is cancer in many lymph nodes
- the tumour is a certain size and there is cancer in many lymph nodes

These extra tests show if the cancer spread to other parts of the body. Your doctor will also order extra tests if you have new symptoms (for example, pain, shortness of breath) not related to other conditions.

Not everyone needs these tests. These tests are **not** usually done on patients with Stage 1 or 2 breast cancer. Stage 1 cancer means the breast cancer is small and has not spread anywhere else. Stage 2 means the tumour is larger than at stage 1 and may have spread to a few nearby lymph nodes. These tests are only meant to look for cancer that has spread to the rest of the body.

Extra tests can include:

- blood tests to check general health and kidney function
- bone scan to show any abnormal areas in your bone that the cancer might have spread to (for more information see Bone Scan)
- CT scan which are x-rays that build a detailed 3-dimensional image of your body (for more information see CT Scan)
- PET scan to check if cancer has spread to the lymph nodes and other parts of the body

Genetic testing

If you have TNBC and are younger than 60 years of age, you may get genetic testing. A gene called BRCA1 is linked to a greater risk of getting TNBC. The BRCA1 gene stops the cells in our body from growing out of control. If the gene mutates (changes) it can cause cells to divide without control. Cells that divide when they are not supposed to may become a cancer. This mutated gene can be passed down (inherited) through families.
Watch the video Understand Hereditary Cancer [YouTube] www.youtube.com/watch?v=i15TGMmUdKY&t=15s for more information.

How is TNBC treated?

How TNBC is treated depends on:

- stage (the size of the tumour and how far the cancer has spread)
- grade (how different the cancer cells are from healthy cells)
- what treatment option you prefer

The treatments and the order you may get them are based on details about your cancer.

In most cases, treatment will include:

- chemotherapy (with or without immunotherapy), followed by
- surgery, then
- radiation, then
- other possible treatments.

Your doctor will talk to you about all your treatment options

Chemotherapy

Chemotherapy (also known as chemo) uses medicines to kill cancer cells. Chemotherapy is a systemic therapy, which means it travels through your blood to reach cells throughout your entire body. It is a common type of cancer treatment. Your chemotherapy treatment will probably include a combination of medicines.

Immunotherapy with chemotherapy

In triple negative breast cancer, immunotherapy is used at the same time as chemotherapy if the tumour is large . Or you might have immunotherapy if the cancer has spread to the lymph nodes.

Immunotherapy would not be used if you had an auto-immune problem in the past.

Surgery

Surgery may include:

- Lumpectomy (remove a part of the breast) or mastectomy (remove the whole breast), and
- Sentinel Lymph Node Biopsy (remove a few lymph nodes that are under the armpit and closest to the breast and test for cancer), or
- Axillary Lymph Node Dissection (remove around 10 to 30 lymph nodes from the armpit). Your surgeon may recommend ALND in certain cases.

For more information read the brochure, "Your Guide to Having Breast Cancer Surgery".

Radiation therapy

Radiation therapy (also called external beam radiation therapy) uses high-energy radiation to kill cancer cells. It works by damaging and later killing the cells in the treatment area.

If you had a lumpectomy, you need radiation therapy after surgery. Radiation therapy may help lower the chance that your cancer will come back in the breast, lymph nodes or both.

If you had a mastectomy, you may need radiation treatment after surgery. You may need radiation treatment if the tumour is large or cancer is found in the lymph nodes.

Your doctor will discuss with you which treatment option is right for you. For more information about other treatment options visit the Health Information "Medical Tests and Treatments".

How long will my TNBC treatment be?

It takes between 2 to 4 weeks to recover from breast cancer surgery. It may take you longer to heal if your lymph nodes are removed or if you got breast reconstruction surgery.
For more information on breast reconstruction, read the brochure "Breast Reconstruction".

How long it will take to get all treatment types depends on the location and stage of the cancer. Every person's experience is different. You may have:

- chemotherapy (with or without immunotherapy) for 16 to 24 weeks
- surgery 4 to 6 weeks after chemotherapy (with or without immunotherapy)
- radiation therapy 6 to 12 weeks after surgery lasting for 3 to 5 weeks

Some people may get more treatment for 6 months after radiation therapy. Your doctor will talk to you about how long treatment may take.

Questions to ask your doctor about your breast cancer

These questions can help you think about what you would like to know after your diagnosis (find the cause of an illness).

- What do 'staging' and 'grading' mean? What stage and grade of cancer do I have?
- What is my receptor status and what does this mean?
- What are my treatment options?
- What are the reasons for and against these treatment options?
- How long will my treatment take?
- What are the short-term side effects of the treatments?
- What are the long-term side effects of the treatments?

- What signs or symptoms should I tell you about?
- Do you expect to cure my cancer with these treatments? If not, what is the goal of these treatments?
- How can I prepare for my treatment appointment?
- What can I do to prevent or manage side effects?
- Will I be able to do my normal activities?
- Will this treatment affect my sex life?
- Will this treatment affect my ability to have children? If so, is there fertility preservation options available?
- Do I need follow-up care?
- Will my cancer come back?
- Are there support groups or resources I can turn to?

See "My Questions" for more questions you may want to ask your cancer care team.

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