Understanding a Breast Cancer Diagnosis

Breast Cancer Grade and Other Tests

Doctors use information from your breast biopsy to learn a lot of important things about the exact kind of breast cancer you have.

- Breast Cancer Grades
- Breast Cancer Ploidy and Cell Proliferation
- Breast Cancer Hormone Receptor Status
- Breast Cancer HER2 Status
- Breast Cancer Gene Expression Tests
- Understanding Your Pathology Report

Stages and Outlook (Prognosis)

If you have been diagnosed with breast cancer, tests will be done to find out the extent (stage) of the cancer. The stage of a cancer helps determine how serious the cancer is and how best to treat it.

- Imaging Tests to Find Out if Breast Cancer Has Spread
- Breast Cancer Stages
- Breast Cancer Survival Rates

Questions to Ask About Your Breast Cancer

You can take an active role in your breast cancer care by learning about your cancer and its treatment and by asking questions. Get a list of key questions here.
Questions to Ask Your Doctor About Breast Cancer

Connect with a breast cancer survivor

Reach To Recovery

The American Cancer Society Reach To Recovery® program connects people facing breast cancer – from diagnosis through survivorship – with trained volunteers who are breast cancer survivors. Our volunteers provide one-on-one support through our website and mobile app to help those facing breast cancer cope with diagnosis, treatment, side effects, and more.

Breast Cancer Grades

Knowing a breast cancer’s grade is important to understand how fast it’s likely to grow and spread.

What is a breast cancer’s grade?

Cancer cells are given a grade when they are removed from the breast and checked in the lab. The grade is based on how much the cancer cells look like normal cells. The grade is used to help predict your outcome (prognosis) and to help figure out what treatments might work best.

A lower grade number (1) usually means the cancer is slower-growing and less likely to spread.

A higher number (3) means a faster-growing cancer that’s more likely to spread.

Grading breast cancer cells

Three cancer cell features are studied and each is assigned a score. The scores are then added to get a number between 3 and 9 that is used to get a grade of 1, 2, or 3, which is noted on your pathology report. Sometimes the terms well differentiated, moderately differentiated, and poorly differentiated are used to describe the grade.
instead of numbers:

- **Grade 1 or well differentiated** (score 3, 4, or 5). The cells are slower-growing, and look more like normal breast tissue.
- **Grade 2 or moderately differentiated** (score 6, 7). The cells are growing at a speed of and look like cells somewhere between grades 1 and 3.
- **Grade 3 or poorly differentiated** (score 8, 9). The cancer cells look very different from normal cells and will probably grow and spread faster.

Our information about [pathology reports](https://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report.html) can help you understand details about your breast cancer.

### Grading ductal carcinoma in situ (DCIS)

DCIS is also graded on how abnormal the cancer cells look.

**Necrosis** (areas of dead or dying cancer cells) is also noted. If there is necrosis, it means the tumor is growing quickly.

- The term *comedocarcinoma* is often used to describe DCIS with a lot of necrosis.
- The term *comedonecrosis* may be used if a breast duct is filled with dead and dying cells.

Comedocarcinoma and comedonecrosis are linked to a higher grade of DCIS.

See [Understanding Your Pathology Report: Ductal Carcinoma In Situ](https://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report/breast-pathology/ductal-carcinoma-in-situ.html) for more on how DCIS is described.

### Hyperlinks

1. [www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report.html](https://www.cancer.org/treatment/understanding-your-diagnosis/tests/understanding-your-pathology-report.html)

### References
Breast Cancer Ploidy and Cell Proliferation

Finding out more information about the DNA in the breast cancer cells can help predict how fast the cancer cells are dividing and growing.

What is ploidy and what does it mean?

The ploidy of cancer cells refers to the amount of DNA they contain.

- If there’s a normal amount of DNA in the cells, they are said to be diploid. These cancers tend to grow and spread more slowly.
- If the amount of DNA is abnormal, then the cells are called aneuploid. These cancers tend to be more aggressive. (They tend to grow and spread faster.)

Tests of ploidy may help figure out long-term outcomes, but they rarely change treatment and are considered optional. They are not usually recommended as part of a routine breast cancer work-up.

What is cell proliferation?

Cell proliferation is how quickly a cancer cell copies its DNA and divides into 2 cells. If the cancer cells are dividing more rapidly, it means the cancer is faster growing or more
The rate of cancer cell proliferation can be estimated by doing a **Ki-67 test**. In some cases, Ki-67 testing to measure cell proliferation may be used to help plan treatment or estimate treatment outcomes. But test results can vary depending on things like the lab doing the testing, the testing method, and what part of the tumor is tested.

Another way to determine cell division is the **S-phase fraction**, which is the percentage of cells in a sample that are copying their DNA as it gets ready to divide into 2 new cells.

If the S-phase fraction or Ki-67 labeling index is high, it means that the cancer cells are dividing more rapidly.

**References**


Breast Cancer Hormone Receptor Status

Breast cancer cells taken out during a **biopsy** or **surgery** will be tested to see if they have certain proteins that are estrogen or progesterone receptors. When the hormones estrogen and progesterone attach to these receptors, they fuel the cancer growth. Cancers are called hormone receptor-positive or hormone receptor-negative based on whether or not they have these receptors (proteins). Knowing the hormone receptor
status is important in deciding treatment options. Ask your doctor about your hormone receptor status and what it means for you.

**What are estrogen and progesterone receptors?**

Receptors are proteins in or on cells that can attach to certain substances in the blood. Normal breast cells and some breast cancer cells have receptors that attach to the hormones estrogen and progesterone, and depend on these hormones to grow.

Breast cancer cells may have one, both, or none of these receptors.

- **ER-positive**: Breast cancers that have estrogen receptors are called *ER-positive* (or ER+) cancers.
- **PR-positive**: Breast cancers with progesterone receptors are called *PR-positive* (or PR+) cancers.
- **Hormone receptor-positive**: If the cancer cell has one or both of the receptors above, the term *hormone-receptiive positive* (also called *hormone-positive* or HR+) breast cancer may be used.
- **Hormone receptor-negative**: If the cancer cell has neither the estrogen nor the progesterone receptor, it’s called hormone-receptor negative (also called *hormone-negative* or HR-).

Keeping the hormones estrogen and progesterone from attaching to the receptors can help keep the cancer from growing and spreading. There are drugs that can be used to do this.³

**Why is knowing hormone receptor status important?**

Knowing the hormone receptor status of your cancer helps doctors decide how to treat it. If your cancer has one or both of these hormone receptors, hormone therapy drugs can be used to either lower estrogen levels or stop estrogen from acting on breast cancer cells. This kind of treatment is helpful for hormone receptor-positive breast cancers, but it doesn’t work on tumors that are hormone receptor-negative (both ER- and PR-negative).

All invasive breast cancers should be tested for both of these hormone receptors either on the biopsy sample or when the tumor is removed with surgery. About 2 of 3 breast cancers have at least one of these receptors. This percentage is higher in older women than in younger women. DCIS should be checked for hormone receptors, too.
What do the hormone receptor test results mean?

A test called an immunohistochemistry (IHC) is used most often to find out if cancer cells have estrogen and progesterone receptors. The test results will help guide you and your cancer care team in making the best treatment decisions.

Test results will give you your hormone receptor status. It will say a tumor is hormone receptor-positive if at least 1% of the cells tested have estrogen and/or progesterone receptors. Otherwise the test will say the tumor is hormone receptor-negative.

**Hormone receptor-positive** (or hormone-positive) breast cancer cells have either estrogen (ER) or progesterone (PR) receptors or both. These breast cancers can be treated with hormone therapy drugs that lower estrogen levels or block estrogen receptors. Hormone receptor-positive cancers tend to grow more slowly than those that are hormone receptor-negative. Women with hormone receptor-positive cancers tend to have a better outlook in the short-term, but these cancers can sometimes come back many years after treatment.

**Hormone receptor-negative** (or hormone-negative) breast cancers have neither estrogen nor progesterone receptors. Treatment with hormone therapy drugs is not helpful for these cancers. These cancers tend to grow faster than hormone receptor-positive cancers. If they come back after treatment, it’s often in the first few years. Hormone receptor-negative cancers are more common in women who have not yet gone through menopause.

**Triple-negative** breast cancer cells don’t have estrogen or progesterone receptors and also don’t make too much of the protein called HER2. These cancers tend to be more common in women younger than 40 years of age, who are African-American, or who have a mutation in the BRCA 1 gene. Triple-negative breast cancers grow and spread faster than most other types of breast cancer. Because the cancer cells don’t have hormone receptors, hormone therapy is not helpful in treating these cancers. And because they don’t have too much HER2, drugs that target HER2 aren’t helpful, either. Chemotherapy can still be useful. See [Triple-negative Breast Cancer](#) to learn more.

**Triple-positive** cancers are ER-positive, PR-positive, and HER2-positive. These cancers can be treated with hormone drugs as well as drugs that target HER2.

**Hyperlinks**


References


Last Revised: September 20, 2019
Breast Cancer HER2 Status

Some women have breast tumors with higher levels of a protein known as HER2 – these are called HER2-positive breast cancers. Ask your doctor about your HER2 status and what it means for you.

What is HER2 and what does it mean?

HER2 is a growth-promoting protein on the outside of all breast cells. Breast cancer cells with higher than normal levels of HER2 are called HER2-positive. These cancers tend to grow and spread faster than other breast cancers, but are much more likely to respond to treatment with drugs that target the HER2 protein.

How are breast tumors tested for HER2?

Women newly diagnosed with invasive breast cancers should be tested for HER2.

A biopsy or surgery sample of the cancer is usually tested with either immunohistochemical stains (IHC) or Fluorescent in situ hybridization (FISH).

See Testing Biopsy and Cytology Specimens for Cancer and Understanding Your Pathology Report: Breast Cancer to get more details about these tests.

What do the test results mean?

The results of HER2 testing will guide you and your cancer care team in making the best treatment decisions.

It is not clear if one test is more accurate than the other, but FISH is more expensive and takes longer to get the results. Often the IHC test is done first.

- If the IHC result is 0 or 1+, the cancer is considered HER2-negative. These cancers do not respond to treatment with drugs that target HER2.
- If the IHC result is 3+, the cancer is HER2-positive. These cancers are usually treated with drugs that target HER2.
- If the IHC result is 2+, the HER2 status of the tumor is not clear and is called "equivocal." This means that the HER2 status needs to be tested with FISH to clarify the result.
**Triple-negative** breast tumors don’t have too much HER2 and also don’t have estrogen or progesterone receptors. They are HER2-, ER-, and PR-negative. Hormone therapy and drugs that target HER2 are not helpful in treating these cancers. See [Triple-negative Breast Cancer](#) to learn more.

**Triple-positive** breast tumors are HER2-, ER-, and PR-positive. These cancers are treated with hormone drugs as well as drugs that target HER2.

**Hyperlinks**


**References**


Breast Cancer Gene Expression Tests

Gene expression tests are a form of personalized medicine - a way to learn more about your cancer and tailor your treatment.

These tests are done on breast cancer cells after surgery or biopsy to look at the patterns of a number of different genes. This process is sometimes called gene expression profiling.

The patterns found can help predict if certain early stage breast cancers are likely to come back after initial treatment. Doctors can also use the information from some of these tests to know which women will most likely benefit from chemotherapy after breast surgery.

Testing options

The Oncotype DX, MammaPrint, and Prosigna are examples of tests that look at different sets of breast cancer genes. More tests are in development. The type of test that's used will depend on your situation. Keep in mind that these tests are usually used for early stage cancers, and testing isn't needed in all cases. For example, if breast cancer is advanced, it might be clear that chemotherapy is needed, even without gene expression testing.

Oncotype DX

The Oncotype DX test is used for stage I, II or IIIa hormone receptor-positive tumors that have not spread to more than 3 lymph nodes and are HER2 negative. It can also be
This test looks at a set of 21 genes in cancer cells from tumor biopsy or surgery samples to get a “recurrence score,” which is a number between 0 and 100. The score reflects the risk of the breast cancer coming back (recurring) in the next 10 years and how likely you will benefit from getting chemo after surgery.

- **A low score (0-25) means a low risk of recurrence.** Most women with low-recurrence scores do not benefit from chemotherapy and have good outcomes when treated with hormone therapy.
- **A high score (26-100) means a higher risk of recurrence.** Women with high-recurrence scores are more likely to benefit from the addition of chemotherapy to hormone therapy to help lower the chance of the cancer coming back.

For women age 50 or younger who have a low recurrence score of 16-25, there might be a small to moderate benefit from the addition of chemotherapy. Talk to your doctor about your options.

**MammaPrint**

The MammaPrint test can be used to help determine how likely breast cancers are to recur in a distant part of the body after treatment. It can be used for any type of invasive breast cancer that’s 5cm (about 2 inches) or smaller and has spread to no more than 3 lymph nodes. This test can be done regardless of the cancer’s hormone and HER2 status.

The test looks at 70 different genes to determine if the cancer is at low risk or high risk of coming back (recurring) in the next 10 years. The test results come back as either “low risk” or “high risk.” This test is also being studied as a way to determine whether certain women might benefit from chemotherapy.

**Prosigna**

The Prosigna test can be used to predict the risk of recurrence in the next 10 years in women who have gone through menopause and whose invasive breast cancers are hormone receptor-positive. It can be used to test stage I or II cancers that have not spread to the lymph nodes, or stage II cancers with no more than 3 positive lymph nodes.

The test looks at 50 genes and classifies the results as low, intermediate, or high risk.
What do the test results mean?

Some gene expression testing can help predict which women will most likely benefit from chemotherapy after breast surgery. (This is called *adjuvant chemotherapy*.) *Hormone therapy*\(^4\) is a standard treatment for hormone receptor-positive breast cancers, but it’s not always clear when to use chemotherapy. These tests can help guide that decision. Still, these tests cannot tell any one woman for certain if her cancer will come back with or without chemotherapy.

These tests continue to be studied in large *clinical trials*\(^5\) to better understand how and when to best use them. In the meantime, ask your doctor if these tests might be useful for you.

**Hyperlinks**


**References**


Last Revised: September 20, 2019

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**Imaging Tests to Find Out if Breast Cancer Has Spread.**

If you have been diagnosed with breast cancer, you might need more tests if your doctor thinks the cancer might have spread based on your symptoms, the results of your physical exam, or the size of your tumor. Not all women with breast cancer need
these tests. Your doctor will talk with you about which (if any) of these tests you will need.

**Chest x-ray**: This test may be done to see if the cancer has spread to your lungs.

**CT scan** (computed tomography): A CT scan uses x-rays taken from different angles, which are combined by a computer to make detailed pictures of the inside of your body. This test is most often used to look at the chest and/or belly (abdomen) to see if breast cancer has spread to other organs. It can also be used to guide a biopsy needle into an area of concern.

**MRI** (magnetic resonance imaging): This test makes detailed pictures using radio waves and strong magnets instead of x-rays. This test can be used to look at the breasts or other parts of the body. MRIs can be more uncomfortable than CT scans because they take longer, and you often need to lie in a narrow tube while the test is done.

**Ultrasound**: For an ultrasound, a wand that gives off sound waves is moved over the skin to take pictures of the inside of the body. A gel is often put on your skin first.

**PET scan** (positron emission tomography): For this test, a form of radioactive sugar (called FDG) is put into a vein and travels throughout the body. Cancer cells absorb high amounts of this sugar. A special camera then takes pictures that show the areas where the sugar collected throughout the body. A PET scan is often combined with a CT scan (known as a PET/CT scan).

**Bone scan**: This test can help show if the cancer has spread to your bones. It is similar to a PET scan, but it uses a different radioactive substance that settles in areas of change in the bones. It can show all of the bones of your body at the same time and can find small areas of cancer spread not seen on plain x-rays.

**Hyperlinks**

1. [www.cancer.org/treatment/understanding-your-diagnosis/tests/x-rays-and-other-radiographic-tests.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/x-rays-and-other-radiographic-tests.html)
3. [www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/mri-for-cancer.html)
5. [www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine.html](http://www.cancer.org/treatment/understanding-your-diagnosis/tests/nuclear-medicine.html)
Breast Cancer Stages

After someone is diagnosed with breast cancer, doctors will try to figure out if it has spread, and if so, how far. This process is called staging. The stage of a cancer describes how much cancer is in the body. It helps determine how serious the cancer is and how best to treat it. Doctors also use a cancer’s stage when talking about survival statistics.

The earliest stage breast cancers are stage 0 (carcinoma in situ). It then ranges from stage I (1) through IV (4). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. And within a stage, an earlier letter means a lower stage.

How is the stage determined?

The staging system most often used for breast cancer is the American Joint Committee on Cancer (AJCC) TNM system. The most recent AJCC system, effective January 2018, has both clinical and pathologic staging systems for breast cancer:
The pathologic stage (also called the surgical stage) is determined by examining tissue removed during an operation. Sometimes, if surgery is not possible right away or at all, the cancer will be given a clinical stage instead. This is based on the results of a physical exam, biopsy, and imaging tests. The clinical stage is used to help plan treatment. Sometimes, though, the cancer has spread further than the clinical stage estimates, and may not predict the patient’s outlook as accurately as a pathologic stage.

In both staging systems, 7 key pieces of information are used:

- **The extent (size) of the tumor (T):** How large is the cancer? Has it grown into nearby areas?
- **The spread to nearby lymph nodes (N):** Has the cancer spread to nearby lymph nodes? If so, how many?
- **The spread (metastasis) to distant sites (M):** Has the cancer spread to distant organs such as the lungs or liver?
- **Estrogen Receptor (ER) status:** Does the cancer have the protein called an estrogen receptor?
- **Progesterone Receptor (PR) status:** Does the cancer have the protein called a progesterone receptor?
- **Her2 status:** Does the cancer make too much of a protein called Her2?
- **Grade of the cancer (G):** How much do the cancer cells look like normal cells?

In addition, Oncotype Dx® Recurrence Score results may also be considered in the stage in certain circumstances.

Once all of these factors have been determined, this information is combined in a process called stage grouping to assign an overall stage. For more information see Cancer Staging2.

Details about the first three factors (the TNM categories) are below. However, the addition of information about ER, PR, and Her2 status along with grade has made stage grouping for breast cancer more complex than for other cancers. Because of this, it is best to ask your doctor about your specific stage and what it means.

**Details of the TNM staging system**

Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. The categories below use the
pathologic (surgical) definitions.

**T categories for breast cancer**

T followed by a number from 0 to 4 describes the main (primary) tumor's size and if it has spread to the skin or to the chest wall under the breast. Higher T numbers mean a larger tumor and/or wider spread to tissues near the breast.

**TX:** Primary tumor cannot be assessed.

**T0:** No evidence of primary tumor.

**Tis:** Carcinoma in situ (DCIS, or Paget disease of the breast with no associated tumor mass)

**T1** (includes T1a, T1b, and T1c): Tumor is 2 cm (3/4 of an inch) or less across.

**T2:** Tumor is more than 2 cm but not more than 5 cm (2 inches) across.

**T3:** Tumor is more than 5 cm across.

**T4** (includes T4a, T4b, T4c, and T4d): Tumor of any size growing into the chest wall or skin. This includes inflammatory breast cancer.

**N categories for breast cancer**

N followed by a number from 0 to 3 indicates whether the cancer has spread to lymph nodes near the breast and, if so, how many lymph nodes are involved.

Lymph node staging for breast cancer is based on how the nodes look under the microscope, and has changed as technology has improved. Newer methods have made it possible to find smaller and smaller collections of cancer cells, but experts haven’t been sure how much these tiny deposits of cancer cells affect outlook.

It’s not yet clear how much cancer in the lymph node is needed to see a change in outlook or treatment. This is still being studied, but for now, a deposit of cancer cells must contain at least 200 cells or be at least 0.2 mm across (less than 1/100 of an inch) for it to change the N stage. An area of cancer spread that is smaller than 0.2 mm (or fewer than 200 cells) doesn’t change the stage, but is recorded with abbreviations (i+ or mol+) that indicate the type of special test used to find the spread.
If the area of cancer spread is at least 0.2 mm (or 200 cells), but still not larger than 2 mm, it is called a **micrometastasis** (one mm is about the size of the width of a grain of rice). Micrometastases are counted only if there aren't any larger areas of cancer spread. Areas of cancer spread larger than 2 mm are known to affect outlook and do change the N stage. These larger areas are sometimes called **macrometastases**, but are more often just called metastases.

**NX:** Nearby lymph nodes cannot be assessed (for example, if they were removed previously).

**N0:** Cancer has not spread to nearby lymph nodes.

**N0(i+):** The area of cancer spread contains fewer than 200 cells and is smaller than 0.2 mm. The abbreviation "i+" means that a small number of cancer cells (called isolated tumor cells) were seen in routine stains or when a special type of staining technique, called **immunohistochemistry**, was used.

**N0(mol+):** Cancer cells cannot be seen in underarm lymph nodes (even using special stains), but traces of cancer cells were detected using a technique called **RT-PCR**. RT-PCR is a molecular test that can find very small numbers of cancer cells. (This test is not often used to find breast cancer cells in lymph nodes because the results do not influence treatment decisions.)

**N1:** Cancer has spread to 1 to 3 axillary (underarm) lymph node(s), and/or tiny amounts of cancer are found in internal mammary lymph nodes (those near the breast bone) on sentinel lymph node biopsy.

**N1mi:** Micrometastases (tiny areas of cancer spread) in the lymph nodes under the arm. The areas of cancer spread in the lymph nodes are at least 0.2mm across, but not larger than 2mm.

**N1a:** Cancer has spread to 1 to 3 lymph nodes under the arm with at least one area of cancer spread greater than 2 mm across.

**N1b:** Cancer has spread to internal mammary lymph nodes on the same side as the cancer, but this spread could only be found on sentinel lymph node node biopsy (it did not cause the lymph nodes to become enlarged).

**N1c:** Both N1a and N1b apply.

**N2:** Cancer has spread to 4 to 9 lymph nodes under the arm, or cancer has enlarged the internal mammary lymph nodes
**N2a:** Cancer has spread to 4 to 9 lymph nodes under the arm, with at least one area of cancer spread larger than 2 mm.

**N2b:** Cancer has spread to one or more internal mammary lymph nodes, causing them to become enlarged.

**N3:** Any of the following:

**N3a:** either:

Cancer has spread to 10 or more axillary lymph nodes, with at least one area of cancer spread greater than 2 mm,

OR

Cancer has spread to the lymph nodes under the collarbone (infraclavicular nodes), with at least one area of cancer spread greater than 2 mm.

**N3b:** either:

Cancer is found in at least one axillary lymph node (with at least one area of cancer spread greater than 2 mm) and has enlarged the internal mammary lymph nodes,

OR

Cancer has spread to 4 or more axillary lymph nodes (with at least one area of cancer spread greater than 2 mm), and tiny amounts of cancer are found in internal mammary lymph nodes on sentinel lymph node biopsy.

**N3c:** Cancer has spread to the lymph nodes above the collarbone (supraclavicular nodes) with at least one area of cancer spread greater than 2 mm.

**M categories for breast cancer**

M followed by a 0 or 1 indicates whether the cancer has spread to distant organs -- for example, the lungs, liver, or bones.

**M0:** No distant spread is found on x-rays (or other imaging tests) or by physical exam.

**cM0(i+):** Small numbers of cancer cells are found in blood or bone marrow (found only by special tests), or tiny areas of cancer spread (no larger than 0.2 mm) are found in lymph nodes away from the underarm, collarbone, or internal mammary areas.
M1: Cancer has spread to distant organs (most often to the bones, lungs, brain, or liver).

Examples using the full staging system

Because there are so many factors that go into stage grouping for breast cancer, it's not possible to describe here every combination that might be included in each stage. The many different possible combinations mean that two women who have the same stage of breast cancer might have different factors that make up their stage.

Here are 3 examples of how all of the factors listed above are used to determine the pathologic (surgical) breast cancer stage:

Example #1

If the cancer size is between 2 and 5 cm (T2) but it has not spread to the nearby lymph nodes (N0) or to distant organs (M0) AND is:

- Grade 3
- Her2 negative
- ER positive
- PR positive

The cancer stage is IB.

Example #2

If the cancer is larger than 5 cm (T3) and has spread to 4 to 9 lymph nodes under the arm or to any internal mammary lymph nodes (N2) but not to distant organs (M0) AND is:

- Grade 2
- Her2 positive
- ER positive
- PR positive

The cancer stage is IB.

Example #3
If the cancer is larger than 5 cm (T3) and has spread to 4 to 9 lymph nodes under the arm or to any internal mammary lymph nodes (N2) but not to distant organs (M0) AND is:

- Grade 2
- Her2 negative
- ER negative
- PR negative

**The cancer stage is IIIB.**

These are only 3 examples out of many possible combinations of factors. To understand what your breast cancer stage is, and what it means, talk to your doctor.

**Hyperlinks**

2. [www.cancer.org/treatment/understanding-your-diagnosis/staging.html](http://www.cancer.org/treatment/understanding-your-diagnosis/staging.html)

**References**


Last Revised: June 28, 2021
Survival Rates for Breast Cancer

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed. They can’t tell you how long you will live, but they may help give you a better understanding of how likely it is that your treatment will be successful.

Keep in mind that survival rates are estimates and are often based on previous outcomes of large numbers of people who had a specific cancer, but they can’t predict what will happen in any particular person’s case. These statistics can be confusing and may lead you to have more questions. Talk with your doctor about how these numbers may apply to you, as he or she is familiar with your situation.

What is a 5-year relative survival rate?

A relative survival rate compares women with the same type and stage of breast cancer to women in the overall population. For example, if the 5-year relative survival rate for a specific stage of breast cancer is 90%, it means that women who have that cancer are, on average, about 90% as likely as women who don’t have that cancer to live for at least 5 years after being diagnosed.

Where do these numbers come from?

The American Cancer Society relies on information from the SEER* database, maintained by the National Cancer Institute (NCI), to provide survival statistics for different types of cancer.

The SEER database tracks 5-year relative survival rates for breast cancer in the United States, based on how far the cancer has spread. The SEER database, however, does not group cancers by AJCC TNM stages (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** There is no sign that the cancer has spread outside of the breast.
- **Regional:** The cancer has spread outside the breast to nearby structures or lymph nodes.
- **Distant:** The cancer has spread to distant parts of the body such as the lungs, liver or bones.
5-year relative survival rates for breast cancer

Based on women diagnosed with breast cancer between 2010 and 2016.

<table>
<thead>
<tr>
<th>SEER Stage</th>
<th>5-year Relative Survival Rate</th>
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<tr>
<td>Localized</td>
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<tr>
<td>Regional</td>
<td>86%</td>
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<tr>
<td>Distant</td>
<td>28%</td>
</tr>
<tr>
<td>All SEER stages combined</td>
<td>90%</td>
</tr>
</tbody>
</table>

Understanding the numbers

- **Women now being diagnosed with breast cancer may have a better outlook than these numbers show.** Treatments improve over time, and these numbers are based on women who were diagnosed and treated at least five years earlier.
- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- **These numbers don’t take everything into account.** Survival rates are grouped based on how far the cancer has spread, but your age, overall health, how well the cancer responds to treatment, **tumor grade**, the presence of **hormone receptors** on the cancer cells, **Her2 status**, and other factors can also affect your outlook.
- **Survival rates for women with triple-negative breast cancer are different than those above.** See [Triple-negative Breast Cancer](https://www.cancer.org/cancer/breast-cancer/about/types-of-breast-cancer/triple-negative.html).
- **Survival rates for women with inflammatory breast cancer are different than those above.** See [Inflammatory Breast Cancer](https://www.cancer.org/cancer/breast-cancer/about/types-of-breast-cancer/inflammatory-breast-cancer.html).

*SEER= Surveillance, Epidemiology, and End Results

Hyperlinks

Questions to Ask Your Doctor About Breast Cancer

It's important to be able to have frank, open discussions with your cancer care team. They want to answer all of your questions, so that you can make informed treatment and life decisions.

Here are some questions that you can use to help better understand your cancer and your treatment options. Don't be afraid to take notes and tell the doctors or nurses when you don't understand what they're saying. You might want to bring another person with you when you see your doctor and have them take notes to help you remember what was said.

Not all of these questions will apply to you, but they should help get you started. Be sure to write down some questions of your own. For instance, you might want more information about recovery times or you may want to ask about nearby or online support groups where you can talk with other women going through similar situations. You may also want to ask if you qualify for any clinical trials\footnote{1}.

Keep in mind that doctors aren't the only ones who can give you information. Other health care professionals, such as nurses and social workers, can answer some of your questions. To find out more about speaking with your health care team, see The Doctor-Patient Relationship\footnote{2}.
When you’re told you have breast cancer

- Exactly what type of breast cancer do I have?
- How big is the cancer? Where exactly is it?
- Has the cancer spread to my lymph nodes or other organs?
- What’s the stage of the cancer? What does that mean?
- Will I need any other tests before we can decide on treatment?
- Do I need to see any other doctors or health professionals?
- What is the hormone receptor status of my cancer? What does this mean?
- What is the HER2 status of my cancer? What does this mean?
- How do these factors affect my treatment options and long-term outlook (prognosis)?
- What are my chances of survival, based on my cancer as you see it?
- Should I think about genetic testing? What are my testing options? Should I take a home-based genetic test? What would be the reasons for and against testing?
- How do I get a copy of my pathology report?
- If I’m concerned about the costs and insurance coverage for my diagnosis and treatment, who can help me?

When deciding on a treatment plan

- How much experience do you have treating this type of cancer?
- Should I get a second opinion? How do I do that?
- What are my treatment choices?
- What treatment do you recommend and why?
- Should I think about taking part in a clinical trial?
- What would the goal of the treatment be?
- How soon do I need to start treatment?
- How long will treatment last? What will it be like? Where will it be done?
- Should my biopsy tissue be sent for a gene expression test to help decide if chemotherapy might be helpful for me?
- What should I do to get ready for treatment?
- What risks or side effects are there to the treatments you suggest? Are there things I can do to reduce these side effects?
- How will treatment affect my daily activities? Can I still work fulltime?
- Will I lose my hair? If so, what can I do about it?
- Will I go through menopause as a result of the treatment? Will I be able to have
children after treatment? Would I be able to breastfeed?

- What are the chances the cancer will come back (recur) after this treatment?
- What would we do if the treatment doesn’t work or if the cancer comes back?
- What if I have transportation problems getting to and from treatment?

If you need surgery

- Is breast-conserving surgery\(^8\) (lumpectomy) an option for me? Why or why not?
- What are the positive and negative sides of breast-conserving surgery versus mastectomy?
- How many surgeries like mine have you done?
- Will you have to take out lymph nodes? If so, would you advise a sentinel lymph node biopsy? Why or why not?
- What side effects might lymph node removal cause?
- How long will I be in the hospital?
- Will I have stitches or staples at the surgery site? Will there be a drain (tube) coming out of the site?
- How do I care for the surgery site? Will I need someone to help me?
- What will my breasts look and feel like after my treatment? Will I have normal feeling in them?
- What will the scar look like?
- Is breast reconstruction surgery\(^10\) an option if I want it? What would it mean in my case?
- Can I have reconstruction at the same time as the surgery to remove the cancer? What are the reasons for and against having it done right away or waiting until later?
- What types of reconstruction might be options for me?
- Should I speak with a plastic surgeon about reconstruction options?
- Will I need a breast form (prosthesis), and if so, where can I get one?
- Do I need to stop taking any medications or supplements before surgery?
- When should I call your office if I’m having side effects?

During treatment

Once treatment begins, you’ll need to know what to expect and what to look for. Not all
of these questions may apply to you, but asking the ones that do may be helpful.

- How will we know if the treatment is working?
- Is there anything I can do to help manage side effects?
- What symptoms or side effects should I tell you about right away?
- How can I reach you on nights, holidays, or weekends?
- Will I need to change what I eat during treatment?
- Are there any limits on what I can do?
- Can I exercise during treatment? If so, what kind of exercise should I do, and how often?
- Can you suggest a mental health professional I can see if I start to feel overwhelmed, depressed, or distressed?
- Will I need special tests, such as imaging scans or blood tests? How often?

**After treatment**

- Will I need a special diet after treatment?
- Are there any limits on what I can do?
- Am I at risk for lymphedema?
- What can I do to reduce my risk for lymphedema?
- What should I do if I notice swelling in my arm?
- What other symptoms should I watch for? What kind of exercise should I do now?
- What type of follow-up will I need after treatment?
- How often will I need to have follow-up exams, blood tests, or imaging tests?
- How will we know if the cancer has come back? What should I watch for?
- What will my options be if the cancer comes back?

**Hyperlinks**

6. [www.cancer.org/treatment/finding-and-paying-for-treatment/choosing-your-]
treatment-team/seeking-a-second-opinion.html

Last Revised: September 20, 2019

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