In every crisis lies the seed of opportunity.
You become what you believe.
– Oprah Winfrey

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Here at the Center for Breast Health at Carroll Hospital we strive to care for you not just as a patient with breast cancer but as a new member of our family. We understand you have needs beyond clinical issues and aim to address those needs completely. We focus on three components of life through breast cancer: Mind, Body and Spirit. Each hold importance in your care and we treat them as equals in our journey to your wellness.

We are on this trip together with you.

“The journey of a thousand miles begins with one step.”

— Lao Tzu
"It is the power of the mind to be unconquerable."

– Lucius Annaeus Seneca
Important Hospital Resources

**Center for Breast Health**
CarrollHospitalCenter.org/BreastHealth
Fisher Medical Building
193 Stoner Avenue, Suite 230, Westminster, MD 21157
Phone: 410-871-7080 | Fax: 410-871-6534

**William E. Kahlert Regional Cancer Center**
KahlertRegionalCancer.org
291 Stoner Avenue, Westminster, MD 21157
Phone: 410-871-6400 | Fax: 410-871-6245

**Tevis Center for Wellness**
291 Stoner Avenue, Westminster, MD 21157
Phone: 410-871-7000

**Carroll Hospital**
CarrollHospitalCenter.org
200 Memorial Avenue, Westminster, MD 21157
Phone: 410-848-3000

**Health Navigation Services**
Breast Health Navigators, 410-871-7120
Cancer Health Navigators, 410-871-6400
Carroll Hospital offers free cancer navigation services to guide newly diagnosed male and female patients through treatment and recovery. Services are provided by registered nurses.

The Wellness Boutique
Phone: 410-871-6161
A boutique featuring a variety of health and wellness merchandise and other holistic items designed to bring comfort or promote a healthy lifestyle. Studio YOU, a specialty area in the boutique, features a wide selection of items to support people with cancer, including breast prostheses, mastectomy bras, wigs, hats, turbans and various comfort items. Located next to the Tevis Center for Wellness. Limited quantities of wigs and head coverings are available free of charge.

“Some days there won’t be a song in your heart. Sing anyway.”
~ Emory Austin

**Complementary Health Services**
Phone: 410-871-7000
Open to male and female patients, Carroll Hospital offers a variety of therapeutic services and programs, from individual treatments and group classes to educational lectures about popular mind-body techniques. Health offerings include acupuncture, massage, reflexology, Reiki and yoga.

**Advanced Radiology**
Phone: 1-888-972-9700
Website: advancedradiology.com
As the largest and most preferred radiology provider in Maryland, Advanced Radiology offers a complete range of advanced imaging services, such as digital mammography; digital X-ray; nuclear medicine; DEXA for bone density measurement; and high-field and open MRI, CT, PET/CT. Choose from over 20 convenient locations in Maryland.

**HomeCare Maryland**
Phone: 410-566-5015
Website: HomeCareMaryland.com
HomeCare Maryland delivers a full range of superior, home-based services that are flexible and responsive to a patient’s unique needs. Services include skilled nursing, pre-discharge home assessments, comprehensive rehabilitation, home health aides, nutrition assessment, education and follow up.
Inpatient Cancer Care
Phone: 410-871-7300
For cancer patients requiring hospital care, our
dedicated oncology unit performs the latest
treatments and therapies under the direction of a
board-certified oncologist. We offer comfortable,
private rooms equipped with a bathroom, television,
plenty of natural light and overnight accommodations
for family members.

Education and Support Programs
Phone: 410-871-7000
Website: CarrollHospitalCenter.org
Carroll Hospital sponsors year-round health education
programs, screenings and support groups, including
many specifically designed for cancer
patients. Call to register or learn more.

Genetic Counseling
Carroll Hospital offers genetic counseling services for
cancer patients and those at risk for the disease. A
physician referral and registration are required.

Center for Breast Health
Phone: 410-871-7080
As part of the program, participants will meet with
Dona Hobart, M.D., who has advanced training from
Stanford University. She will collect a comprehensive
personal and family history, perform a risk assess-
ment, and provide information about testing options
before genetic testing. After testing, Dr. Hobart will
provide support and explain the results, risks, options
and next steps in coordination with your physician.

Testing is available for all types of cancers, with a
special focus on breast, pancreatic, ovarian and
colorectal cancers. Most insurances accepted.

Tevis Center for Wellness
Phone: 410-871-7000
Carroll Hospital, in coordination with GeneScreen
Counseling (a genetic counseling service), offers
teleconferences with video capabilities accessible
through your phone or computer. GeneScreen’s
specially trained genetic counselors will collect a
comprehensive personal and family history, perform
a risk assessment, and provide information about
testing options, if appropriate. If patients choose to
have genetic testing, a genetic counselor will explain
the test results and next steps in coordination with
your physician.

Testing is available for all types of cancers and
coverage varies depending on your insurance.

Nutrition Counseling
Phone: 410-871-6161
A registered dietitian specializing in oncology
nutrition can develop nutrition plans to help
patients strengthen their immune systems and
promote recovery, particularly during chemotherapy
or radiation. A physician’s referral is required.

Resource Library
Phone: 410-871-6161
To help them stay informed about their condition or
take steps to prevent illness, patients and community
members can check out a variety of print and
multimedia resources from the Resource Center
located on the first floor of the Dixon Building.

“Believe you can
and you’re halfway there.”
–Theodore Roosevelt
Your Treatment Team

**Physician:** Collaborates with you and other members of your care team to determine treatment recommendations. Each patient’s care plan is carefully mapped out at our Multidisciplinary Breast Conference, a regular gathering of physicians and specialists at the Center for Breast Health.

**Surgeon:** Performs your surgery and helps you through the early stages of treatment.

My surgeon is Dr. ____________________________________________________________
Phone: _______________________________________________________________________
Email: _______________________________________________________________________

**Medical Oncologist:** Guides you through medical therapies, such as chemotherapy and hormonal therapy.

My medical oncologist is Dr. _____________________________________________________
Phone: _______________________________________________________________________
Email: _______________________________________________________________________

**Radiation Oncologist:** Designs and administers your radiation therapy.

My radiation oncologist is Dr. ____________________________________________________
Phone: _______________________________________________________________________
Email: _______________________________________________________________________

**Health Navigators**
Our registered nurse health navigators work as a team to connect you with helpful resources, ensure your treatment progresses smoothly, provide needed support and guidance and assist you with any issues that arise. Please feel free to contact them any time. They welcome your questions and input and are committed to meeting your needs.

**Breast Health Navigator:**
Marcia McMullin, R.N., manager of breast health services
Phone: 410-871-7120
Email: mmcmullin@CarrollHospitalCenter.org

**Kahlert Regional Cancer Center Nurse Health Navigator:**
Navigator: ____________________________________________________
Phone: 410-871-7473
Email: ________________________________

“If you’re going through hell, keep going.”
– Winston Churchill
Multidisciplinary Care

At the Center for Breast Health at Carroll Hospital, we offer a multidisciplinary, collaborative approach to breast cancer treatment. This approach not only keeps all members of your care team on the same page, but it also has been shown to increase survival rates in breast cancer patients.

Your team includes physicians and other providers from:
- Radiology
- Surgery
- Pathology
- Medical oncology
- Radiation oncology
- Health navigation

The center’s multidisciplinary team meets weekly to discuss current cases, and your primary care physician is invited to attend these gatherings. Your team will review all information pertinent to your treatment and care, including:
- Mammogram, ultrasound and MRI films
- Pathology slides and reports
- Your medical history and family history
- Notes from other providers

“When one door of happiness closes, another opens, but often we look so long at the closed door that we do not see the one that has been opened for us.”

–Helen Keller
Understanding Your Pathology Report

Your pathology does not come back all at once. While some data is available after your biopsy, other information is known only after your primary surgery. We understand that waiting for your pathology report is difficult, and we will do our best to provide you with this information as soon as it becomes available. Below are some common questions and answers about pathology report data. If you have additional questions, contact your physician.

Is my breast cancer invasive?

If breast cancer is found, it’s important to know whether the cancer has spread outside the milk ducts or lobules (milk-making glands) of the breast.

Non-invasive cancers (also referred to as “in situ” or “pre-cancers”) stay within the milk ducts or milk lobules. Cancer that has spread beyond the breast into normal tissues is called invasive. Most breast cancers are invasive. Sometimes cancer cells spread to other parts of the body through the blood or lymph system. When this happens, it is called metastatic breast cancer. In some cases, breast cancer can be both invasive and non-invasive.

You may see these descriptions of the type of cancer cells in your report:
- DCIS (Ductal Carcinoma In Situ): A non-invasive cancer that stays inside the milk ducts.
- LCIS (Lobular Carcinoma In Situ): A tumor that is an overgrowth of cells that stay inside the milk-making part of the breast (lobules). LCIS is not a true cancer; rather it is a warning sign of an increased risk for developing an invasive cancer in either breast in the future.
- IDC (Invasive Ductal Carcinoma): A cancer that begins in the milk duct but has grown into the surrounding normal tissue inside the breast. This is the most common kind of breast cancer.
- ILC (Invasive Lobular Carcinoma): A cancer that starts inside the lobules but grows into the surrounding normal tissue inside the breast.

How fast are the cancer cells growing?

Your pathology report may include information about the rate of cell growth, meaning the proportion of cancer cells within the tumor that are growing and dividing to form new cancer cells. One of the tests that can measure the rate of cell growth is called Ki-67.

Ki-67 is a protein in cells that increases as the cells prepare to divide and multiply. A staining process can measure the percentage of tumor cells that test positive for Ki-67. The more positive cells, the more quickly they are dividing and forming new cells. In breast cancer, a result of less than 10 percent is considered low, 10 to 20 percent is intermediate/borderline, and more than 20 percent is high. Your oncologist may use this test to direct possible chemotherapy.
**How big is the cancer?**

Doctors measure cancers in centimeters (cm). The size of the cancer, however, is just one of many factors that determine the stage and treatment of the breast cancer. For example, a small cancer may be very aggressive while a larger cancer may be less so.

**Are there breast cancer cells in my lymph nodes?**

Your doctor will examine your lymph nodes to see if they contain cancer. Lymph nodes are filters along the lymph fluid channels. Lymph fluid leaves the breast and eventually goes back into the bloodstream. The lymph nodes try to catch and trap cancer cells before they reach other parts of the body. When lymph nodes are free, or clear, of cancer, the test results are called negative. If lymph nodes have some cancer cells in them, they are called positive. Having cancer cells in the lymph nodes under your arm is associated with an increased risk of the cancer spreading.

**How many lymph nodes are involved?**

The more lymph nodes that contain cancer cells, the more serious the cancer might be. Physicians might use the number of involved lymph nodes to make treatment decisions. They also look at the amount of cancer in the lymph nodes.

**How much cancer is in each lymph node?**

These terms are often used to describe how much cancer is in each lymph node:
- Microscopic: Only a few cancer cells are in the node (i.e. a microscope is needed to detect them).
- Gross: A lot of cancer is in the node (i.e. you can see or feel the cancer without a microscope).
- Extra capsular extension: When the cancer has spread outside the wall of the node.

**Do the cancer cells have hormone receptors?**

Normal breast tissue responds to the female hormones estrogen and progesterone. The tumor will respond to these hormones if it has the appropriate receptor. Think of the receptors as a place for the hormone to park. If there is no place to park, the hormone cannot affect the cell.

A cancer is called ER-positive if it has receptors for the hormone estrogen. It is called PR-positive if it has receptors for the hormone progesterone. Breast cells that do not have receptors are negative for these hormone receptors. Breast cancers that are ER-positive, PR-positive, or both tend to respond to hormonal therapy. Hormonal therapy is medicine that reduces the amount of estrogen in your body or that blocks estrogen from the receptors, which can reduce cancer cell growth. Even if the cancer has no hormone receptors, other treatments are available.

**What is my HER2 status?**

Your pathology report usually includes the cancer’s HER2 status. The HER2 gene is responsible for making HER2 proteins. These proteins are receptors on breast cells. Under normal circumstances, HER2 receptors help control how a breast cell grows, divides and repairs itself. But in about 25 percent of breast cancers, the HER2 gene can become abnormal and make too many copies of itself (i.e. amplification of the HER2 gene). Amplified HER2 genes command breast cells to make too many receptors (i.e. overexpression of the HER2 protein). When this happens, the overexpressed HER2 receptors cause the breast cells to grow and divide in an uncontrolled way. This can lead to the development of breast cancer. Breast cancers that have amplified HER2 genes or that overexpress the HER2 protein are described in the pathology report.
as being HER2-positive. HER2-positive breast cancers tend to grow faster and are more likely to spread and come back when compared with HER2-negative breast cancers. But HER2-positive breast cancers do respond to specific treatments.

What about other types of testing?

- **Genomic/Oncotype DX**

If the breast cancer is early stage and hormone-receptor-positive, you and your physician may decide that a genomic assay is appropriate. Unlike individual gene testing, such as testing for HER2, genomic assays analyze the activity of a group of normal and abnormal genes that can increase the risk of breast cancer coming back after treatment. This analysis can help determine if a person is likely to benefit from chemotherapy to reduce the risk of the cancer coming back. Called an Oncotype DX, this test is also used to estimate the recurrence risk of DCIS and/or the risk of a new invasive cancer developing in the same breast, as well as how likely a person is to benefit from radiation therapy after DCIS surgery. Test results, which take about ten days to two weeks, are reported separately from your pathology report. An Oncotype DX is performed only after your primary surgery.

- **Genetic Testing**

Inherited cases of breast cancer are likely associated with abnormal genes. Two of the most common types are abnormal versions of BRCA1 (Breast Cancer gene 1) and BRCA2 (Breast Cancer gene 2). According to the National Cancer Institute, women with an abnormal BRCA1 or BRCA2 gene have about a 60 percent risk of being diagnosed with breast cancer during their lifetimes (compared to about 12 percent for women overall). Their risk of ovarian cancer is also increased. Abnormal BRCA1 or BRCA2 genes are found in 5 to 10 percent of all breast cancer cases in the United States. Changes in other genes also are associated with breast cancer, though they are less common and do not seem to increase risk as much as abnormal BRCA1 and BRCA2 genes.

- **EndoPredict**

A test for patients with ER+, HER2 breast cancer in early stages. EndoPredict calculates the chance that your cancer will return in the 10 years following treatment, offering information about how aggressive your cancer is. Understanding this information can help you and your doctor make informed choices about your treatment.

**MY RESULTS**

(Keep in mind that you will not receive all of the following information at once, and **you will not know your stage until after surgery**.)

**Complete with the help of your physician:**

**Type of cancer**

- [ ] Invasive
- [ ] Non-invasive

**Size:** _____ cm (centimeters)

**Hormone receptors:**

- Estrogen:
  - [ ] positive ____%
  - [ ] negative

- Progesterone:
  - [ ] positive ____%
  - [ ] negative

**HER2 status:**

- [ ] positive
- [ ] negative  
- [ ] borderline

**Secondary test:**

- [ ] positive
- [ ] negative

**Ki67%**

- [ ]

**Margins of resection:**

- [ ] positive
- [ ] negative

**Lymph node status:**

- [ ] positive
- [ ] negative

- number of nodes __________

**Oncotype DX recurrence score:**

- [ ]

**Risk of recurrence**

- [ ]

**My cancer stage**

- [ ]
Resources for Women with Breast Cancer

Resources for Women with Breast Cancer

❄ = Available at Carroll County Public Library
◆ = Available at Tevis Center for Wellness
★ = Available through MARINA, Maryland’s inter-library loan system – Access via your local library

Just the Facts, Ma’am

❄ Breast Cancer Clear & Simple This easy-to-read book covers common questions and answers women have about breast cancer diagnosis, treatment, recovery. Skim the table of contents to find your question, or read the entire book. Most chapters conclude with a list of questions to ask the doctor; a glossary and a resource list are also included. (616.9944 B)

❄ Breast Cancer Journey (Ruth O’Regan et al.) This comprehensive guide covers diagnosis, treatment (including a thorough overview of breast reconstruction), side effects, financial matters, and life after cancer. It includes a 26-page resource list, a glossary, list of references, and a special insert for caregivers. (616.9944 O)

❄◆ Dr. Susan Love’s Breast Book, 6th ed. (Susan M. Love) First published in 1990, this is the classic work on breast health. In Carroll County, it is available at the Tevis Center for Wellness as a print book and at Carroll County Public Library as a print book, an audio book, and an ebook. (618.19 L)

www.dana-farber.org/Health-Library/ Information from the Dana-Farber Cancer Institute in Boston, MA
https://medlineplus.gov/breastcancer.html Information from the U.S. National Library of Medicine

You’re Not Alone

❄ Bald is Better with Earrings (Andrea Hutton) With humor and candor, Andrea Hutton shares her story along with practical tips for navigating every stage of the breast cancer journey from testing to the end of treatment and beyond. (616.9944 H)

◆ A Breast Cancer Alphabet (Madhulika Sikka) From a woman who’s been there, this slimvolumed A to Z primer (H is for Hair; Q is for Quitting; S is for Sex – Yes, really!) was written to help you cope with breast cancer. (616.9944 S)

◆ What Helped Get Me Through (Julie K. Silver, MD, ed.) Hundreds of cancer survivors filled out a survey to share with others how they made it through their diagnosis and treatment. Edited by a doctor who is also a breast cancer survivor, the survey responses are grouped into 16 easily skimmed, themed chapters; titles include “How I Nurtured Myself” and “What I Wish I Had Known at Diagnosis”. (362.196)

www.dana-farber.org/Health-Library/Tips-for-Tying-a-Headscarf.aspx Kelley Tuthill, breast cancer survivor and reporter at Boston’s WCVB TV Channel 5, demonstrates three ways to tie a scarf.

Fighting Cancer with Food

❄ The Breast Cancer Cookbook (Mohammed Keshtgar) Based on sound research and comprising more than 100 recipes with accompanying mouthwatering photographs, this collection will inspire you to a healthier diet. (641.5631 K)
The Cancer-Fighting Kitchen (Rebecca Katz) Food as medicine never tasted so good. Written by a chef who’s also a nutrition educator at one of the country’s leading cancer wellness centers, this book offers a plan and recipes to help you maximize cancer treatment and minimize side effects. Share it with your caregiver, too. (641.5631 K)


These recipes to support a healthy diet have been selected by our own community nutrition educator at Carroll Hospital’s Tevis Center for Wellness. New recipes are posted weekly; if making dietary changes is challenging, why not take a baby step, and aim to consistently try the recipe of the week.

www.dana-farber.org/Health-Library/
Managing-Symptoms-during-Chemotherapy-Treatment.aspx
Stacy Kennedy, nutrition specialist at Dana-Farber, offers tips and demonstrations on managing chemotherapy side effects through food.

Treatment Is Over – Now What?
Radical Remission (Kelly A. Turner) Surprised that no one was studying cases of radical remission (recovery against all odds), Dr. Kelly A. Turner made them the focus of her doctoral dissertation. In reviewing more than 1000 cases and conducting 100 personal interviews, she discovered nine common themes that she believes may help prevent recurrence. (616.994 T)

The Whole-Food Guide for Breast Cancer Survivors (Edward Bauman and Helayne Waldman) Diet and lifestyle are two breast cancer risk factors that are within our control. Each chapter in this guide offers clear explanations, along with goals, action steps, a to-do list, and a "Last Word" from a survivor. (616.9944 B)

(You can find more books about breast cancer at most public libraries under the Dewey Decimal number 616.994; you can find more books about fighting cancer with food under the Dewey Decimal number 641.5xx.)

“Although the world is full of suffering, it is full also of the overcoming of it.”

–Helen Keller
Recommended Websites & Electronic Resources

**Websites:**

**American Cancer Society (ACS)**
www.cancer.org
ACS is a nationwide, community-based organization with a chartered division in every state.

**American Society for Therapeutic Radiology and Oncology (ASTRO)**
www.astro.org
ASTRO's mission is to advance the practice of radiation oncology by promoting excellence in patient care, providing opportunities for educational and professional development, promoting research and disseminating research results, and representing radiation oncology in a rapidly evolving socioeconomic health care environment.

**BreastCancer.org**
www.breastcancer.org
A nonprofit organization dedicated to providing the most reliable, complete and up-to-date information about breast cancer.

**Breast360.org**
www.breast360.org
A program of The American Society of Breast Surgeons.

**CancerCare**
www.cancercare.org
Offers free assistance for people with cancer.

**CancerConnect**
www.cancerconnect.com
Provides current, comprehensive and authoritative information on the prevention, diagnosis and management of cancer and offers a community where patients can exchange information and support and inspire one another.

**Cancer.Net**
www.cancer.net
Brings the expertise and resources of the American Society of Clinical Oncology (ASCO) to people living with cancer and their loved ones. It provides timely, comprehensive information to help patients and families make informed health care decisions.

**Cancer Hope Network (CHN)**
www.cancerhopenetwork.org
Provides free, confidential, one-on-one support to people with cancer and their families by connecting patients to trained volunteers with similar experiences.

**CaringBridge**
www.caringbridge.org
A place where patients can connect, share news and receive support.

**National Cancer Institute (NCI)**
www.cancer.gov
The U.S. government agency responsible for conducting and supporting cancer research. The institute’s website provides information about treatment, clinical trials and supportive care.

**National Coalition for Cancer Survivorship**
www.canceradvocacy.org
A patient-led organization advocating on behalf of survivors of all types of cancer.

“Cancer is not a straight line. It’s up and down.”
–Elizabeh Edwards
Susan G. Komen for the Cure
www.komen.org
One of the nation’s largest, most widely known breast-cancer organizations. Its main areas of focus are breast cancer research, education, advocacy, health services and social support programs. Komen’s signature event is the Race for the Cure, which raises funds for breast cancer education and research.

Suggested Apps
While most of the following apps are free, some require a small fee. Most are compatible with Apple products, but several run on Android phones as well.
- My Medical
- Caring Bridge to use with the Caring Bridge website
- Beyond the Shock
- iPharmacy Drug Guide and Pill ID
- My Cancer Coach
- Fooducate

Helpful Blogs
A blog is a personal website or web page on which an individual records opinions, personal experiences, reviews and links to other sites. Please remember that blog content represents personal opinion, not medical advice.
- The Accidental Amazon: www.accidentalamazon.com
- Breast Cancer? But Doctor….I Hate Pink: www.butdoctorihatepink.com
- Caroline's Breast Cancer Blog: carolinemfr.blogspot.com
- Chemobrain……In the Fog: chemo-brain.blogspot.com
- Let Life Happen: www.letlifehappen.com
- Living Beyond Breast Cancer: www.lbbc.org
- My Journey Through BC, Cardiomyopathy & Stage IV Breast Cancer ~ LMBC: debsbreastcancerjourney.blogspot.com
- Nancy’s Point: nancyspoint.com
- Rethink Breast Cancer: rethinkbreastcancer.com
- The Life I Didn’t Expect: juditsaunders.blogspot.com
- Young Survival Coalition (YSC): blog.youngsurvival.org

Useful Podcasts
Guided Relaxation Exercises for Coping with Breast Cancer
Financial Assistance

Financial stress is a very common concern during cancer treatment. Many patients struggle with lost work time and increased expenses. Please contact your health navigator (see page 16 of this guide) with any financial questions or concerns you may have.

Resources (as funds are available)
Cancer Support Foundation, Inc.
Can help with energy bills and other quality-of-life services.
410-833-5435 or 410-964-9563

Patient Assistance Funds
For patients experiencing a serious illness, such as cancer, Carroll Hospital provides several patient assistance funds including the Studio YOU & Wellness Boutique Assistance Fund. To be eligible, a patient must be receiving care at Carroll Hospital or one of its affiliates and determined to be in financial need or crisis.
For more information, call the Tevis Center for Wellness at 410-871-6160.

Red Devils (For patients living in, or receiving treatment in Maryland)
Provides services such as massage, meals and house cleaning, to name a few.
Call Tevis Center for Wellness: 410-871-7000

“I don’t think of all the misery but of the beauty that still remains.”
– Anne Frank
Begin to see yourself as a soul with a body rather than a body with a soul.
Types of Surgery: What to Expect

**Lumpectomy**
Terms commonly used to describe a lumpectomy include limited breast surgery, wide excision, segmental mastectomy, partial mastectomy or breast-conserving surgery. These terms essentially mean the same thing: a portion of the breast is being removed. Studies have shown that for most breast cancers, lumpectomy with radiation yields the same survival as a mastectomy.

**Post-Surgical Care:**
- After a lumpectomy you will experience short-term pain, swelling and redness at the incision sites. (You will likely have two incisions, one on the breast and one in your armpit where the sentinel nodes were removed.)
- Only take prescription pain medication if needed. For some patients, over-the-counter pain medication will suffice.
- Call the doctor or nurse if the redness and swelling worsen over time.
- After surgery, you may want to sleep with your arm raised or with a small pillow placed under your arm. Wear loose-fitting clothes to bed.
- If you are receiving brachytherapy (a type of radiation), you will have significant drainage from the tube site. This is normal. Simply keep the area clean and redress with dry sterile gauze.
- You may tire easily after surgery. This is normal. Follow what your body tells you. Sleep as much as you can and try to take it easy.
- After two to three weeks, you can return to normal activity. You should be able to participate all the activities you enjoyed prior to surgery, such as gardening, golf, swimming, cycling and tennis.

**Sentinel Lymph Node Biopsy**
Sentinel lymph node biopsy is a procedure to test the most important lymph nodes related to your cancer. The status of the lymph node is used to stage your tumor and sometimes to direct treatment. Typically, the procedure is done at the time of your breast surgery.

When it is time for surgery, you will receive anesthesia in the operating room. By State law, a specially trained radiation technologist will inject the dye. The dye will tract to the most important lymph nodes.

A small straight incision will be made in your armpit to remove them. Your surgeon will use a small device to find the dye in the lymph nodes and will typically remove between one and four nodes. The nodes will be sent to pathology where they will be checked for cancer immediately. This test is 85 percent accurate. Final results are usually available within one week.

After the sentinel node biopsy is complete, your surgeon will perform surgery on your breast. A separate incision will be made for this part of the surgery.

A small number of patients will have to undergo complete lymph node dissection, in which more than 10 nodes are removed. This procedure will most likely be performed at a later date.

**Post-Surgical Care:**
- The incision area will consist of dissolvable stitches under your skin. Some soreness is normal.
- Moving your arm regularly can help prevent stiffening of the shoulder. Sometimes scar tissue forms around the incision area, which can be treated with physical therapy.

“Once you choose hope, anything is possible.” – Christopher Reeve
**Brachytherapy**

About 20 to 30 percent of patients are eligible for a type of radiation treatment called brachytherapy. This type of radiation is performed twice a day for five days. Patients receiving brachytherapy will be seen by a radiation oncologist prior to surgery.

Brachytherapy involves placing a balloon in the breast where the lumpectomy was performed. The balloon is equipped with a tube that comes out of the skin. Once the final pathology is complete and all criteria are met, the balloon is removed and replaced with a treatment balloon. (Inserting the treatment balloon is a simple and painless procedure that takes about 20 minutes to complete. The procedure is performed by a surgeon with one or two assistants in the office.)

Next, radiation is placed in the chambers of the balloon to ensure the radiation reaches only the tissue closest to the balloon. NO radiation remains in the balloon between treatments, and you are free to resume your daily activities as normal.

**Post-Surgical Care:**

Your health navigator will go over specific care instructions with you, including:

- Most patients require a home care nurse for two to five days after discharge to help them with the dressing of the balloon.
- There will be significant drainage from where the balloon exits the skin; this is completely normal.
- The area must be kept clean and dry.
- You will be given a special bra (similar to a sports bra) to wear to help keep the balloon and breast stable.
- The balloon will be removed at the time of the last treatment. (Balloon removal is not painful.)
- You may shower 24 hours after balloon is removed.

**Mastectomy**

If you are having a mastectomy, plan to arrive at the hospital on the day of your surgery. If you are not undergoing reconstruction, you will go home the same day. Most patients undergoing reconstruction will spend at least one night in the hospital.

**Post-Surgical Care:**

- Expect some soreness around the incision site.
- You will have at least one drain after the surgery (our nursing staff will teach you proper drainage care).
- Most swelling should subside with time. Some patients experience swelling after the drains are removed, called a seroma. A seroma can be drained in the office with a needle. While the procedure is not painful, it might need to be repeated weekly. Some patients need to wear a compression garment to decrease seroma formation.
- You may experience pain on the inside upper arm. The pain can be a burning sensation or tingling and will usually subside with time. Try to move your arm normally after surgery. (Some patients put a small pillow in their armpit for comfort.) If you have trouble moving your arm, talk to your physician. In 20 to 30 percent of patients, the pain does not completely go away but decreases significantly. Pain that does not resolve is called post-mastectomy pain syndrome (PMPS).

If you do not have reconstruction, you will be fitted with a prosthesis once you are completely healed. Your insurance will pay for the prosthesis. If you do not have insurance, we will help you obtain a prosthesis free of charge.

**Hidden Scar™**

Dr. Hobart is certified in Hidden Scar techniques offering patients the ability to be free of the reminders of surgery by hiding surgical scars when possible.

“Hope is the thing with feathers that perches in the soul, and sings the tune without the words, and never stops at all.”

– Emily Dickinson
Breast Reconstruction

Breast reconstruction creates a breast that resembles a natural breast in appearance and form. This is done by using the woman's own tissues or an implant. It may be done after removal of a whole breast (mastectomy/bilateral [double] mastectomy) or part of the breast (segmental mastectomy, quadrantectomy or wide local excision). The new breast shape can be created using an implant and/or your own tissue from another part of the body, usually the back or lower abdomen. Reconstructed breasts don’t usually have a nipple but one can be created with surgery.

Who can have reconstruction?

Most women who have had a whole or partial mastectomy can have breast reconstruction, either at the same time as their initial surgery for cancer (immediate reconstruction) or months, even years, later (delayed reconstruction).

Deciding to have reconstruction

Your surgeon will want you to go into the operation with a full understanding of what is going to happen and realistic expectations of how your reconstructed breast will look. Do not proceed with reconstruction until you feel you’ve got all the facts and have received answers to all your questions. You may find it helpful to write down any questions you want to ask and to take notes during consultations. Taking someone with you can help you to remember what has been discussed and give you extra support.

Talk to your surgeon about options for breast reconstruction.
Helpful Hints for Caregivers & Care Partners

Hints
- Help with the activities of daily life, such as cooking, driving, household chores and caring for children and pets.
- Screen telephone calls. Consider designating a contact person to communicate health news and updates.
- Share your feelings honestly and completely. Express anger, love, dislike, appreciation, grief and happiness.
- Be a good listener.
- Respect your loved one’s privacy.
- Make a list of things that need to be done, so that you have tasks ready when individuals offer assistance.
- Maintain a positive attitude. Try to accept and embrace the present.
- Be patient and flexible.
- Try to attend appointments and write down information to help you stay informed.
- Remember, your loved one is still the same person, and treat her as such. Try to strike a good balance between providing assistance and encouraging independence.

- Laugh and be playful. Laugh some more.
- Seek spiritual support through community, prayer, meditation or the help of a spiritual leader.
- If you have children, include them in age-appropriate tasks. Keep them involved.
- Use all resources available to you, including our health navigators (see page 16 of this guide for more information).
- Consider complementary therapies such as yoga, meditation and reflexology to relieve stress.
- Reflect. Ask yourself, “What good can come from this?” and “What can I learn from this?”
- STOP once a day to breathe. Recite a few lines from a poem or prayer or hum a few lines of a favorite song.
Resources for Caregivers & Care Partners

**Books for Adults**

- *Passages in Caregiving: Turning Chaos into Confidence*
  by Gail Sheely

- *Stand By Her* by John W. Anderson

- *Breast Cancer Husband* by Marc Silver

- *It Takes 2* by Mark Brodinsky

- *Breast Cancer: Let Me Check My Schedule!*
  Peggy McCarthy & Jo An Loren

- *In Sickness and in Health: A Husband’s Story of Surviving Breast Cancer*
  by Michael Streicker

- *Breast Cancer Husband: How to Help Your Wife (and Yourself) during Diagnosis, Treatment and Beyond*
  by Marc Silver

- *Breast Cancer: Caregivers & Survivor’s Guide to Recovery*
  by The Ribbon Riders
Nutrition & Physical Activity

Nutrition and Physical Activity During and After Cancer Treatment: Answers to Common Questions

The questions and answers below are part of an article developed by the American Cancer Society's Nutrition, Physical Activity and Cancer Survivorship Advisory Committee. Written for health care professionals, the full article can be viewed online at http://onlinelibrary.wiley.com/doi/10.3322/caac.21142/abstract.

Through the questions and answers listed here, we address some common concerns that cancer survivors have about diet and physical activity. A cancer survivor is defined as anyone who has been diagnosed with cancer, whether or not the person is in treatment.

Alcohol

Does alcohol increase the risk of cancer recurrence (coming back)?

Studies have found a link between alcohol intake and the risk of breast cancer.

Alcohol intake can also increase levels of estrogens in the blood. In theory, this could increase the risk of estrogen receptor-positive breast cancer coming back after treatment. But only a few studies have looked at alcohol use in breast cancer survivors. About half of them link it to worse outcomes, while the other half either showed no harm or a benefit. One study found that the effect of alcohol might be worse in women who are overweight or obese.

Should I avoid alcohol during cancer treatment?

The cancer type and stage (extent), as well as the type of treatment should be taken into account when deciding whether to drink alcohol during treatment. Many of the drugs used to treat cancer are broken down by the liver, and alcohol, by causing liver inflammation, could impair drug breakdown, increasing side effects. It's a good idea to drink only a little, if any, alcohol during treatment to prevent interactions with the drugs used to treat cancer.

Alcohol, even in the small amounts used in mouthwashes, can irritate mouth sores and even make them worse. If you have mouth sores, you may be advised to avoid or limit alcohol. It may also be best to avoid or limit alcohol if you are starting treatment that will put you at risk for mouth sores, such as head and neck radiation or many types of chemotherapy.

Antioxidants

What do antioxidants have to do with cancer?

Antioxidants include vitamin C, vitamin E, carotenoids (compounds that give vegetables and fruits their colors), and many phytochemicals (plant-based chemicals). They help prevent cell damage caused by chemical reactions with oxygen. Because this damage may play a role in cancer development, it has long been thought that antioxidants may help prevent cancer.

Studies suggest that people who eat more vegetables and fruits, which are rich sources of antioxidants, may have a lower risk for some types of cancer. Because cancer survivors may be at increased risk for second cancers, they should eat a variety of antioxidant-rich foods each day. (Second cancers are new, different cancers, not the same cancer coming back.)

So far, studies of antioxidant vitamin or mineral supplements have not found that they reduce cancer risk. The best advice at this time is to get antioxidants through foods rather than supplements.
Is it safe to take antioxidant supplements during cancer treatment?
Many dietary supplements contain levels of antioxidants (such as vitamins C and E) that are much higher than the recommended Dietary Reference Intakes for optimal health.

At this time, many cancer doctors advise against taking high doses of antioxidant supplements during chemotherapy or radiation. There is a concern that the antioxidants might repair the damage to cancer cells that these cancer treatments cause, making the treatments less effective. But others have noted that the possible harm from antioxidants is only in theory. They believe that there may be a net benefit in helping to protect normal cells from damage caused by these cancer treatments.

Whether antioxidants or other supplements are helpful or harmful during chemotherapy or radiation treatment is a major question without a clear science-based answer right now. Until more evidence is available, it’s best for cancer survivors getting these treatments to avoid dietary supplements except to treat a known deficiency of a certain nutrient, and to avoid supplements that give more than 100 percent of the Daily Value for antioxidants.

Flaxseed (a good fat)
Flaxseed is a good source of vitamins, minerals and fiber, and is also high in omega-3-fatty acids and phytoestrogenic lignans (compounds that act like estrogen in the body).

In the lab, flaxseed (and compounds from flaxseed) seem to have slowed cancer cell growth and helped certain treatments work better. In two small studies, patients with breast or prostate cancer who were put on a flaxseed rich diet before surgery had lower rates of cancer cell growth (in their tumors) than the patients on other diets. More research is still needed to see the effect of flaxseed on outcomes.

Fiber
Can dietary fiber prevent cancer or improve cancer survival?
Dietary fiber includes many different plant carbohydrates that are not digested by humans. Fibers are either soluble (like oat bran) or insoluble (like wheat bran and cellulose). Soluble fiber helps lower the risk of heart disease by reducing blood cholesterol levels. Fiber is also linked with improved bowel function.

Good sources of fiber are beans, vegetables, whole grains, nuts and fruits. Eating these foods is recommended because they contain other nutrients that may help reduce cancer risk. They also have other health benefits, such as reduced risk of heart disease. At this time we don’t know if fiber intake can affect cancer risk or survival.
Obesity

Does being overweight increase the risk of cancer coming back or getting another cancer?

More and more evidence suggests that being overweight or obese raises the risk for recurrence (the cancer coming back) and reduces the odds of survival for many cancers. Increased body weight has been linked with higher death rates for all cancers combined.

Because of other proven health benefits to losing weight, people who are overweight are encouraged to get to and stay at a healthy weight. Avoiding weight gain as an adult is important, too, not only to reduce cancer risk and risk of cancer coming back, but to reduce the risk of other chronic diseases as well.

Physical activity

Should I exercise during cancer treatment and recovery?

Research strongly suggests that exercise is not only safe during cancer treatment, but it can also improve physical functioning and many aspects of quality of life. Moderate exercise has been shown to improve fatigue (extreme tiredness), anxiety and self-esteem. It also helps heart and blood vessel fitness, muscle strength and body composition (how much of your body is made up of fat, bone or muscle).

People getting chemotherapy and radiation who already exercise may need to do so at a lower intensity and build up more slowly than people who are not getting cancer treatment. The main goal should be to stay as active as possible and slowly increase your level of activity over time after treatment. Movement of any sort throughout the day is as important as exercise! The goal should be 2.5 - 3 hours of moderate exercise per week once strength is restored after cancer treatment.

Are there special precautions survivors should consider?

Certain issues for cancer survivors may prevent or affect their ability to exercise. Some effects of treatment may increase the risk for exercise-related problems. For instance:

- People with severe anemia (low red blood cell counts) should delay activity until the anemia is better.
- Those with weak immune systems should avoid public gyms and other public places until their white blood cell counts return to safe levels.
- People getting radiation should avoid swimming pools because chlorine may irritate the skin at the treatment area.

If you were not active before diagnosis, you should start with low-intensity activities and then slowly increase your activity level. Certain people should use extra caution to reduce their risk of falls and injuries:

- Older people
- Those with bone disease (cancer in the bones or thinning bones, such as osteoporosis)
- People with arthritis
- Anyone with nerve damage (peripheral neuropathy)

Can regular exercise reduce the risk of cancer coming back?

There have been studies that look at breast, colorectal, prostate and ovarian cancer where exercise can reduce the risk of cancer coming back.

In these studies, people with higher levels of physical activity after diagnosis lived longer and had less chance of the cancer coming back. Still, more studies are needed to see if exercise has a direct effect on cancer growth.

In the meantime, since physical activity is known to prevent heart and blood vessel disease, diabetes, and osteoporosis, cancer survivors should try to have a physically active lifestyle and movement.

Is yoga helpful to cancer survivors?

Most of the studies of yoga in cancer have been in breast cancer patients. They have found that yoga can be helpful in terms of anxiety, depression, distress and stress. It didn’t seem to be as helpful for more physical outcomes, such as body composition, fitness and muscle strength.

More research is needed, but to get the most benefit, it may be best to combine yoga with aerobic exercise and resistance (weight) training.
**Phytochemicals**

What are phytochemicals, and do they reduce cancer risk?

Phytochemicals are a wide range of compounds made by plants. Some have either antioxidant or hormone-like actions. Many studies have looked at the effects that phytochemicals (or the plants that contain them) may have on cancer coming back or getting worse (progressing).

Eating lots of vegetables and fruits reduces the risk of some types of cancer, so researchers are looking for the specific plant compounds that might account for this.

At this time there is no evidence that phytochemicals taken as supplements are as helpful as the vegetables, fruits, beans and grains they come from.

**Soy products**

Should cancer survivors include soy-based foods in their diet?

Soy foods are an excellent source of protein and can be a good option for meals without meat. Soy contains many phytochemicals, some of which have weak estrogen activity and seem to protect against hormone-dependent cancers in animal studies. Other compounds in soy have antioxidant properties and may have anticancer effects.

There’s a great deal of interest in the possible role of soy foods in reducing cancer risk, especially breast cancer risk. But the evidence at this time is mixed.

For the breast cancer survivor, current research finds no harmful effects from eating soy foods. These foods may even help tamoxifen work better. There is less known about the effects of soy supplements. We at the CBH do not recommend soy supplements.

**Sugar**

Does sugar “feed” cancer?

Sugar and sugar-sweetened drinks add large amounts of calories to the diet and can cause weight gain, which we know can affect cancer outcomes. There are many kinds of sugars, including honey, raw sugar, brown sugar, corn syrup and molasses. Many drinks, such as soft drinks and fruit-flavored beverages, contain sugar. Most foods and drinks that are high in added sugar do not offer many nutrients and may replace more nutritious food choices. For this reason, limiting or eliminating the intake of foods and drinks with added sugar is recommended. In fact, processed sugar has proven to deplete the immune system, just one 12 ounce soda can deplete the immune system for 6 hours!

**Supplements**

Would survivors benefit from using vitamin and mineral supplements?

Survivors should try to get the nutrients they need through whole food, not supplements. Dietary supplements should be used under the guidance of your physician because of a deficiency of a certain nutrient. It is advised not to take vitamins or other supplements to get higher than recommended levels of nutrients—this may do more harm than good.

A daily multivitamin is considered safe in most cases.

**Can nutritional supplements lower cancer risk or the risk of cancer coming back?**

There is strong evidence that a diet rich in vegetables, fruits and other plant-based foods may reduce the risk of some types of cancer. And some recent studies suggest there may be a helpful effect on recurrence or survival for breast, prostate and ovarian cancers. There is varying evidence at this time that supplements can provide these benefits.

Many healthful compounds are found in vegetables and fruits, and it’s likely that these compounds work together to create these helpful effects. Whole Food is the best source of vitamins and minerals.

“I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”

—Maya Angelou
**Vegetables and fruits**

Will eating vegetables and fruits lower the risk of cancer coming back?

In most studies, eating more vegetables and fruits has been linked with a lower risk of lung, oral (mouth), esophagus (tube connecting the mouth to the stomach), stomach and colon cancer. Some recent studies suggest that a higher intake of vegetables may have a helpful effect on recurrence or survival for breast, prostate and ovarian cancers, but this is not definite. Cancer survivors should have an intake of at least 2 to 3 cups of vegetables and 1½ to 2 cups of fruits each day because of their other health benefits. It’s not known which of the compounds in vegetables and fruits are most protective, so it’s best to eat different kinds of colorful vegetables and fruits each day.

Is there a difference in the nutritional value of fresh, frozen, and canned vegetables and fruits?

Yes, but they can all be good choices. Fresh foods are usually thought to have the most nutritional value. But some frozen foods can have more nutrients than fresh foods. This is because they are often picked ripe and quickly frozen, and nutrients can be lost in the time between harvesting and eating fresh foods.

Canning is more likely to reduce the heat-sensitive and water-soluble nutrients because of the high temperatures used in the canning process. Also, be aware that some fruits are packed in heavy syrup, and some canned vegetables are high in sodium.

Should I juice my vegetables and fruits?

Juicing can add variety to your diet and can be a good way to get vegetables and fruits, especially if you have trouble chewing or swallowing. Juicing also helps the body absorb some of the nutrients in vegetables and fruits, however, nutrients degrade quickly and is best when consumed right after making.

Buy juice products that are 100 percent vegetable or fruit juices and pasteurized to remove harmful germs. These are better for everyone, but are especially important for people who may have weak immune systems, such as those getting chemotherapy.

**Vegetarian diets**

Do vegetarian diets reduce the risk of cancer coming back?

In general, vegetarian-based diets show reduction in cancer coming back as opposed to meat-based diets. Vegetable-based diets are lower in saturated fat and high in fiber, vitamins and phytochemicals. Vegetarian diets are in line with the American Cancer Society Nutrition Guidelines for the Prevention of Cancer. See American Cancer Society documents *Vegetarianism and American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention* for more information. In 2016 an Italian trial looked at the Mediterranean diet and breast cancer recurrence. Out of 199 women who were asked to eat lots of fruit, vegetables, fish and olive oil; none of these women suffered cancer recurrence in three years. The preliminary results of this small study suggest that a Mediterranean diet could lower the risk of breast cancer returning, but a longer follow up than three years is needed to confirm the diet’s impact. In general, vegetarian-based diets show reduction in cancer coming back as opposed to meat-based diets.

**Water and other fluids**

How much water and other fluids should I drink?

Symptoms like fatigue (extreme tiredness), lightheadedness, dry mouth, a bad taste in the mouth and nausea can be caused by dehydration (loss of fluid from the body). To help prevent these problems, survivors should try to take in enough fluids. This is especially important if you are losing fluid, such as through vomiting or diarrhea.
Healthy adult men need about 3.7 liters of water a day, while women need about 2.7 liters, but most of this fluid comes from foods. (Note: A liter is a little over a quart.)

If you are having trouble eating or drinking or are losing fluid (because of problems with vomiting or diarrhea, for instance), you may not be able to take in enough fluid. You should talk with your health care team because you might need to be treated with intravenous (IV) fluids.

Cruciferous vegetables and cancer prevention
What are cruciferous vegetables?
Cruciferous vegetables contain vitamins, minerals, other nutrients and chemicals known as glucosinolates. Glucosinolates break down into several biologically active compounds that are being studied for possible anti-cancer effects. Some of these compounds have shown anti-cancer effects in cells and animals, but the results of studies with humans have been less clear.

Cruciferous vegetables include the following vegetables, among others:
- Arugula
- Bok choy
- Broccoli
- Brussels sprouts
- Cabbage
- Cauliflower
- Collard greens
- Horseradish
- Kale
- Radishes
- Rutabaga
- Turnips
- Watercress
- Wasabi

Why are cancer researchers studying cruciferous vegetables?
Cruciferous vegetables are rich in nutrients, including several carotenoids (beta-carotene, lutein, zeaxanthin); vitamins C, E, and K; folate; and minerals. They also are a good fiber source.

In addition, cruciferous vegetables contain a group of substances known as glucosinolates, which are sulfur-containing chemicals. These chemicals are responsible for the pungent aroma and bitter flavor of cruciferous vegetables.

During food preparation, chewing and digestion, the glucosinolates in cruciferous vegetables are broken down to form biologically active compounds such as indoles, nitriles, thiocyanates and isothiocyanates. Indole-3-carbinol (an indole) and sulforaphane (an isothiocyanate) have been most frequently examined for their anticancer effects.

Indoles and isothiocyanates have been found to inhibit the development of cancer in several organs in rats and mice, including the bladder, breast, colon, liver, lung and stomach. Studies in animals and experiments with cells grown in the laboratory have identified several potential ways in which these compounds may help prevent cancer:
- They help protect cells from DNA damage.
- They help inactivate carcinogens.
- They have antiviral and antibacterial effects.
- They have anti-inflammatory effects.
- They induce cell death (apoptosis).
- They inhibit tumor blood vessel formation (angiogenesis) and tumor cell migration (needed for metastasis).

Are cruciferous vegetables part of a healthy diet?
Different vegetables are rich in different nutrients. Vegetables are categorized into five subgroups: dark-green, red and orange, beans and peas (legumes), starchy and other vegetables. Cruciferous vegetables fall into the “dark-green vegetables” category and the “other vegetables” category. More information about vegetables and diet, including how much of these foods should be eaten daily or weekly, is available from the U.S. Department of Agriculture website Choose My Plate (www.choosemyplate.gov).

Obesity and cancer risk
What is obesity?
Obesity is a condition in which a person has an abnormally high and unhealthy proportion of body fat.

To measure obesity, researchers commonly use a scale known as the body mass index (BMI). BMI is calculated by dividing a person’s weight (in kilograms) by their height (in meters) squared. BMI provides a more accurate measure of obesity or being overweight than weight alone.
What is known about the relationship between obesity and cancer?

Obesity is associated with increased risks of the following cancer types and possibly others as well:

- Esophagus
- Pancreas
- Kidney
- Gallbladder
- Breast (after menopause)
- Colon and rectum
- Thyroid
- Endometrium (lining of the uterus)

One study—using NCI Surveillance, Epidemiology, and End Results (SEER) data—estimated that in 2007 in the United States, about 34,000 new cases of cancer in men (4 percent) and 50,500 in women (7 percent) were due to obesity. The percentage of cases attributed to obesity varied widely for different cancer types but was as high as 40 percent for some cancers, particularly endometrial cancer and esophageal adenocarcinoma.

A projection of the future health and economic burden of obesity in 2030 estimated that continuation of existing trends in obesity will lead to about 500,000 additional cases of cancer in the United States by 2030.

This analysis also found that if every adult reduced their BMI by 1 percent, which would be equivalent to a weight loss of roughly 1 kg (or 2.2 lbs) for an adult of average weight, this would prevent the increase in the number of cancer cases and actually result in the avoidance of about 100,000 new cases of cancer. This is good news!

Several possible mechanisms have been suggested to explain the association of obesity with increased risk of certain cancers:

- Fat tissue produces excess amounts of estrogen, high levels of which have been associated with the risk of breast, endometrial and some other cancers.
- Obese people often have increased levels of insulin and insulin-like growth factor-1 (IGF-1) in their blood (a condition known as hyperinsulinemia or insulin resistance), which may promote the development of certain tumors.
- Fat cells produce hormones, called adipokines, that may stimulate or inhibit cell growth. For example, leptin, which is more abundant in obese people, seems to promote cell proliferation, whereas adiponectin, which is less abundant in obese people, may have antiproliferative effects.
- Fat cells may also have direct and indirect effects on other tumor growth regulators, including mammalian target of rapamycin (mTOR) and AMP-activated protein kinase.
- Obese people often have chronic low-level, or "subacute," inflammation, which has been associated with increased cancer risk.

Other possible mechanisms include altered immune responses, effects on the nuclear factor kappa beta system and oxidative stress.

What is known about the relationship between obesity and breast cancer?

Many studies have shown that being overweight and obese are associated with a modest increase in risk of postmenopausal breast cancer. This higher risk is seen mainly in women who have never used menopausal hormone therapy (MHT) and for tumors that express both estrogen and progesterone receptors.

Being overweight and obese have, by contrast, been found to be associated with a reduced risk of premenopausal breast cancer in some studies.

The relationship between obesity and breast cancer may be affected by the stage of life in which a woman gains weight and becomes obese. Epidemiologists are actively working to address this question. Weight gain during adult life, most often from about age 18 to between the ages of 50 and 60, has been consistently associated with risk of breast cancer after menopause.

The increased risk of postmenopausal breast cancer is thought to be due to increased levels of estrogen in obese women. After menopause, when the ovaries stop producing hormones, fat tissue becomes the most important source of estrogen. Because obese women have more fat tissue, their estrogen levels are higher, potentially leading to more rapid growth of estrogen-responsive breast tumors.

The relationship between obesity and breast cancer risk may also vary by race and ethnicity. There is limited evidence that the risk associated with overweight and obesity may be less among African-American and Hispanic women than among white women.
Does avoiding weight gain or losing weight decrease the risk of cancer?
The most conclusive way to test whether avoiding weight gain or losing weight will decrease the risk of cancer is through a controlled clinical trial. A number of NIH-funded weight loss trials have demonstrated that people can lose weight and that losing weight reduces their risk of developing chronic diseases, such as diabetes, while improving their risk factors for cardiovascular disease.

However, previous trials and the results of an NCI workshop have demonstrated that it would not be feasible to conduct a weight loss trial of cancer prevention. The reason is that the effect of weight loss on the prevention of other chronic diseases would be demonstrated—and the trial consequently stopped so that the public could be informed of the benefits—before the effect on the prevention of cancer would become evident.

Therefore, most data about whether losing weight or avoiding weight gain prevents cancer come mainly from cohort and case-controlled studies. Data from these types of studies, called observational studies, can be difficult to interpret because people who lose weight or avoid weight gain may be different in other ways from people who do not, just as obese people may differ from lean people in other ways than BMI. That is, it is possible that these other differences explain their different cancer risk.

More research is needed, however, many observational studies have shown that people who have a lower weight gain during adulthood have a lower risk of:
- Colon cancer
- Breast cancer (after menopause)
- Endometrial cancer

Additional resources
The following materials can be ordered by contacting the American Cancer Society at 1-800-227-2345, or viewed online at www.cancer.org:
- Nutrition for the Person with Cancer During Treatment: A Guide for Patients and Families (also in Spanish)
- American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention (also in Spanish)
- Nutrition for Children With Cancer (also in Spanish)
- Infections in People With Cancer
- Vegetarianism

The following books are also available from the American Cancer Society:
- What to Eat During Cancer Treatment
- The Great American Eat-Right Cookbook
- The American Cancer Society’s Healthy Eating Cookbook

NATUROPATHIC DOCTORS:
- Many people with cancer choose an integrative medicine approach also known as complementary medicine. These approaches may include herbal/botanical, nutritional, diets, homeopathy, acupuncture and other holistic practices like meditation and prayer. Naturopathic doctors (NDs) who specialize in naturopathic oncology understand both the standard treatments employed by medical oncologists and how best to work in a collaborative model of cancer co-treatment. They often help patients maintain their oncology treatment regimens and provide vital support for reducing side effects of those treatments. Naturopathic doctors are aware of the multitude of ‘alternative therapies’ promoted to cure cancer and work to educate patients on evidence-based treatment modalities.
- To find a licensed ND near you, visit OncANP Find an ND and click on your state https://oncanp.org/world-map/us/
- For more information on NDs visit The American Association of Naturopathic Physicians at www.naturopathic.org/
Sexuality and Cancer

Many women have difficulties with sex and intimacy following a breast cancer diagnosis. Some women feel unattractive or experience a lack of energy and interest in intimacy. Aside from feeling that your body has betrayed you, you may have a sense of invasion from the treatments. All these strangers have been poking and prodding you for weeks; you may also feel violated. It takes a while to feel good and in control of your body again. You need to communicate these feelings to your partner so he or she can help you in your healing.

One of the least discussed subjects about life after breast cancer is sexuality. Many women find it hard to talk about sex, especially when they lose parts of their bodies so strongly associated with sexuality. Life after breast cancer can affect an intimate relationship in a myriad of ways. Some of which are fatigue, hair loss, weight gain, scarring and loss of spontaneity.

Many find this difficult to bring up with their health care provider; however, hoping a situation will get better on its own rarely works and usually allows the problem to become chronic. You should request help for such problems as decreased sex drive and vaginal dryness; you may even consider a sex therapist. Counseling or a support group is another option where you can talk about your feelings in a safe and protective environment. The thing to keep in mind is that many struggle with this issue, you are not alone. The good news is that help is available. Below are resources that may be helpful. The important thing is don’t keep silent!

Ask your health navigator for local resources and information.

Sexual Health Resources

Local Sex Therapists
Susan Kachur, L.C.P.C.
Kachur4@aol.com
410-848-8061

Laura Thorpe, L.C.S.W.-C., B.C.D.
410-967-6920
lmthorpe1@netzero.com

National Resources
The American Cancer Society
www.cancer.org
Search sexual side effects in men or sexual side effects in women

Cancer Care
www.cancercare.org
Search intimacy for information and podcasts

National Cancer Institute’s Life After Treatment:
www.cancer.gov
Search body changes and intimacy

Livestrong Foundation
www.livestrong.org
Search for Sexual Health After Cancer

MD Anderson:
Sexuality, Cancer and Cancer Treatment
www.mdanderson.org
Search for Sexuality and Cancer

Memorial Sloan-Kettering
www.mskcc.org
Search for Sexual Health FAQs
Cancer Survivorship Resources

Books for Adults

• Breast Cancer: A Soul Journey
  by Patricia Greer

• Breast Cancer? Let Me Check My Schedule!
  by Peggy McCarthy and Jo an Loren

• Breast Cancer Husband: How to Help Your Wife (and Yourself) during Diagnosis, Treatment and Beyond
  by Marc Silver

• The Breast Cancer Survival Manual
  by John Link M.D.

• Dr. Susan Love's Breast Book
  by Dr. Susan Love

• The Feisty Woman’s Breast Cancer Book
  by Elaine Ratner

• Had I Known: A Memoir of Survival
  by Joan Lunden

• Hope is Contagious: The Breast Cancer Survival Handbook
  by Margit Esser Porter

• Journey: A Breast Cancer Survival Guide
  by Allie Fair Sawyer & Norma Suzette Jones

• The Loving’ Ain’t Over for Women with Cancer
  by Ralph & Barbara Alterowitz

• Living in the Post-Mastectomy Body
  by Rebecca Zuckweiler

• My Breast
  by Joyce Wadler

• My Mother’s Breast
  by Laurie Tarkan

• The Not-So-Scary Breast Cancer Book
  by Carolyn Ingram & Leslie Ingram Gebhart

• The Paper Chain
  by Claire Blake

• A Spiritual Journey Through Breast Cancer
  by Judi Asti

• Surviving After Cancer: Living the New Normal
  by Anne Katz

• Uplift: Secrets From the Sisterhood of Breast Cancer Survivors
  by Barbara Dolinsky
Resources

**American Cancer Society**
www.cancer.org/treatment/caregivers
Information about caregiver roles, how to cope, communicating with the cancer patient and online support communities.

**CancerCare, Inc.**
www.cancercare.org/tagged/caregiving
Online support groups and workshops for caregivers.

**Embrace Program at Carroll Hospital**
Embrace is a free program for cancer survivors that includes physical fitness options, nutrition education and other support services in an effort to help you move forward to a lifetime of wellness. For more information call Care Connect at 410-871-7000.

**National Cancer Institute**
www.cancer.gov/cancertopics/pdq/supportivecare/caregivers/patient/page1
Addresses changing roles, caregiver needs and quality of life.

**National Sleep Foundation**
www.sleepfoundation.org
Online resources for how sleep affects your health

**Blogs**
Living Beyond Breast Cancer (LBBC)
livingbeyondbc.wordpress.com
The Labyrinth as a Spiritual Practice

In walking the labyrinth as a spiritual practice we link with other cultures and eras.

It connects the body and the soul; having a physical and spiritual experience.

It is one meandering path; unlike a maze that has multiple paths and dead ends.

The labyrinth requires attention to the interior life and can be experienced like a body prayer. The labyrinth is a nonverbal experience where we can’t think our way through the journey, we can simply make ourselves open to it and receive what it offers.
The notion of spirituality is very different from religious belief, participation or even practice. A common definition of spirituality is any activity or thought that embodies the search for experience of something beyond oneself.

For many people, a cancer diagnosis can trigger a spiritual crisis. In a person with a strong faith tradition, this may manifest itself as anger at God, a deep sense of abandonment by God or a questioning of one's lifelong faith. The cancer can directly threaten one's sense of purpose and belonging.

When the onslaught of emotions come, welcome them. This is the time to treat yourself with compassion and express your fears, doubts and anxiety. Some find comfort attending a support group while others prefer to confide in a close friend or spiritual advisor (e.g. pastor, priest or rabbi). Many discover their community of faith serves as a place of great strength and support. In addition, some patients seek solace in spiritual practices like prayer, meditation, journaling and guided imagery. Try to seek out what works best for you.

It’s also important to ask yourself these questions:
• What brings comfort to my life?
• What gives me joy and a sense of well-being?
• What coping mechanisms have helped me deal with difficult situations in the past?

The answers can help you find meaning and purpose within your cancer journey.

Cancer survivors often say cancer changes their lives forever. Some consider it the most transforming experience of their life; their faith is deeper, richer and more real than ever before.

Wherever you are on your spiritual journey, remember that you are not alone. Help, hope and many resources are available to you along the way.

If you would like to talk to a spiritual care professional, or need additional resources, please ask your health navigator.

―Toughness is in the soul and spirit, not in muscles.‖

– Alex Karras
Breast cancer patients experience a range of emotions following their diagnosis, including:

- Not believing what they have heard.
- Feeling overwhelmed and unsure what to do next.
- Feeling angry with their physician and anyone else associated with the diagnosis.
- Appealing to a higher power, asking “Why me?” and “What did I do to deserve this?”
- Feeling helpless, resigned and immobilized, or afraid of the outcome.
- Accepting the reality of their diagnosis.

It is healthy to let yourself “feel” your feelings rather than fight them. It takes time to absorb the news of a diagnosis, and it can take up to three weeks before you really “believe” what is happening. Give yourself time you need to make decisions and plans.

Many uncertainties also come with a breast cancer diagnosis. You might feel as if you have lost control of your life. It is hard to see how anything good or positive can come from having cancer. But you might be surprised. Above all, the Center for Breast Health at Carroll Hospital is here to help every step of the way.

Patients repeatedly find kindness, hope, strength, love and support from places they never knew existed. No one wants to be diagnosed with breast cancer, but the journey can take you places you otherwise would never go. It is important to surround yourself with support, whether from family, friends, your faith community or the physicians and staff at the Center for Breast Health.

“We are not human beings on a spiritual journey.

We are spiritual beings on a human journey.”

—Stephen R. Covey
How to Manage Stress and Fear after Diagnosis

• Get to know the people on your medical team. Pinpoint the best communicator on your team, and make sure you have access to him or her by phone, appointment or e-mail.
• Find a physician who communicates effectively. You need a physician who listens and gives you as much or as little information as you need.
• Minimize surprises by asking what to expect from tests, procedures and treatments.
• Make a plan with your physician to ensure you receive test results promptly. Avoid scheduling tests late in the week to avoid having to wait through the weekend for results.
• Try to minimize stress at work and home when facing a challenging treatment week (e.g. chemotherapy or surgery).
• Use your support system. It can be hard to ask for help when you are not used to doing so, but allowing others to assist you builds a sense of purpose and community.
• If well-meaning people try to tell you stories about others struggling with cancer, stop them right away by saying, “I only listen to stories with happy endings!”
• Set small reachable goals each day or week.
• Adopt a positive attitude: “I can do this.”
• Believe in yourself, your body and your team.
• Allow that your body may go through some physical stresses, but your spirit can lead you through the experience.
• Explore complementary therapies, such as yoga, acupuncture and reflexology, to help decrease pain and stress.
• Spend time with positive people who affirm who you are and how you have chosen to deal with breast cancer.
• Join a breast cancer-related group. This can be a formal support network, online discussion group or any place where you can share your experiences in an open way. Look for programs that fit your personality. Some groups may focus on certain topics or interests, such as sports, education or socialization.
• Talk to your physician, or health navigators, if you reach a point where emotions are preventing you from functioning, sleeping and/or taking proper care of yourself.

Support for the Emotional Effects of Cancer
Cancer Care
www.cancercare.org
800-813-HOPE (4673)
Provides free, professional support services to anyone affected by cancer. Programs include counseling and support groups, education, financial assistance and practical help provided by professional oncology social workers. Services are completely free of charge.

Cancer Support Community
www.cancersupportcommunity.org
888.793.WELL (9355)
Provides support groups, stress reduction and cancer education workshops, nutrition guidance, exercise sessions and social events.

Coping University
www.copinguniversity.com
Offers stress-reducing and inspirational audio and video programs at no charge and can be downloaded to iPods and other digital players.

“Spirit is an invisible force made visible in all life.”
– Maya Angelou
Complementary Therapies

Offered through the Tevis Center for Wellness at Carroll Hospital, the therapies listed below are meant to complement your current medical treatment. Financial assistance is available to those who qualify. Call Care Connect at 410-871-7000 for more information.

- **Yoga**: A Hindu system of physical and mental disciplines practiced to attain control of body and mind. A series of exercises and postures promote tranquility and spiritual and physical well-being.
- **Reiki**: A form of therapy in which the practitioner channels energy into the patient to encourage healing or restore well-being.
- **Acupuncture**: A main form of treatment in traditional Chinese medicine. It involves the use of very thin, needles that are inserted painlessly in the body at specific points. Acupuncture can be used in cancer treatment to help with pain and other side effects.
- **Reflexology**: A therapeutic method of stress relief and relaxation that involves stimulating pressure points on the feet and hands.
- **Massage**: The rubbing and kneading of muscles and joints of the body with the hands to relieve tension or pain.

“The human spirit is stronger than anything that can happen to it.”

—C.C. Scott
Acupuncture and Chemotherapy

Chemotherapy-induced nausea and vomiting
Of all the investigated effects of acupuncture on cancer-related symptoms and disorders, the positive effect of acupuncture on chemotherapy-induced nausea and vomiting (N/V) is the most convincing, as demonstrated by the consistency of the results of a variety of clinical study types, including RCTs, nonrandomized trials, prospective consecutive case series, and retrospective studies. Consistent with the findings from clinical studies of acupuncture on N/V due to other causes (i.e., postoperative N/V and morning sickness), these studies showed acupuncture to be effective in the treatment of chemotherapy-induced N/V.

Vasomotor symptoms
Some studies have reported that acupuncture may be effective in reducing vasomotor symptoms among postmenopausal women with breast cancer and prostate cancer patients receiving androgen-deprivation therapy.

Six RCTs have studied the role of acupuncture in reducing hot flashes in breast cancer survivors.

Summary of the Evidence for Acupuncture Treatment of Cancer-related Symptoms
It is noteworthy that almost all reported clinical studies on the effects of acupuncture on cancer or cancer therapy-related symptoms focus on symptom management rather than the disease itself. Investigations into the effects of acupuncture on chemotherapy-induced nausea and vomiting, many of which were randomized and well-controlled, produced the most convincing findings. A number of randomized controlled trials have reported on the effect of acupuncture in alleviating other cancer treatment-associated side effects, with many showing promising evidence supporting the use of acupuncture. Additional phase III clinical trials are ongoing.

Source: http://www.cancer.gov/about-cancer/treatment/cam/hp/acupuncture-pdq#section/_74
A Resource List for Therapeutic Yoga

Please note: this is not intended to be a complete list, or an endorsement of any particular approach, but a springboard for your own investigations.

• Dr. Timothy McCall, author of Yoga as Medicine
  www.drmccall.com

• Yoga in Illness and Health by Jnani Chapman, R.N.
  www.cancerlinks.org/Yoga/?practice.html#TOC

• Mindfulness Based Stress Reduction: University of Massachusetts Medical School, Center for Mindfulness in Medicine, Health Care and Society; founder Jon Kabat-Zinn

Studies:
• Yoga reduces insomnia in Breast Cancer Patients Treated with Hormone Therapy
  www.cancernetwork.com/oncology-nursing/asco-yoga-reduces-insomnia-breast-cancer-patients-treated-hormone-therapy

• Mindfulness-Based Stress Reduction as supportive therapy in cancer care – systematic review
  www.ncbi.nlm.nik.gov/pubmed/16194185

If you want to read more research:
• NCCAM National Center for Complementary and Alternative Medicine
  www.nccam.nih.gov

• Yoga for Health
  nccam.nih.gov/health/yoga/introduction.htm
  (see references at end of article)

• CAM on PubMed:
  nccam.nih.gov/research/camonpubmed

• National Library of Medicine – Medline Plus
  www.medlineplus.gov

Books:
• Healing Yoga for People Living with Cancer
  by Lisa Holtby

• Yoga and Breast Cancer: A Journey to Health and Healing
  by Ingrid Kollak, Ph.D., R.N., and Isabell Utz-Billing, M.D.

• Relax and Renew: Restful Yoga for Stressful Times
  by Judith Hanses Lassiter

• Yoga as Medicine by Timothy McCall

• Full Catastrophe Living (and other books)
  by Jon Kabat-Zinn

Guided Imagery and Meditation:
• Bellaruth Naparstek
  www.healthjourneys.com

• Jon Kabat-Zinn
  www.mindfulnesstapes.com

• Free audio meditations:
  www.fragrantheart.com

DVDs:
• Gentle Yoga for Cancer Patients, Reconnecting Body, Mind and Spirit with Lynn Felder, RYT

• Yoga for Cancer Recovery with Claire Petretti
  Yoga and the Gentle Art of Healing. A Journey of Recovery after Breast Cancer with Susan Rosen

• Gentle Yoga for Recovery and Beyond with Camille Kittrell (www.exclusiveyoga.com)
Support & Education

**Breast Cancer Support Group, Free**
Facilitated by a nurse educator, the monthly Breast Cancer Support Group helps women and men better understand and manage the challenges and triumphs associated with the breast cancer journey. The group meets the second Tuesday of each month at 7 p.m. in the Tevis Center for Wellness. Call 410-871-7000 for more information. Pre-registration is not required.

**Gather and Connect, Free**
This group provides an opportunity for people living with cancer and their caregivers to share strategies on dealing with cancer. Structured in a casual and inviting setting, these meetings are designed to facilitate a sense of community for those who have been affected by cancer. Walk-ins are welcome and attendees are invited to stay for the entire session or a portion of it. No registration is required.

**Look Good, Feel Better, Free**
Patients who are undergoing chemotherapy can benefit from this free American Cancer Society program, held once a month to help women cope with the appearance-related side effects of cancer treatment. You can receive a free supply of makeup tailored to your skin. Call 410-871-7000 to register or for more information.

“I have heard there are troubles of more than one kind.
Some come from ahead and some come from behind.
But I’ve bought a big bat. I’m all ready you see.
Now my troubles are going to have troubles with me!”

— Dr. Seuss