Patient Guide to Breast Cancer Surgery and Treatment

oncotype DX® Breast Cancer Assay

Uncover the Unexpected™

An educational guide prepared by Genomic Health®

Coree H.
Flight attendant and mother of 3.
Diagnosed with invasive breast cancer in 2009.

This is your booklet.

It is designed to help you through this challenging time. Use it as a guide during discussions about your treatment with your breast surgeon.

Draw on it. write on it. make it your own.

Use the form at the back of this booklet to record your treatment.

This education piece is not designed to provide individual advice in connection with your diagnosis or treatment plan. Such matters should be discussed with your healthcare provider.

The people shown in this booklet used the Onco*type* DX® Breast Cancer test in making their treatment decisions with their physicians.

Table of contents

Your Guide to Breast Cancer Surgery

With your recent diagnosis of breast cancer, and throughout your preparation for surgery and treatment planning, it is normal for you to feel frightened, overwhelmed, and full of uncertainty. But remember this: you are not alone. Millions of women have been successfully treated for breast cancer.

While discussing the information in this booklet with your breast surgeon, don't be afraid to share any questions or concerns you may have. More importantly, allow yourself to rely on your family and closest friends for the strong support that only they can provide.

Remember:

Consider your treatment options: Over the last 30 years, doctors have made great strides in the treatment of breast cancer and patient survival.

You have time: Breast cancer is a complicated disease. It is important to understand your disease and your treatment options. In most cases, treatment does not need to begin immediately—there is time to make informed decisions.

Take charge: Make informed decisions and work with your healthcare team in planning your care and treatment.

Your Healthcare Team

Your breast cancer care team consists of healthcare professionals whose job is to make sure that you are informed and that your surgery and overall treatment are a success. You can help them help you by asking questions and becoming an active member of the team. Here are the medical experts who might be involved on your care team:

Breast surgeon: Plans the surgery and removes the breast tumor

Pathologist: Analyzes the tumor cells to characterize your breast cancer

Radiation oncologist: Treats cancer using localized radiation therapy

Medical oncologist: Treats cancer body-wide using chemotherapy, hormone therapy, and other drugs

Reconstructive surgeon: Performs reconstructive surgery after breast cancer surgery

Oncology nurse: Manages your care and comfort before, during, and after treatment

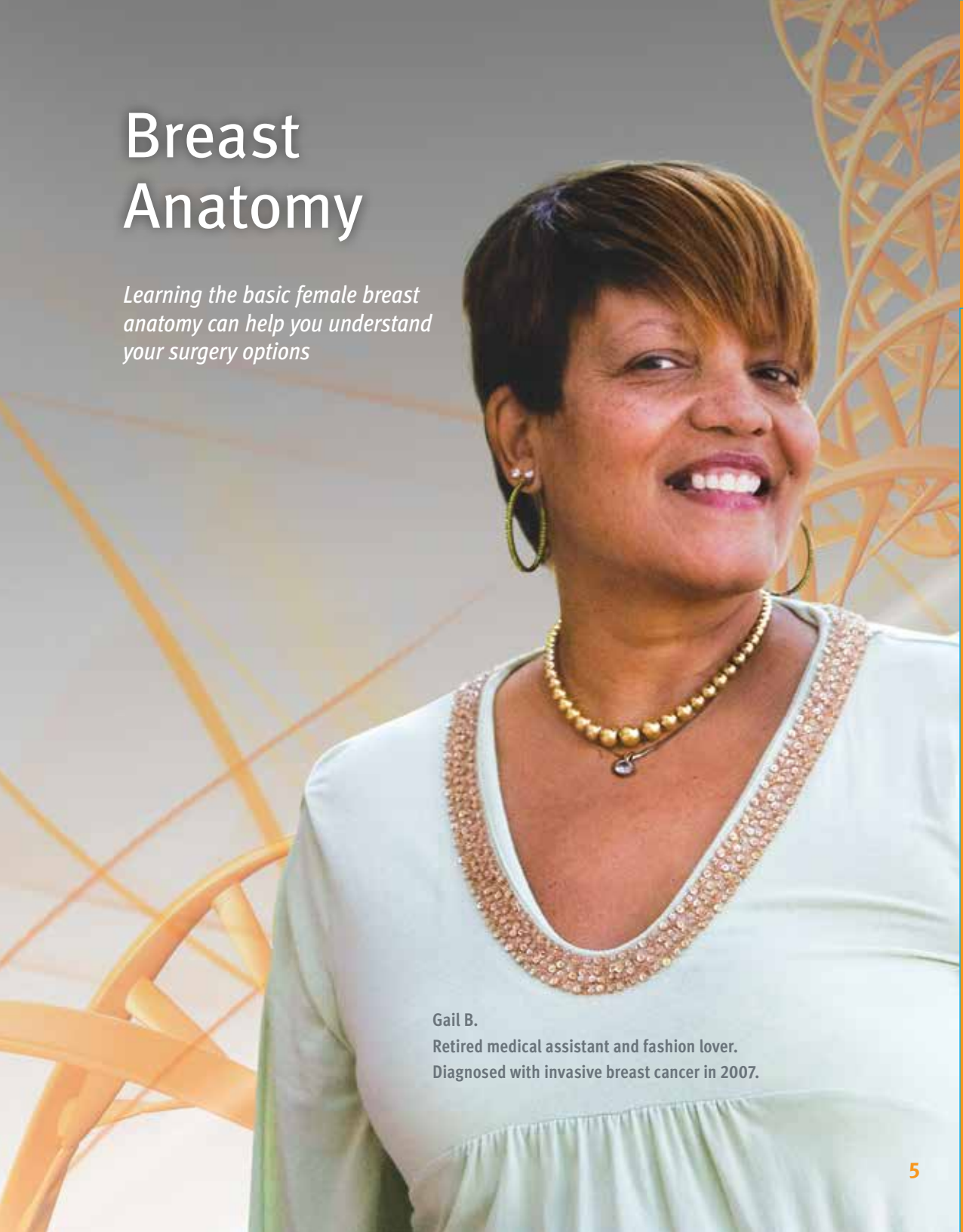
Social worker: Helps with your psychological, family, and financial concerns as you return to your normal daily life

Primary care doctor: Attends to your general healthcare needs before, during, and after your cancer surgery and treatment

Nurse navigator: Educator and patient advocate who coordinates treatment and follows you from diagnosis to after treatment

Breast Anatomy

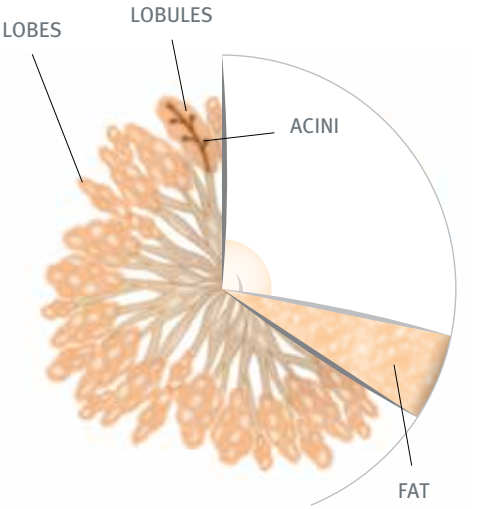
Learning the basic female breast anatomy can help you understand your surgery options

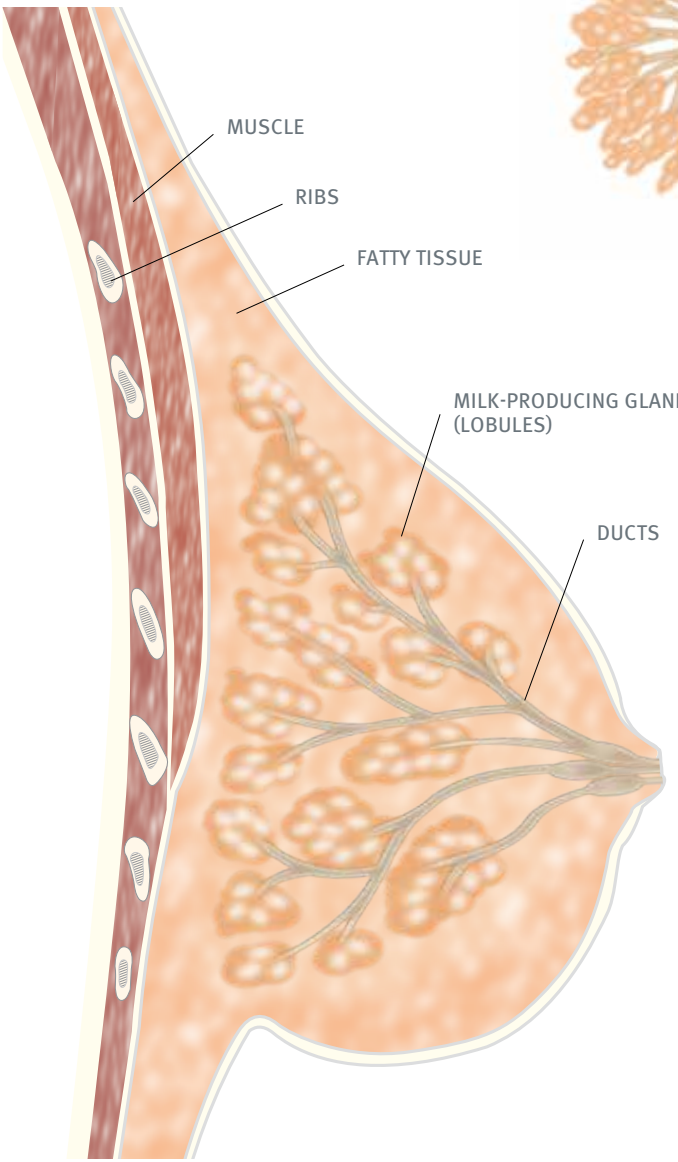


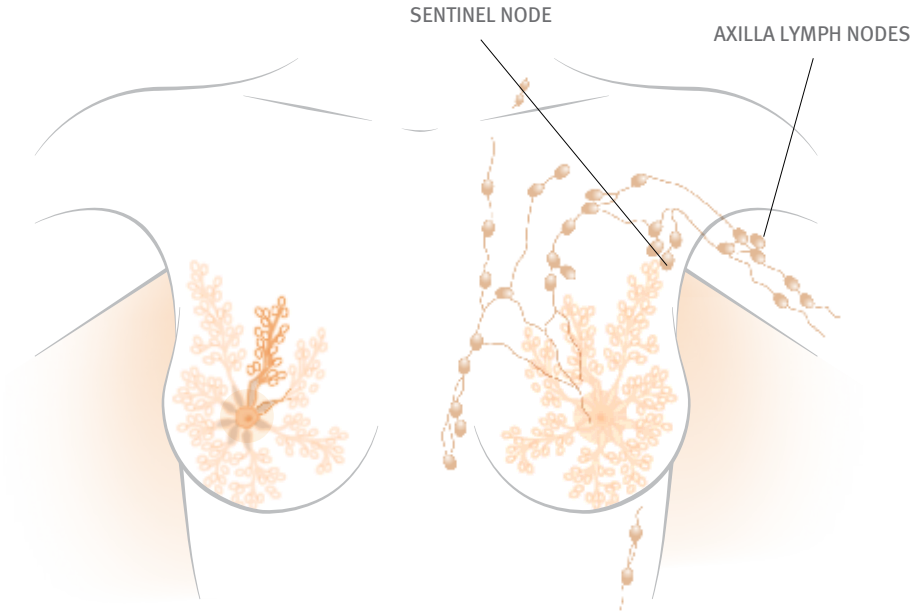
Gail B.
Retired medical assistant and fashion lover.
Diagnosed with invasive breast cancer in 2007.

Anatomy of the breast

Use these illustrations for your notes and drawings







The female breast is a highly complex organ that gives women the ability to produce milk. It is composed primarily of fat and connective tissue, as well as the structures described below.

Milk-producing glands (lobules) are linked by small tubes called ducts. These glands are responsive to female hormones, including estrogen and progesterone.

Blood vessels deliver oxygen and nutrients to tissues in the breast.

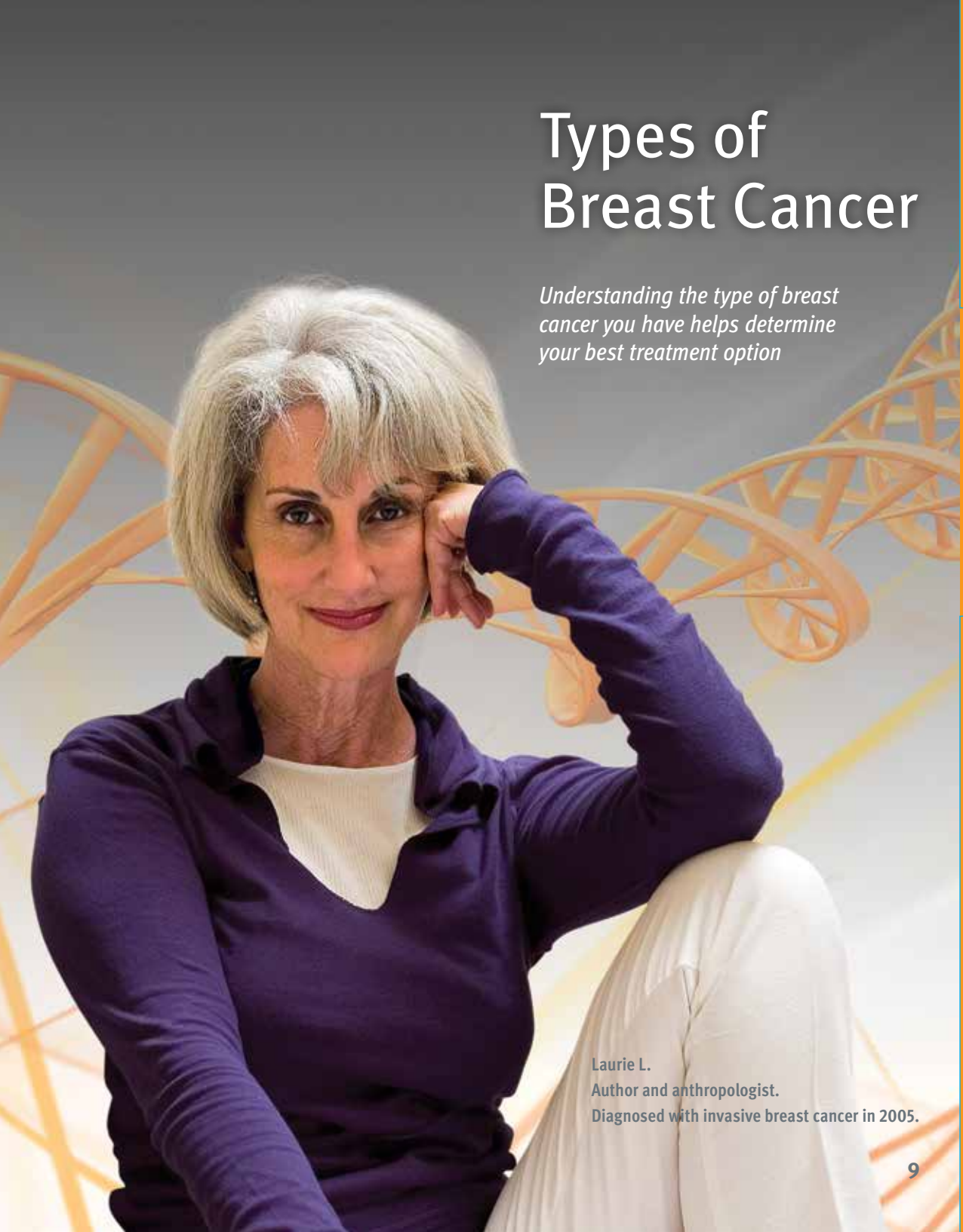
Lymph nodes are part of the body's lymphatic system. The lymphatic system drains and filters fluid from cells and is an important part of the immune system.

The lymphatic system drains breast fluid into bean-shaped lymph nodes, located in your blood stream. The sentinel node is the first lymph node to receive this drainage and, therefore, the first lymph node that the tumor would spread to if disease spread to the axilla (armpit).

There are no muscles in the breast. However, the breast lies over muscle that is involved in breathing and arm movement.

Types of Breast Cancer

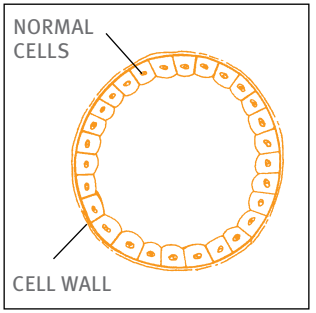
Understanding the type of breast cancer you have helps determine your best treatment option



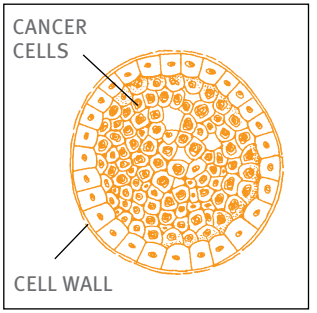
Laurie L.
Author and anthropologist.
Diagnosed with invasive breast cancer in 2005.

Types of Breast Cancer

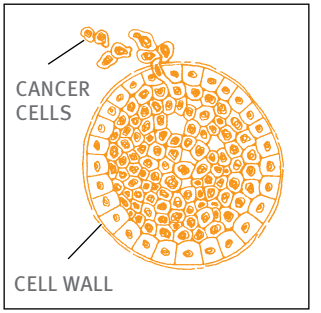
Most cancers begin in your breast's milk ducts (ductal cancer) or milk-producing glands (lobular cancer).



Normal duct or lobule



In situ *(non-invasive) cancer cells*



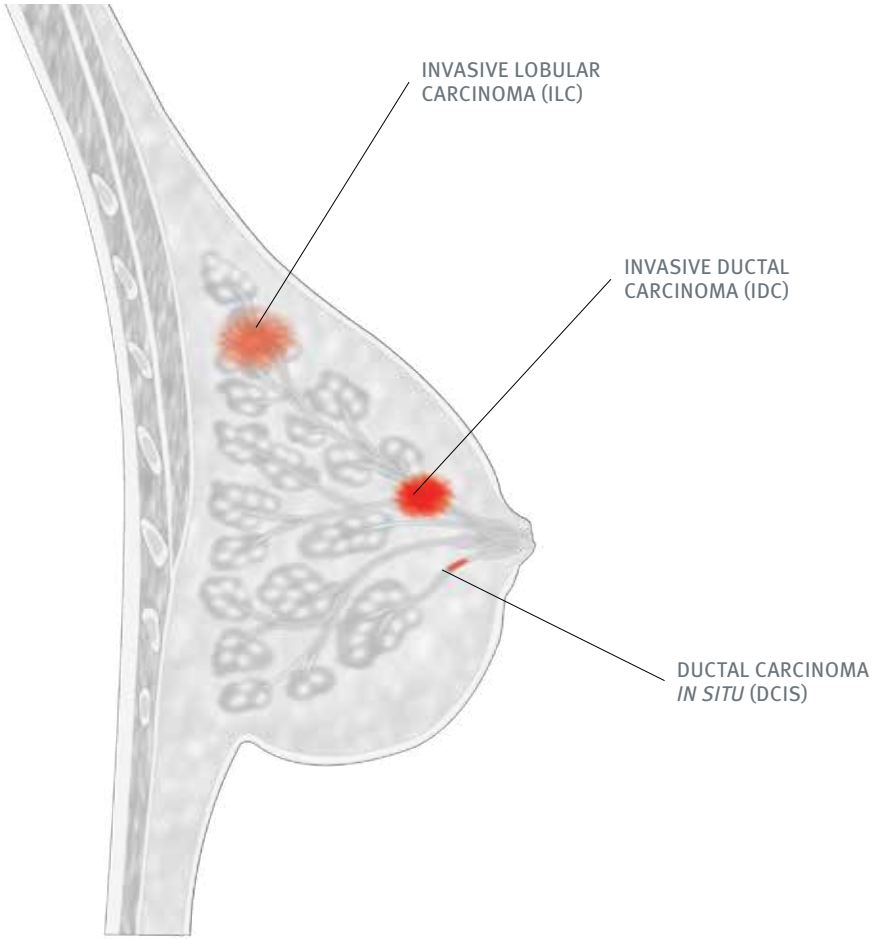
Invasive cancer cells

Non-invasive breast cancer

Non-invasive breast cancer is also called *in situ* breast cancer. The term *in situ* refers to the fact that the cancer cells are confined to one place—they have not spread to tissue surrounding the lobule or duct.

Ductal carcinoma *in situ* (DCIS) is confined to the lining of the milk ducts.

Lobular carcinoma *in situ* (LCIS) is confined to the milk-producing glands.



Invasive breast cancer

Invasive or infiltrating breast cancer refers to a type of cancer that has extended to the tissue surrounding a duct or lobule and may spread to other parts of your body.

Invasive ductal carcinoma (IDC) forms in the milk duct, then breaks through, invading nearby tissue.

Invasive lobular carcinoma (ILC) forms in the milk-producing glands (lobules) and breaks through to the surrounding tissue.

Breast Surgery

Consider the facts, ask for advice, and make the decision that is right for you

Angela Y.
Mother of 4 and triathlete.
Diagnosed with DCIS breast cancer in 2006.

Breast Surgery

Choosing a breast cancer surgery option is a difficult decision: you have the option between a lumpectomy followed by radiation therapy, or a mastectomy. Both can be effective. Your doctor will provide you with advice and facts about these options.

Whichever option you and your doctor decide on, if the cancer is invasive, then the lymph nodes under your armpit will be examined to see if the cancer has spread. This is usually done using a sentinel node biopsy and may also require the removal of additional lymph nodes if the cancer has spread to the sentinel node.

The biopsy

When a tumor is detected that may be cancerous, a biopsy is performed to confirm whether or not cancer is present and to provide information about the type of surgery required.

To perform the biopsy, tissue is taken from your tumor and examined under a microscope. Two of the most common types of biopsy are the core biopsy and the surgical biopsy.

Core biopsy: A hollow needle is used to remove tissue samples from the lump in your breast. Several small samples are sent to the pathologist for further analysis.

Surgical biopsy: All or part of the lump in your breast is removed through an incision in the breast, then is sent to the pathologist for further examination.

Lumpectomy (breast-conserving surgery)

Lumpectomy can be an effective treatment that conserves as much of your breast as possible. With a lumpectomy, the surgeon removes the tumor and some healthy tissue surrounding the tumor to help obtain a cancer-free surgical margin (area surrounding the tumor). As little as possible of the healthy breast tissue is taken and the breast usually retains its shape.

Lumpectomy is typically performed under local, regional, or general anesthesia. You will have an opportunity to let your surgeon and anesthesiologist know your preferences. Recovery time is usually a matter of days.

After a lumpectomy, most patients receive a series of radiation treatments.

The recommendation for radiation therapy will be discussed between you and your radiation oncologist.

After your lumpectomy

After a lumpectomy, you may not experience excessive pain, but part of your breast and areas under your arm may feel tight or numb due to the effect of the surgery on nerve cells. The loss of sensation in your breast should be temporary but it could remain to some extent for the rest of your life.

Mastectomy

Mastectomy involves the removal of all the glandular tissue in your breast. It is performed under general anesthesia, in most cases through an incision made across your breast. Recovery time is usually a few weeks.

Unlike lumpectomy, radiation therapy is usually not required after mastectomy for early-stage breast cancer. It may be recommended if your tumor is large, if cancer cells have spread to the lymph nodes, or if there is a chance that it has spread to your ribs or chest muscles.

During the mastectomy, the surgeon may place one or more small plastic tubes in the area of your breast to remove any fluids that may accumulate. This drain will usually remain in place for a short time after surgery (1–3 weeks).

After your mastectomy

Your surgeon will provide you with detailed instructions, including how to care for your incision and drains, and when to resume normal activities. Don't hesitate to discuss your concerns with your doctor.

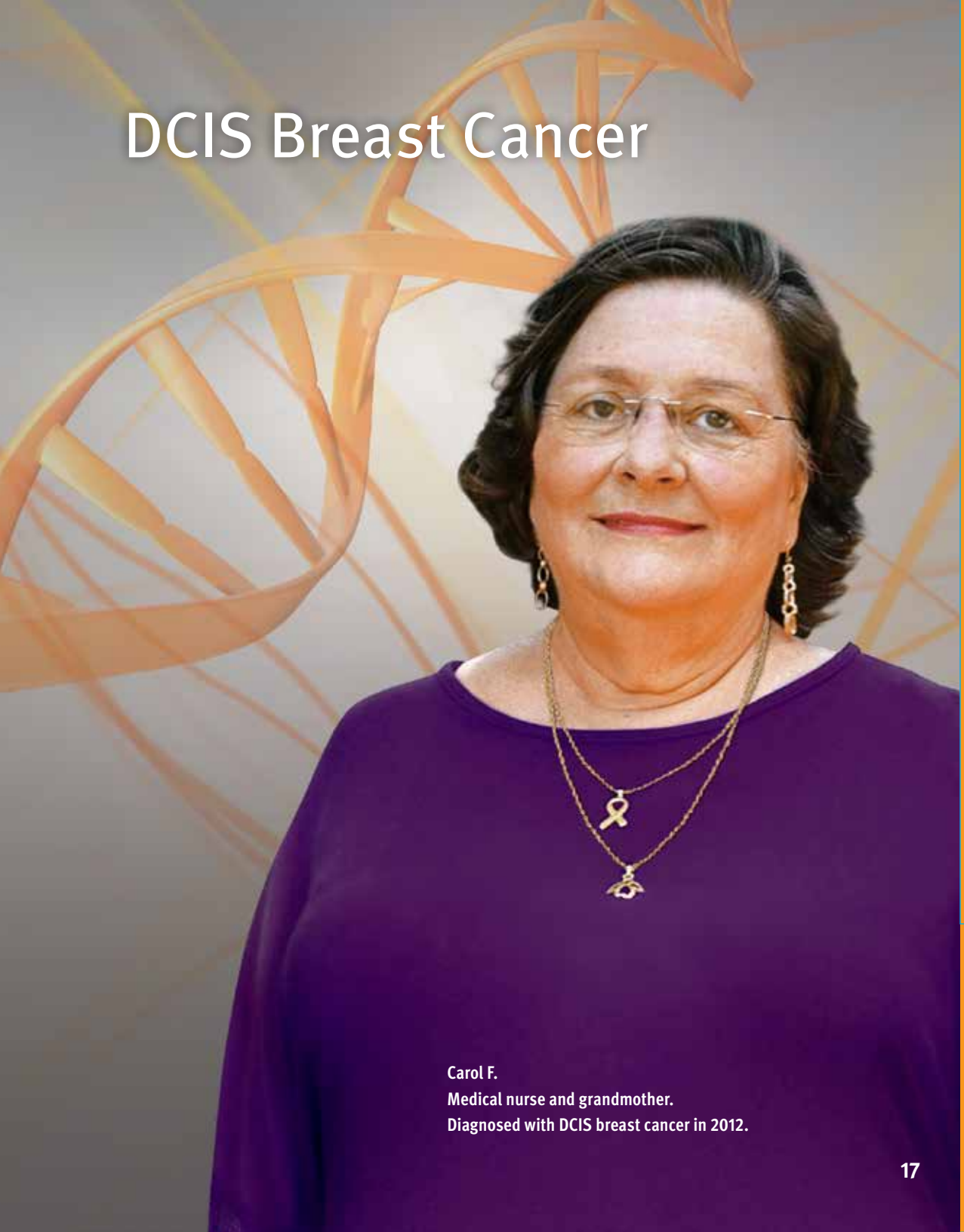
Expect some discomfort. Depending on the extent of your surgery, you may experience pain, swelling, and bruising in your chest area.

You may meet with a medical oncologist after your surgery to discuss further treatments. If further treatments are recommended, they will probably be scheduled to begin several weeks after your surgery.

Take care of yourself

Cancer surgery can leave you feeling physically and emotionally exhausted. Follow your doctor's instructions. Ask your friends and family members for help. Rest, don't lift heavy objects, and maintain a healthy diet.

DCIS Breast Cancer



Carol F.
Medical nurse and grandmother.
Diagnosed with DCIS breast cancer in 2012.

Characterizing Your DCIS Breast Cancer

DCIS (ductal carcinoma in situ*) is one of the most commonly diagnosed breast conditions, and is an early, non-invasive form of breast cancer.[1] Unlike invasive breast cancer, the cancer cells have stayed within the milk ducts.*

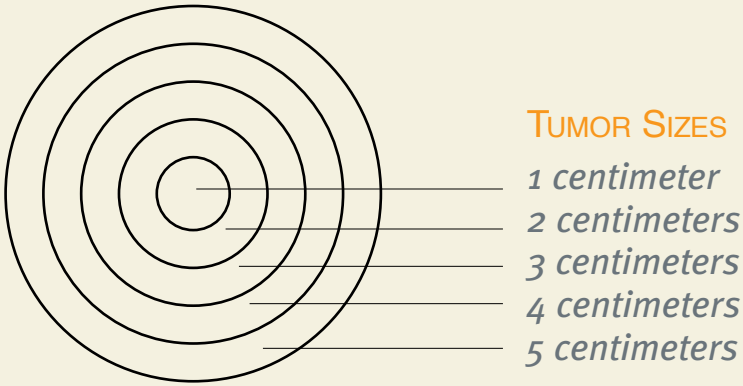
It is overwhelming to get the diagnosis, however DCIS is rarely life-threatening. After therapy, women with DCIS are at increased risk for the cancer coming back in the same breast (called local recurrence) as either DCIS or as invasive breast cancer.[2]

To plan your treatment, the first step is usually surgery to remove the DCIS tumor. The next step is to characterize your tumor to understand how likely your cancer is to return, and how beneficial certain treatments may be.

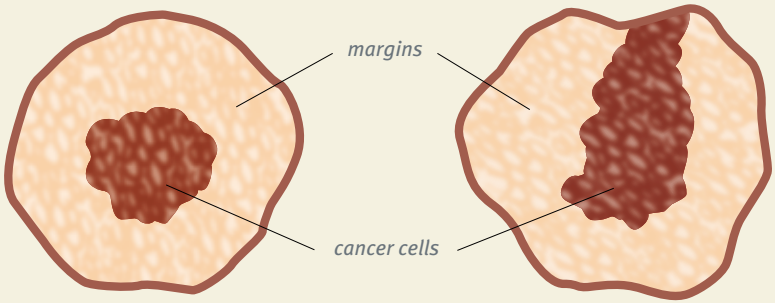
Definitive diagnosis—the pathology report

The pathology report provides detailed information about your breast cancer. This information is obtained from tests performed on a biopsy or surgical sample taken from your tumor during your original surgery. Doctors use this information along with other factors, including your age, medical history, and general health, to tailor your cancer treatment and estimate the potential benefits and risks of radiation and hormonal therapies. Information on your pathology report may include the following:

- Tumor grade—classifies how closely cells in the tumor sample resemble cells in normal breast tissue
- Tumor size—usually reported in millimeters or centimeters
- Surgical margins—normal (healthy) tissue surrounding the edge of the tumor tissue removed during surgery
  - Negative margins—cancer was entirely removed during surgery (surgical margin is cancer free)
  - Positive margins—residual cancer cells remain following surgery
- Hormone receptor (ER/PR) status—whether your tumor is sensitive to estrogen or progesterone



Tumor size is usually reported in metric units (millimeters or centimeters).



Negative margins *Positive margins*

Looking At The Biology Of Your DCIS Tumor

A unique diagnostic test looks at the activity of genes in your breast tumor tissue.

By measuring the activity of certain genes in breast cancer tissue, the Onco*type* DX test provides more information about what is happening inside the tumor. Along with the pathology report and other factors, these results can help identify which women with non-invasive DCIS breast cancer are likely to have their breast cancer return.

Breast Cancer Grading and Staging

Results obtained from your biopsy enable your doctors to make treatment decisions and to determine whether or not your cancer may come back in the future. Cancer grading and staging are methods that doctors use to organize this information.

Breast cancer grading

Breast cancer grading is based on differentiation, or how closely the cancer cells resemble normal breast cells. Cancer cells may be classified as: grade 1 (well differentiated), grade 2 (moderately differentiated) or grade 3 (poorly differentiated). The higher the grade, the more different the cells are from normal. This information helps your doctor determine the treatment options that are best for you.

Breast cancer staging

Breast cancer staging is a classification method that helps your doctor to determine the extent of your cancer and your treatment options. Staging is based on the results of your biopsy as well as other information.

In most cases, staging is done after the tumor is removed.

Stages of breast cancer

After the cancer is classified, your doctors will use several pieces of information to determine the stage of your breast cancer. The higher the stage, the more extensive the cancer. However, by definition, carcinoma *in situ* (DCIS or LCIS) is Stage 0 because the tumor is in its original place and has not spread past the ducts or lobules.

Notes

Adjuvant Therapy for DCIS

Adjuvant therapy is an additional therapy performed after surgery to help treat or prevent the return of breast cancer. For most patients with DCIS, adjuvant therapy may include radiation therapy, and/or hormonal therapy, and occasionally chemotherapy.

Radiation therapy

Radiation therapy is a highly effective way to destroy cancer cells that may still remain in your breast after surgery. Most women who have a lumpectomy receive radiation therapy. Some women who have a mastectomy may too, depending on the size of their tumor or the extent of their cancer.

Some of the most common side effects from radiation therapy are:

- Tiredness
- Lowered white blood cell counts
- Swelling and inflammation
- Skin sensitivity and discoloration

Hormonal therapy

Hormonal therapy is often used to lower the risk of a hormone receptor–positive (HR+) breast cancer from returning or spreading to a new site. Hormonal therapy blocks hormone receptor sites on cancer cells that multiply when stimulated by female hormones, including estrogen and progesterone.

Hormonal therapy is usually recommended for women who have Estrogen Receptor (ER) or Progesterone Receptor (PR) positive cancer cells. This includes approximately 70% of the women who have breast cancer.

For DCIS, the most common treatment includes: selective ER modulators, such as tamoxifen, which block the hormone receptors. Tamoxifen is given orally (by mouth).

Hormonal treatments can lead to side effects similar to menopause, including:

- Hot flashes or flushes
- Aches and pains in the muscles and joints
- Nausea
- Blood clots
- Fertility issues

The Onco*type* DX Test

Breast cancer test

The Onco*type* DX test for DCIS is a unique test that helps identify which women with non-invasive DCIS are more likely to have their breast cancer come back as DCIS or as invasive breast cancer. This information may be useful in helping you and your doctor take a personalized treatment approach.[3]

What the test measures

The Onco*type* DX test measures the activity of different genes in a woman's breast tumor tissue.

Your doctor is the best source of information about the Oncotype DX test and can answer additional questions that you may have.

Benefits of the test

The Onco*type* DX test gives you and your doctor additional information to assess how your tumor behaves. This information can help you and your doctor make decisions about your treatment plan and may help tailor your treatment plan specifically for you.

How the test is performed

The Onco*type* DX test is performed on a small amount of tumor tissue that was removed during your surgery (lumpectomy or core biopsy).

When your doctor orders the Onco*type* DX test, the hospital will send a sample of your tissue to the Genomic Health® laboratory that performs the Onco*type* DX test.

You will NOT have to go through any additional surgery or procedure to get the Onco*type* DX test.

How the test can help you

Your doctor will receive a report with the results of your Onco*type* DX test. The report contains your unique DCIS Score™ result, which is a number between 0 and 100.

- Women with a lower DCIS Score result may have a lower risk that their cancer will return as DCIS or as an invasive tumor. It is important to note that a lower DCIS Score result does not mean that there is no chance that a woman's breast cancer may return
- Women with a higher DCIS Score result may have a greater chance that their breast cancer may return. A higher DCIS Score result does not mean that a woman's breast cancer will definitely return

The Onco*type* DX test results also provide additional information, such as the activity levels of the estrogen receptors (ER) in your tumor, to help guide your treatment.

Are you a candidate for the Oncotype DX test?

You may be a candidate for the Oncotype DX test if you meet all of these criteria:

- You have been recently diagnosed with DCIS, a non-invasive form of breast cancer and are making treatment decisions with your doctor
- You have had a lumpectomy (breast-conserving surgery), and not a mastectomy
- Your breast cancer is ER+ or ER–

Does my insurance cover the Oncotype DX test?

Coverage varies by insurance plan for all medical services and benefits. Genomic Health, the company that developed and performs the Oncotype DX test, has a comprehensive program called GAP (Genomic Access Program) to help you through the process.

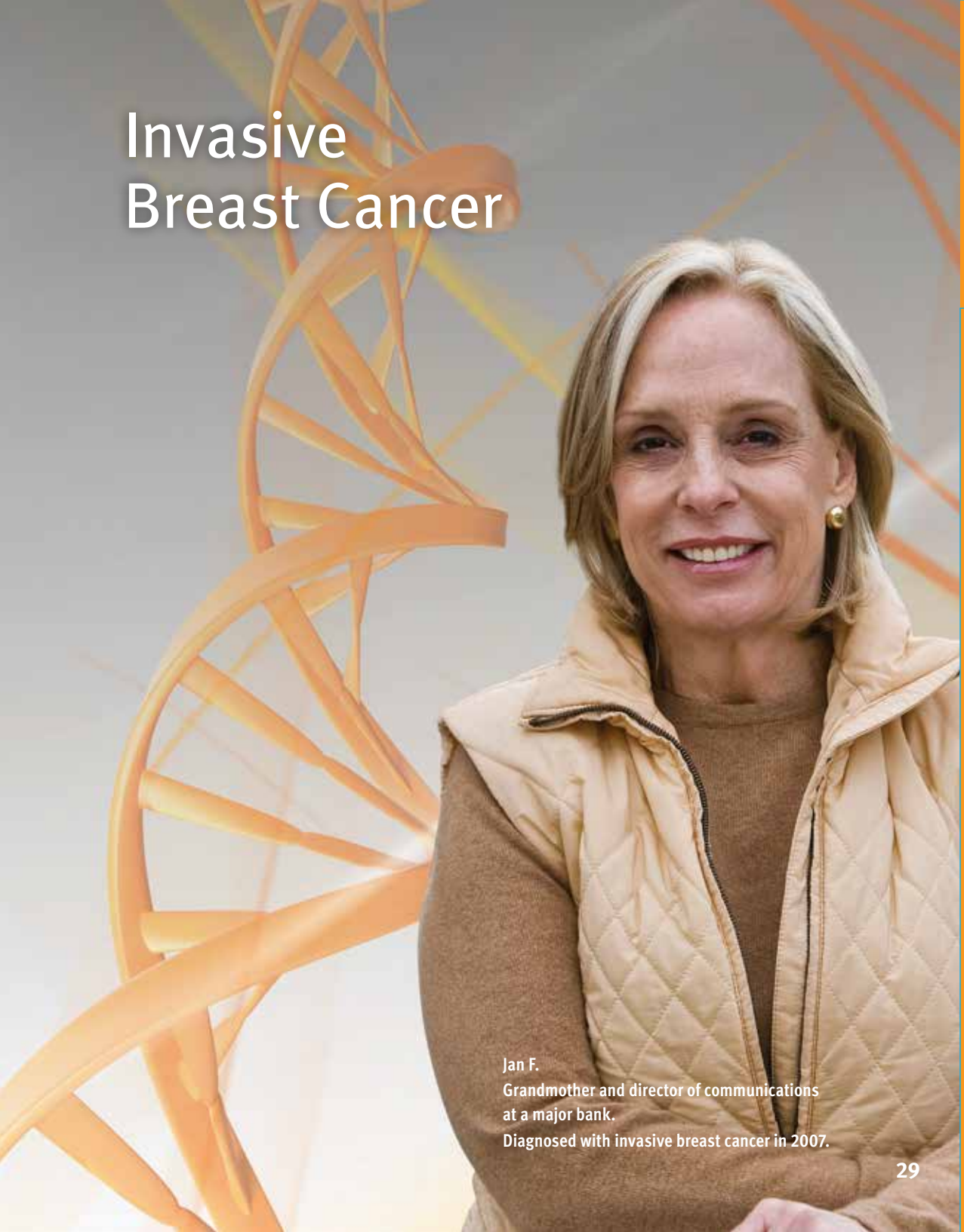
GAP can help find out if the test is covered, and help process the claim once the test is complete. GAP can also help with the appeal process if your claim is denied. GAP also offers financial assistance, when necessary, based on eligibility.

Please note that you may be financially responsible for some or all costs associated with the Oncotype DX test.

More information about the Oncotype DX test is available at *(866) ONCOTYPE (866-662-6897) and at* ***www.mybreastcancertreatment.org.***

Notes

Invasive Breast Cancer



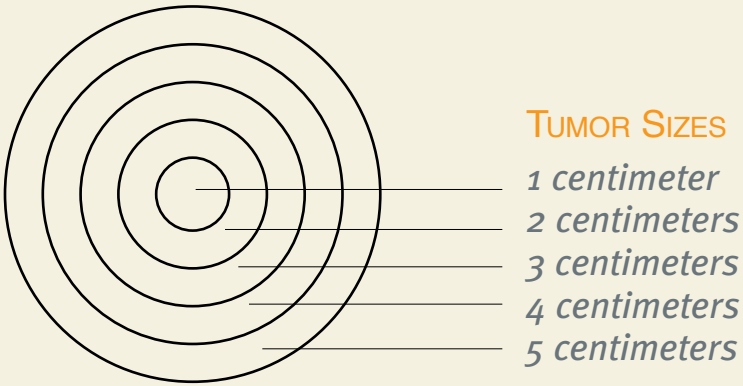
Jan F.
Grandmother and director of communications at a major bank.
Diagnosed with invasive breast cancer in 2007.

Characterizing Your Invasive Breast Cancer

Definitive diagnosis—the pathology report

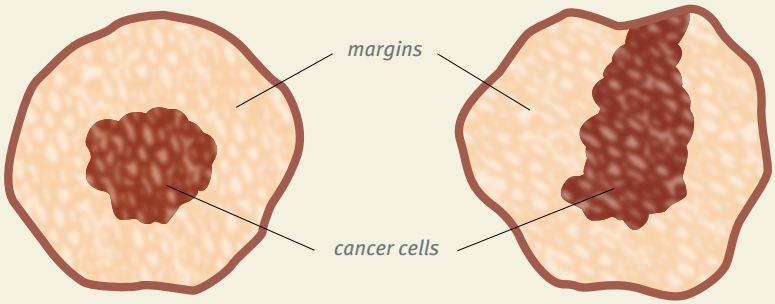
The pathology report provides detailed information about your breast cancer. This information is obtained from tests performed on a biopsy or surgical sample taken from your tumor. Doctors use this information along with other factors, including your age, medical history, and general health, to tailor your cancer treatment and estimate the added benefits of hormonal therapy, chemotherapy and the anti-HER2 therapy. Information on your pathology report may include the following:

- Tumor grade—classifies how closely cells in the tumor sample resemble cells in normal breast tissue
- Tumor size—usually reported in millimeters or centimeters (1 cm=10 mm)
- Surgical margins—normal (healthy) tissue surrounding the edge of the tumor tissue removed during surgery
  - Negative margins—cancer was entirely removed during surgery (surgical margin is cancer-free)
  - Positive margins—residual cancer cells remain following surgery



Tumor size is usually reported in metric units (millimeters or centimeters).

- Lymph node status, if sampled—whether or not cancer is detected in your lymph nodes
- Hormone receptor (ER/PR) status—whether your tumor is sensitive to estrogen or progesterone
- HER2 status—HER2 is a protein that controls cell growth and repair. Cancer cells that have high levels of HER2 tend to grow quickly and may respond well to anti-HER2 therapy



Negative margins *Positive margins*

Looking at the biology of your tumor

A unique diagnostic test looks at the activity of genes in your breast tumor tissue.

By measuring the activity of certain genes in breast cancer tissue, the Onco*type* DX test provides more information about what is happening inside the tumor. Along with the pathology report and other factors, these results can help identify which women with early-stage, ER+ and lymph node-negative (N–) cancer are likely to benefit from adding chemotherapy to their hormonal treatment. The Onco*type* DX test may also be useful in helping these women assess the likelihood of having their breast cancer return.

Breast Cancer Grading and Staging

Results obtained from your biopsy help determine the likelihood that your cancer may come back in the future, and enable your doctors to make more informed treatment decisions. Cancer grading and staging are methods that doctors use to organize this information.

Breast cancer grading

Breast cancer grading is based on differentiation or how closely the cancer cells resemble normal breast cells. Cancer cells may be classified as: grade 1 (well differentiated), grade 2 (moderately differentiated), or grade 3 (poorly differentiated). The higher the grade, the more different the cells are from normal. This information helps your doctor determine the treatment options that are best for you.

Breast cancer staging

Breast cancer staging is a classification method that helps your doctor to determine the extent of your cancer and your treatment options. Staging is based on the results of your biopsy as well as other information.

In most cases, staging is done after the tumor is removed and the lymph nodes have been examined.

The TNM system

A common way of classifying stages of breast cancer is the TNM system. The TNM system has 3 categories: T (tumor), N (node), and M (metastasis). Each category is assigned a number. The higher the number, the greater the extent of the cancer.

T: Indicates the size of the tumor

N: Indicates the extent to which the cancer has spread to nearby lymph nodes [(N+) or (N–)]

M: Indicates the extent to which the cancer has spread to other parts of the body

Linda P.
HR manager and volunteer.
Diagnosed with invasive breast cancer in 2006.

Stages of breast cancer

After the cancer is classified, the TNM category is combined with other information to determine the stage of your breast cancer. The higher the stage, the more extensive the cancer.[4]

Stage 0:	Carcinoma in situ (DCIS or LCIS)—the tumor is in its original place and has not spread past the ducts or lobules
Stage I:	The tumor is small (less than 2 cm) and well localized (has not spread to the lymph nodes)
Stage II:	The tumor meets any of the following conditions: • Small (less than 2 cm) and has spread to axillary lymph nodes • 2 to 5 cm and has not spread to axillary lymph nodes • 2 to 5 cm and has spread to axillary lymph nodes • No tumor evident in the breast but has spread to axillary lymph nodes • Larger than 5 cm and has not spread to axillary lymph nodes
Stage III:	The tumor meets any of the following conditions: • Smaller than 5 cm and has spread to connected axillary lymph nodes • Larger than 5 cm and has spread to single or attached axillary lymph nodes • Has spread to chest wall; diagnosed as inflammatory • Has spread to lymph nodes under and above the collarbone and inside the breast and nodes, but not other parts of the body
Stage IV:	The cancer has spread to other organs in your body, such as your bones, lungs, liver, or brain

Notes

Adjuvant Therapy

Adjuvant therapy is an additional therapy performed after surgery to help treat or prevent the return of breast cancer. Your adjuvant therapy may include radiation therapy, hormonal therapy, and/or chemotherapy.

Neoadjuvant therapy

Sometimes, women with breast cancer receive radiation therapy, hormonal therapy, or chemotherapy before surgery. This is called neoadjuvant therapy.

Radiation therapy

Radiation therapy is a highly effective way to destroy cancer cells that may still remain in your breast after surgery. Most women who have a lumpectomy receive radiation therapy. Some women who have a mastectomy may too, depending on the size of their tumor or the extent of their cancer.

Some of the most common side effects from radiation therapy are:

- Tiredness
- Lowered white blood cell counts
- Swelling and inflammation
- Skin sensitivity and discoloration

Hormonal therapy

Hormonal therapy is often used to lower the risk of a hormone receptor-positive (HR+) breast cancer from returning or spreading to a new site. Hormonal therapy blocks hormone receptor sites on cancer cells that multiply when stimulated by female hormones, including estrogen and progesterone.

Hormonal therapy is usually recommended for women who have Estrogen Receptor (ER) or Progesterone Receptor (PR) positive cancer cells. This includes approximately 70% of the women who have breast cancer.

There are a number of hormonal treatments for breast cancer. Common treatments include: selective ER modulators, such as the medicine known as tamoxifen, which block the hormone receptors in women; and aromatase inhibitors, which reduce the amount of estrogen produced in post-menopausal women. These treatments are given orally (by mouth).

Hormonal treatments can lead to side effects similar to menopause, including:

- Hot flashes or flushes
- Aches and pains in the muscles and joints
- Nausea
- Blood clots
- Fertility issues
- Weakening of the bones (aromatase inhibitors)

Chemotherapy

Chemotherapy uses drugs to destroy cancer cells that remain in your body after surgery, in an effort to reduce the risk of your cancer coming back after surgery.

A number of chemotherapy regimens are available for treating breast cancer patients. Which regimen is best for you is decided after carefully reviewing your pathology report and medical history with your oncologist.

Evaluating the benefit of chemotherapy

A unique diagnostic test for women with early-stage breast cancer

If you have early-stage, invasive breast cancer that is ER+ and HER2–, you are pre-menopausal and lymph node negative (N–), or you are post-menopausal and N+, the Onco*type* DX test may help you and your doctor decide if you are likely to benefit from adding chemotherapy to your treatment program. It can also help you understand the likelihood of having your breast cancer return.

The side effects of chemotherapy depend on the duration of your treatment and the type of drugs you take. These side effects range from mild to severe and may include:

- Fatigue
- Hair loss
- Nausea
- Vomiting
- Anemia
- Diarrhea
- Heart problems
- Menopausal symptoms
- Fertility issues
- Infections
- Neuropathy

Anti-HER2 therapy

Some breast cancers are HER2-positive. HER2 (human epidermal growth factor receptor 2) is a protein that stimulates the growth of new cancer cells. When you have a breast cancer biopsy or surgery, the tumor is evaluated to see if it is HER2-positive (HER2+) or -negative (HER2–). If your tumor cells are HER2+, you may be a candidate for anti-HER2 therapy.

Anti-HER2 therapy is designed to shut down HER2 activity and stop the stimulation of cancer cell growth.

The Onco*type* DX Test

Breast cancer test

The Onco*type* DX test is a unique diagnostic test that helps identify which women with early-stage breast cancer that is ER+, HER2–, N– (pre- or post-menopausal) or N+ (post-menopausal) are more likely to benefit from adding chemotherapy to their hormonal treatment. The test also assesses the likelihood that a woman's breast cancer will return. This information may be useful in helping you and your doctor make decisions about your treatment.[5-11]

What the test measures

The Onco*type* DX test measures the activity of 21 different genes in a woman's breast tumor tissue.

Your doctor is the best source of information about the Oncotype DX test and can answer additional questions that you may have.

Benefits of the test

The Onco*type* DX test gives you and your doctor additional information to assess how your specific tumor behaves. This information can help you and your doctor make decisions about your treatment plan and may help tailor your treatment for you.

How the test is performed

The Onco*type* DX test is performed on a small amount of tumor tissue that was removed during your original surgery (lumpectomy, mastectomy, or core biopsy).

When your doctor orders the Onco*type* DX test, the hospital will send a sample of your tumor tissue to the Genomic Health® laboratory that performs the Onco*type* DX test.

You will NOT have to go through any additional surgery or procedure to get the Onco*type* DX test.

What you will learn

Your doctor will receive a report with the results of your Onco*type* DX test. The report contains your Recurrence Score® result, which is a number between 0 and 100.

- Women with lower Recurrence Score results have a lower risk that their cancer may return. These women also have a cancer that is less likely to benefit from chemotherapy. It is important to note that a lower Recurrence Score result does not mean that there is no chance that a woman's breast cancer will return
- Women with higher Recurrence Score results have a stronger chance that their breast cancer may return. At the same time, these women may also gain a large benefit from chemotherapy. A higher Recurrence Score result does not mean that a woman's breast cancer will definitely return

The Onco*type* DX test results also provide additional information, such as the activity levels of the estrogen and progesterone receptors in your tumor, to help guide your treatment.

Are you a candidate for the Oncotype DX test?

You may be a candidate for the Oncotype DX Breast Cancer test if you are newly diagnosed with early stage invasive breast cancer that is both:

- Hormone (estrogen) receptor positive (ER+)
- Human epidermal growth factor receptor 2 negative (HER2 -)

Talk with your doctor about the benefits of the Oncotype DX test for you.

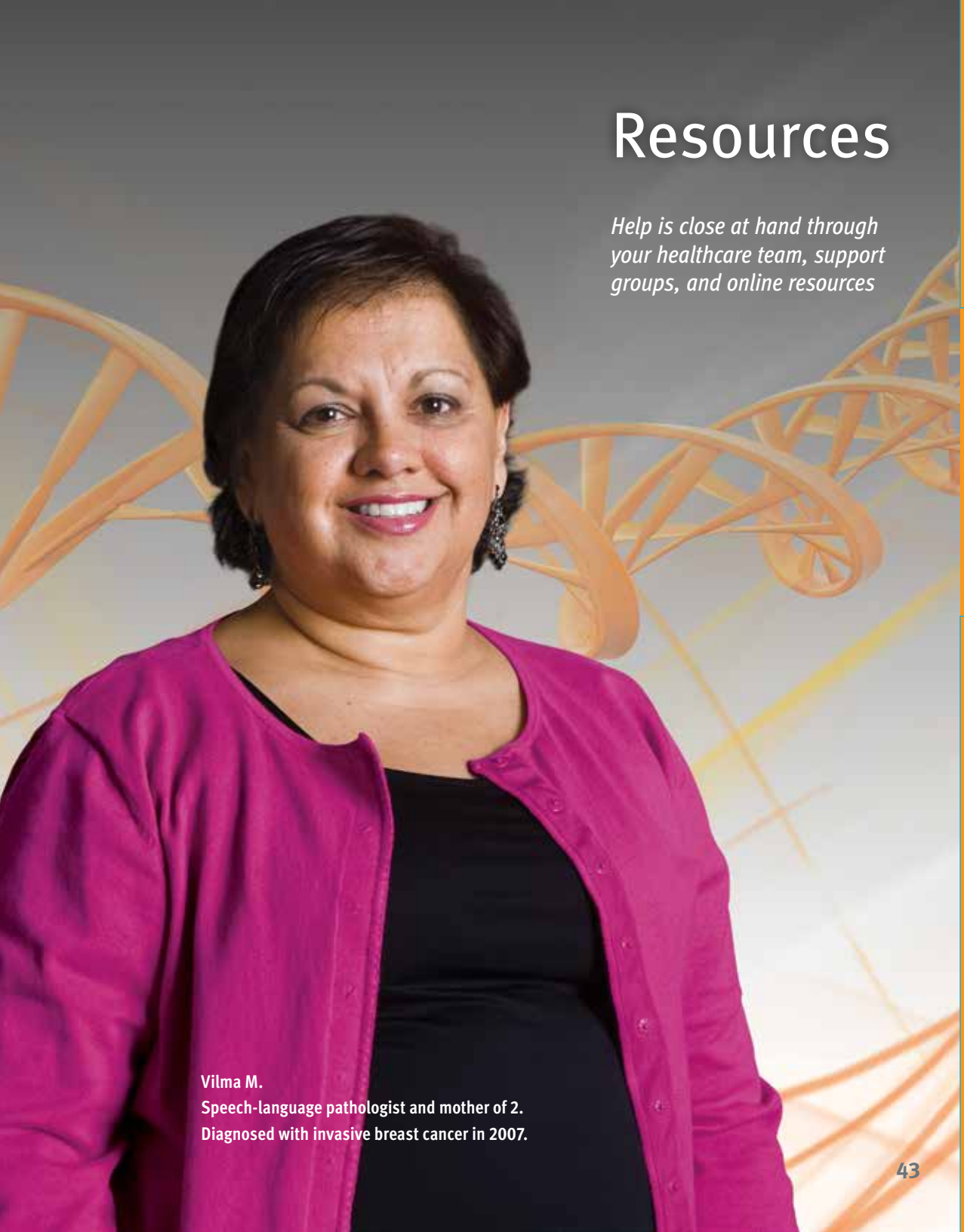
Does my insurance cover the Oncotype DX test?

Most insurance carriers, including Medicare, Aetna, CIGNA, United Healthcare, Kaiser Permanente, Anthem/WellPoint, Humana, Blue Cross Federal, and many others cover the Oncotype DX test for eligible patients. In addition, Genomic Health offers the Genomic Access Program (GAP), a comprehensive program designed to help you with the coverage process and provide financial assistance when necessary, based on eligibility. Please call (866) ONCOTYPE (866-662-6897) for more information on insurance and for financial-aid questions.

More information about the Oncotype DX test is available at (866) ONCOTYPE (866-662-6897) and at www.mybreastcancertreatment.org.

Resources

Help is close at hand through your healthcare team, support groups, and online resources



Vilma M.
Speech-language pathologist and mother of 2.
Diagnosed with invasive breast cancer in 2007.

Taking Care of Yourself

Among the many options you may choose to help you with your breast cancer treatment, perhaps the most important of all is your own involvement. Become an active participant in your treatment.

Work with your healthcare team. Learn, ask questions, maintain a positive outlook, and join a support group. Joining a breast cancer support group is a great way to find answers, receive encouragement, and meet others who can assist you in getting the help you need.

Resources

American Cancer Society

www.cancer.org

The American Cancer Society (ACS) is a nationwide, community-based voluntary organization that provides information on breast cancer prevention, detection, treatment, and community activities.

Breastcancer.org

www.breastcancer.org

Breastcancer.org offers information about breast cancer diagnosis and treatment, community resources, and living day to day with breast cancer.

National Cancer Institute (NCI)

www.cancer.gov

The National Cancer Institute is part of the US National Institutes of Health (NIH). Their website provides comprehensive information on breast cancer, clinical trials, ongoing research, patient support, and resources.

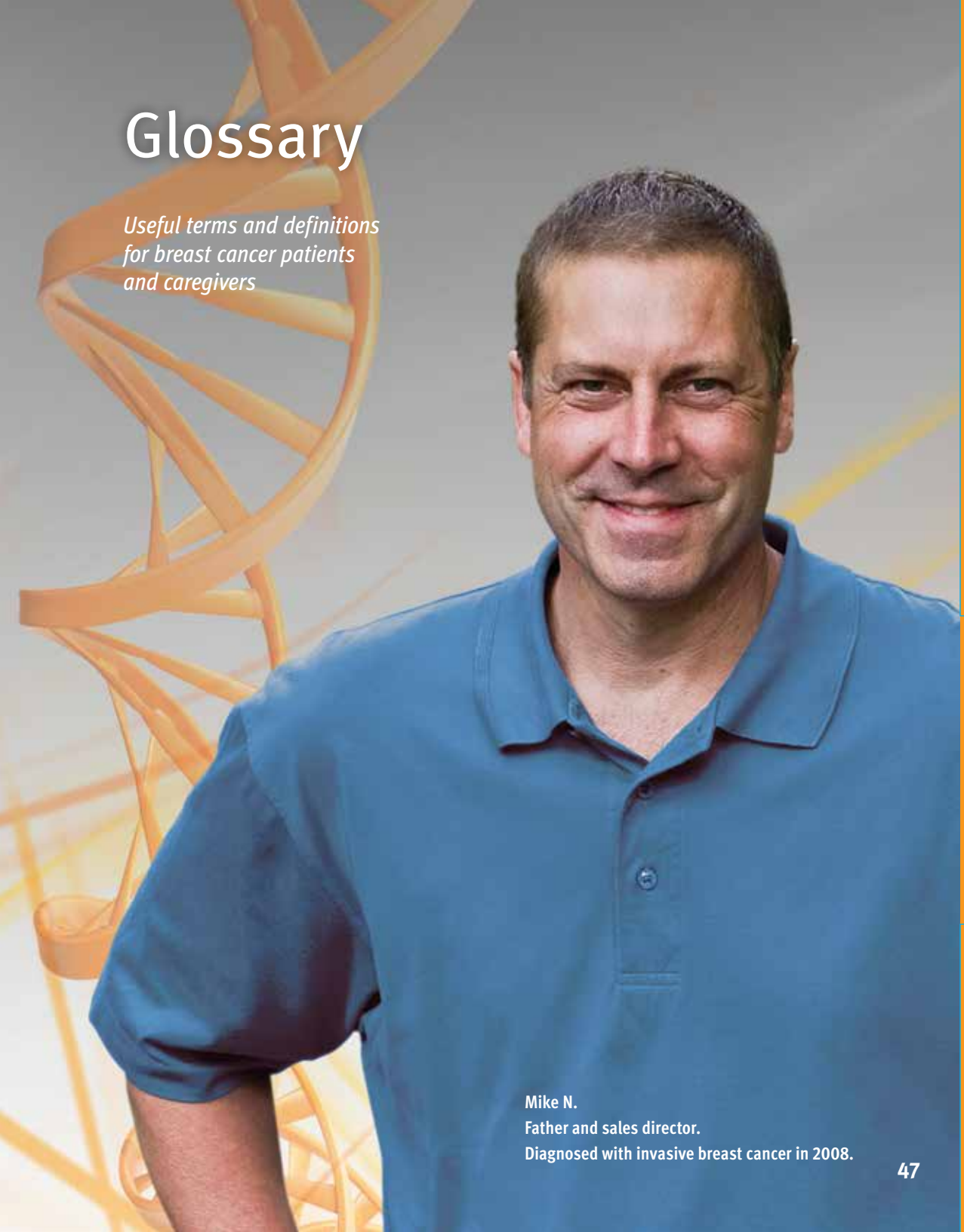
Susan G. Komen for the Cure

www.komen.org

Komen for the Cure is the world's largest grassroots network of breast cancer survivors and activists. The website provides information and support for patients and caregivers, including a phone help line.

Glossary

Useful terms and definitions for breast cancer patients and caregivers



Mike N.
Father and sales director.
Diagnosed with invasive breast cancer in 2008.

Glossary of Terms

Adjuvant Therapy: Treatment performed in addition to surgery.

Assay: A laboratory test.

Axilla: A term that refers to the area near or in the armpit. Most of the lymph fluid that leaves the breast drains into the lymph nodes in the armpit.

Cancer: A term for diseases in which abnormal cells divide without control or order. Cancer cells can invade nearby tissues and can spread through the bloodstream and lymph nodes to other parts of the body.

Cell: The smallest unit of a tissue that makes up any living thing. Cells have a very specialized structure and function.

Chemotherapy: Treatment with drugs, to destroy or slow the growth of cancer cells.

Ductal Carcinoma *in situ* (DCIS): An early or non-invasive form of breast cancer that is confined to the milk ducts within the breast, and is considered Stage 0 disease.

Early-Stage Breast Cancer: Breast cancer is categorized by stage based on the size of the tumor and whether the cancer has spread. Stage I, IIIA, IIB, and IIA are considered "early-stage" and refer to cancers that may have spread to nearby lymph nodes but not to distant parts of the body.

Estrogen Receptor (ER): A protein that may be present on certain cells to which estrogen molecules can attach. The term "ER-positive (ER+)" means a woman's cancer cells may be sensitive to (respond to) hormonal therapy.

Hormone Receptor: A hormone receptor is a protein on the surface of a cell that binds to specific hormones such as the female hormones estrogen and progesterone.

Hormonal Therapy: The use of specific drugs, such as tamoxifen or aromatase inhibitors, to reduce or regulate the production or effects of hormones in the body.

Human Epidermal Growth Factor Receptor 2 (HER2): A protein that appears in the cancer cells of some women with breast cancer. A woman whose tumor has greater-than-normal levels of HER2 is considered HER2 positive. A woman whose tumor has normal levels of HER2 is considered HER2 negative.

Lumpectomy: A surgical procedure that removes a localized mass of tissue, including the breast cancer tumor and a small amount of tissue surrounding the tumor.

Lymph Nodes: Small bean-shaped organs (sometimes called lymph glands); part of the lymphatic system. Lymph nodes under the arm drain fluid from the chest and arm. During surgery, some underarm lymph nodes are removed to help determine the stage of breast cancer.

Mastectomy: A surgical procedure to remove all or part of the breast.

Neoadjuvant Therapy: Treatment given before the primary therapy (surgery is usually the primary therapy).

Node-Negative (N–) Breast Cancer: Breast cancer that has not spread to the lymph nodes.

Node-Positive (N+) Breast Cancer: Breast cancer that has spread to the lymph nodes.

Onco*type* DX® Tests: The Onco*type* DX tests are unique diagnostic tests that look at the genomic profile of a tumor.

Progesterone Receptor (PR): A protein that may be present on certain cells to which progesterone molecules can attach. The term "PR-positive (PR+)" refers to tumor cells that contain the PR protein. These cells are generally sensitive to (respond to) hormone therapy.

Radiation: The use of radiation to destroy cancer cells. Radiation therapy may be used before or after surgery, and is sometimes used in combination with chemotherapy. Radiation is used for local control of the cancer at the site of the tumor.

Staging: A classification system for breast cancers based on the size of the tumor, whether the cancer has spread to the lymph nodes, and whether the cancer has spread to other sites in the body (metastasis).

Surgical Margin: Healthy normal tissue that surrounds the edge of the tumor tissue that was removed during surgery. “Negative” or “clear” margin means the cancer was entirely removed; “positive” margin means some cancer cells still remain after surgery.

Tumor: Tissue growth in which the cells that make up the tissue have multiplied uncontrollably. A tumor can be benign (non-cancerous) or malignant (cancerous).

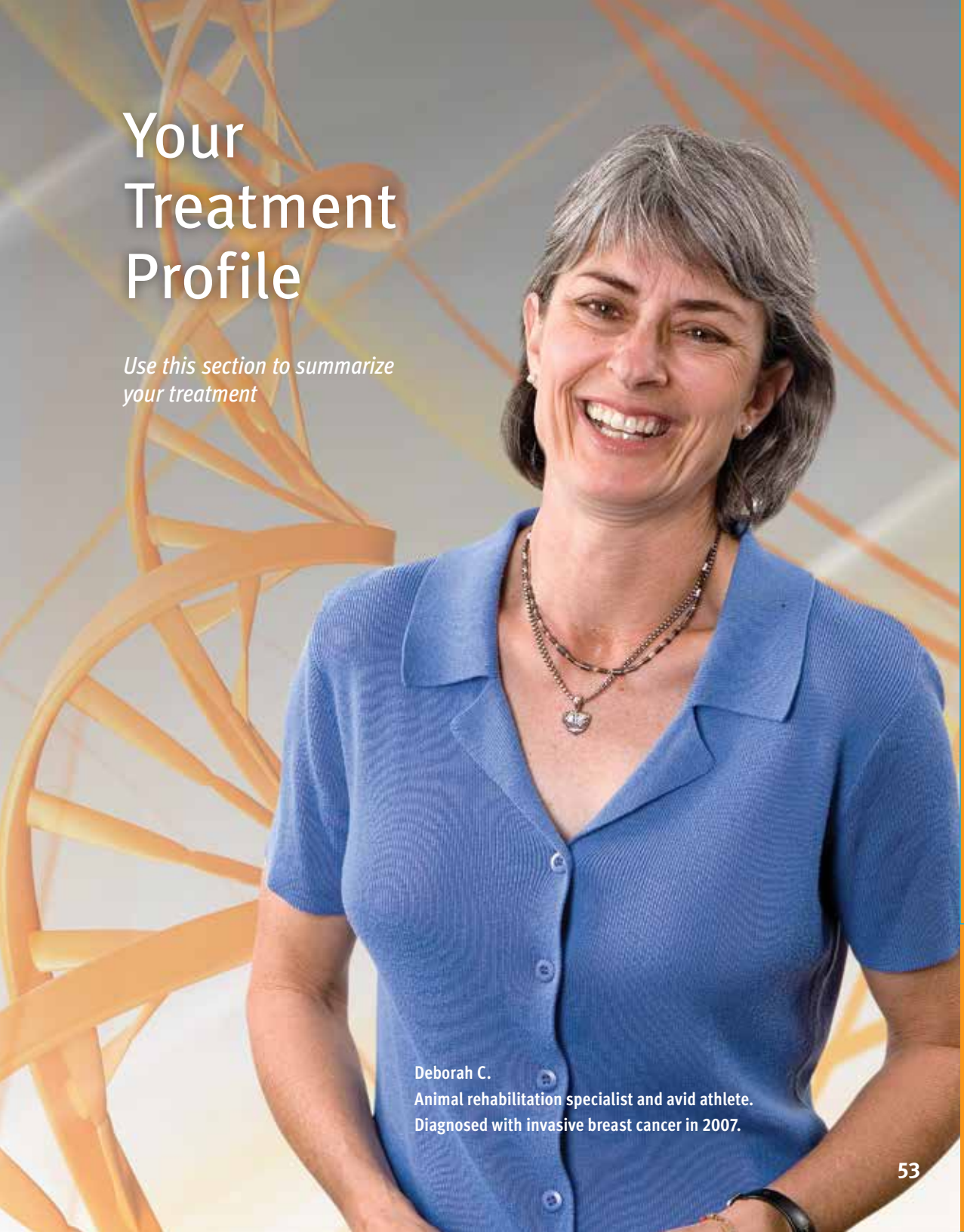
Tumor Grade: Characterization of a tumor based on how similar the cancer cells are to normal cells.

Tumor Size: How big the tumor is, usually reported in metric units (millimeters [mm] or centimeters [cm]).

Notes

Your Treatment Profile

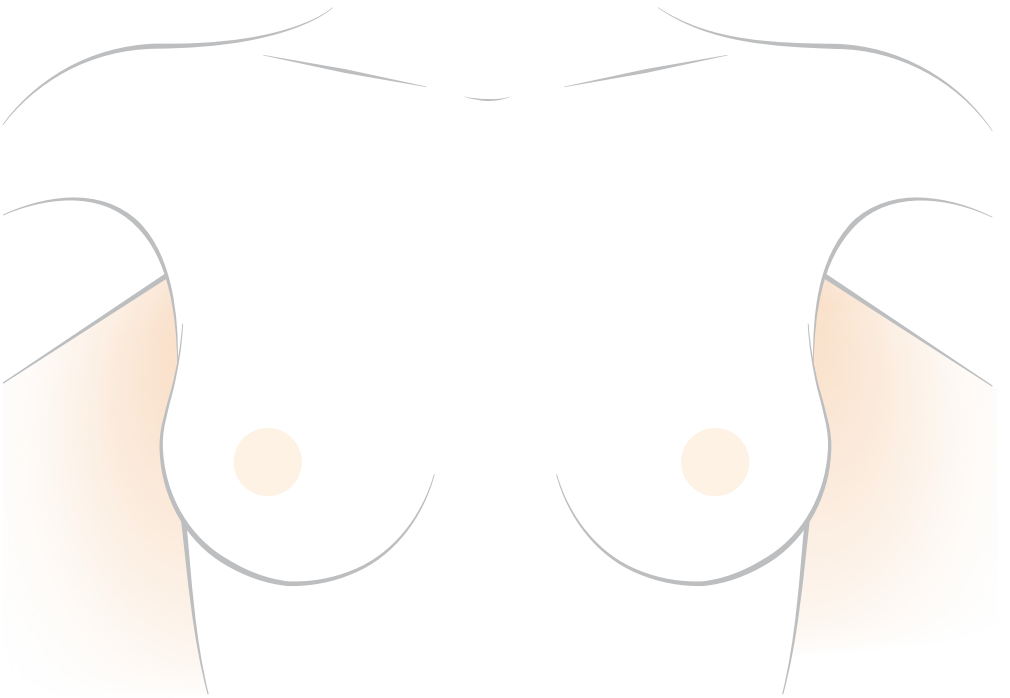
Use this section to summarize your treatment



Deborah C.
Animal rehabilitation specialist and avid athlete.
Diagnosed with invasive breast cancer in 2007.

Your treatment profile

Use these illustrations for your notes and drawings



Notes

Tumor type:		Tumor size:		
ER/PR status:	_____	positive	_____	negative
HER2 status:	_____	positive	_____	negative
Lymph node status:	_____	positive	_____	negative
If positive, location:				
Cancer grade:				
Cancer stage:		(Final staging determination will occur after your surgery.)		
Your Onco*type* DX test result:				
Type of surgery:	_____	lumpectomy	_____	mastectomy
Adjuvant therapy:	_____	hormonal	_____	radiation
	_____	chemotherapy	_____	anti-HER2

Notes

Date of surgery:

The Onco*type* DX test was ordered:

Postsurgery recovery:

Meeting with radiation oncologist:

Radiation therapy:

Meeting with medical oncologist:

Hormonal therapy:

Chemotherapy:

Anti-HER2 therapy:

Healthcare Team Contact Information

Surgeon Name/Phone Number: _____

Radiation Oncologist Name/Phone Number: _____

Medical Oncologist Name/Phone Number: _____

Other: _____

Other: _____

Notes

This education piece is not designed to provide individual advice in connection with your diagnosis or treatment plan. Such matters should be discussed with your healthcare provider.

References 1. Polyak. *J Natl Cancer Inst Monogr.* 2010. **2.** Hughes et al. *J Clin Oncol.* 2009. **3.** Solin LJ, et al. *J Natl Cancer Inst.* 2013 **4.** NCCN Guidelines: Breast Cancer. V1.2012. **5.** Paik et al. *N Engl J Med.* 2004. **6.** Paik et al. ASCO 2005. Abstract 510. **7.** Habel et al. *Breast Cancer Res.* 2006. **8.** Paik et al. *J Clin Oncol.* 2006. **9.** Goldstein et al. *J Clin Oncol.* 2008. **10.** Dowsett et al. *J Clin Oncol.* 2010. **11.** Albain et al. *Lancet Oncol.* 2010.

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