



# Mind, Body, Spirit

 Aurora Cancer Care®

We are  AdvocateAuroraHealth™

This binder belongs to:

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Phone: \_\_\_\_\_

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# Introduction

This booklet is provided to you as a patient newly diagnosed with cancer. It can be used as a starting point to understand your disease and the current treatment options available. There are places throughout this booklet to write information you gather throughout your treatment. Use of this booklet will help you become an active participant in your health care.

The information contained in this booklet comes from a variety of sources (e.g., American Cancer Society, National Cancer Institute), which can be accessed by the general public. Therefore, this information is for general use as a starting point. It should not replace the information given to you by your medical provider.

You should discuss all relevant information with your medical provider(s) so that your care can be tailored to meet your specific needs and circumstances. Aurora Health Care is a not-for-profit health care provider and a national leader in efforts to improve the quality of health care.

## Acknowledgements

- American Cancer Society Website: [www.cancer.org](http://www.cancer.org)
- National Cancer Institute Website: [www.cancer.gov](http://www.cancer.gov)
- National Cancer Institute, Chemotherapy and You: Support for People with Cancer. Retrieved from website of the National Cancer Institute ([www.cancer.gov/publications/patient-education/chemo-and-you](http://www.cancer.gov/publications/patient-education/chemo-and-you))
- Dignicap.com

## About This Book

This booklet is written for you – someone who is about to receive or is now receiving **chemotherapy** or other anti-cancer treatment. Your family, friends, and others close to you may also want to read this book.

This book is a guide you can refer to throughout your treatment. It includes facts about anti-cancer treatment and its side effects and highlights ways you can care for yourself before, during, and after treatment.

# Introduction cont.

## This book covers:

- **Questions and answers about your treatment (chemotherapy, immunotherapy, targeted therapy, biotherapy, hormone therapy, oral chemotherapy, radiation, and other treatment options).**
- Answers common questions, such as what chemotherapy, immunotherapy, targeted therapy, biotherapy, hormone therapy, oral chemotherapy, and radiation therapy are and how they affect cancer cells. Rather than read this book from beginning to end – look at only those sections you need now. Later, you can always read more.
- **Side effects and ways to manage them.**  
Explains side effects and other problems that may result from chemotherapy, immunotherapy, targeted therapy, biotherapy, hormone therapy, oral chemotherapy, and radiation therapy. This section also has ways that you and your doctor or nurse can manage these side effects.
- **Tips for meeting with your doctor or nurse.**  
Includes questions for you to think about and discuss with your doctor, nurse, and others involved in your cancer care.
- **Ways to learn more.**  
Lists ways to get more information about chemotherapy, immunotherapy, targeted therapy, biotherapy, hormone therapy, oral chemotherapy, radiation therapy, and other topics discussed in this book – in print, online, and by telephone.
- **Words to know.**  
A dictionary that clearly explains all the words that are in bold in this book. Talk with your doctor or nurse about what you can expect during treatment. He or she may suggest that you read certain sections of this book or try some of the ways to manage side effects.

# General Information

## What is Cancer?

Cancer is a general term for many diseases, all of which are characterized by uncontrolled growth and spread of abnormal cells. These abnormal (cancer) cells do not act or behave as normal cells do. Normal cells grow and multiply to replace old or dead cells; cancer cells multiply uncontrollably. They keep reproducing regardless of the need for new cells.

Because of this reproduction, cancer cells form malignant tumors. These tumors can invade other tissues and organs and may destroy normal cells. Cancer may grow slowly or rapidly. Eventually many tumors grow into nearby organs or tissue or spread to other parts of the body. This spread is called metastasis. Metastasis usually occurs through the bloodstream or lymph vessels. Benign tumors are made up of cells that are not cancerous; they usually do not grow and spread in the same way as malignant tumors. They are usually not dangerous.

There are more than 100 types of cancer. The names of various kinds of cancer refer to the type of body tissue from which the cancer cell developed. For instance, adenocarcinoma is a kind of cancer that involves mucus-secreting cells/glands, such as in the lung or breast. Sarcoma refers to a cancer that involves connective tissues such as bone or cartilage.

Cancer develops when a cell becomes abnormal. What causes the cell to become abnormal is often not clear. Many factors have been found to be cancer-producing. They include the use of tobacco products, exposure to some chemicals, and excessive exposure to sunlight. Cancer is not contagious; you cannot catch it from another person.

### Notes:

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### Tips for Patients Newly Diagnosed with Cancer

When people first hear the news that they have “cancer,” a variety of emotions and reactions occur. Many people report that they felt shocked. Most also found it hard to hear everything that was being said to them about their treatment options. It is very common for patients to sit through a doctor visit and feel so overwhelmed that later you will recall very little of what was told to you.

#### Here are some suggestions that you may find helpful:

- Bring a friend, spouse, or family member with you to your doctor visits. Two sets of ears will help remember more information.
- Bring this booklet to every office visit to jot down notes and add other information given to you, like your test results and treatment plans.
- Bring a list of questions with you to your office visits.
- If you do not understand any part of your care or words that are used – please ask.

All questions are good questions.

### What to Expect During a Typical Appointment

You will check in at the front desk where the Patient Service Representative will verify your identity and apply a wristband on your wrist.

#### Before you see the provider, a team member will:

- Access your implanted Mediport or check your PICC line
- Draw your blood to be tested if labs were ordered
- Measure your height and weight
- Measure your blood pressure, heart and respiration rate; and temperature
- Ask how you’re feeling and advise your doctor

#### Your doctor will:

- Give you an examination
- Review your blood test results
- Determine if you’ll be treated today
- Enter your medication order
- Tell nurse and pharmacist you are ready for treatment



## General Information cont.

### Your pharmacist will:

- Review your medication order
  - Right medication
  - Right dose

### Your pharmacy technician will:

- Make the medication following strict protocol
  - Sterile room
  - One medication at a time

### Your pharmacist will:

- Double-check the prepared medication

### Your nurse will:

- Pick up medication from pharmacy
- Double-check medication against doctor's order
  - With chemotherapy, two nurses double-check your medication
- Administer your medication

### Promptness is our goal, but delays sometime happen due to:

- Number of patients in clinic
- Waiting for blood test results
- Clarification of orders with your medical team

### We appreciate your patience.

## Aurora Cancer Care Visitor Guidelines

Patients at our clinics enjoy a quiet, healing environment along with the comfort of having friends or loved ones included in their care. To ensure all patients can enjoy a support system, each patient is asked to limit visitors to one or two people.

If you have a health care Power of Attorney, please invite him or her to your appointments with your Oncologist. This will help them stay up to date with your treatment decisions.

Another benefit of outpatient treatment is a reduced risk of hospital-acquired infections. For this reason, and for the safety of everyone in the infusion setting, no children under the age of 14 are allowed at any time. Children cannot be left unattended in the waiting room. Please make childcare arrangements before arriving.

### Thank you for choosing Aurora Cancer Care.

# My Personal Care Record

## My Personal Care Team

The treatment of cancer requires a team effort of many doctors, nurses and other health care professionals. **Use the next few pages to keep track of your team.**

### DOCTORS

Dr. \_\_\_\_\_ Specialty \_\_\_\_\_

Nurse \_\_\_\_\_ Office # \_\_\_\_\_

Address \_\_\_\_\_

Dr. \_\_\_\_\_ Specialty \_\_\_\_\_

Nurse \_\_\_\_\_ Office # \_\_\_\_\_

Address \_\_\_\_\_

Dr. \_\_\_\_\_ Specialty \_\_\_\_\_

Nurse \_\_\_\_\_ Office # \_\_\_\_\_

Address \_\_\_\_\_

Dr. \_\_\_\_\_ Specialty \_\_\_\_\_

Nurse \_\_\_\_\_ Office # \_\_\_\_\_

Address \_\_\_\_\_

# My Personal Care Record cont.

## Other Health Care Professionals

Cancer Nurse Navigator \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Nurse Practitioner \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Physician Assistant \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Social Worker \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Behavioral Health Counselor \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Chaplain \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Financial Counselor \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Dietitian \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Physical Therapist \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

Home Health Agency \_\_\_\_\_ Phone # \_\_\_\_\_

Address \_\_\_\_\_

### My Oncology Health Care Team

While receiving care at Aurora Cancer Care, you will talk with many health care providers – all of whom are specialized in their field. Everyone works together to give patients the best medical care possible and the personal attention they deserve. Members of your oncology team may include:

#### Patient Service Representative (Receptionist)

The patient service representative (receptionist) is usually the first person you meet. They are responsible for greeting and checking-in our patients, answering phones, routing calls to the proper person and collecting information and copays, if required.

#### Patient Service Representative II (Scheduler)

The patient service representative (scheduler) will help you schedule future appointments. She is available to help schedule or coordinate any tests or scans ordered by the doctor when approved by your insurance company

#### Laboratory Staff

All Aurora Cancer Care clinics have on-site lab facilities. As a patient, you can benefit from our compassionate, experienced phlebotomists. Some clinics have an on-site diagnostic lab. Tests that can typically be done by medical technologists include a complete blood count (CBC), chemistry panels, INR (blood clotting) and other testing. Tests not performed at our clinic may be referred to another laboratory for completion. Please let us know if your insurance company requires you to use a special lab.

#### Medical Assistant

Before you see your doctor, a medical assistant will escort you to an exam room, check your blood pressure, ask about your current medications, over-the-counter drugs, vitamins, herbs or other supplements you are taking at home, and ask you a few questions about your health.

#### Nurses

The nurses at Aurora Cancer Care are highly trained to provide exceptional health care for you during your diagnosis and treatments. Our registered nurses (RNs) and licensed practical nurses (LPNs) are licensed by the State of Wisconsin. Our RNs are credentialed by the Oncology Nursing Society (ONS) as chemotherapy and immunotherapy providers. In addition, many RNs are certified in oncology nursing by the Oncology Nursing Certification Corporation (ONCC).

## My Personal Care Record cont.

Oncology nurses work in the role of a cancer care coordinator, an infusion RN, or inpatient cancer RN. Your cancer care coordinator works with your doctor and will give you information about your appointments, tests, and medications. Your doctor may communicate with you through the cancer care coordinator between your doctor appointments. Oncology RNs in the infusion area administer chemotherapy and other treatments. They coordinate your treatment under the direction of the physician and are available to help you with any of your symptoms or concerns.

### **Cancer Nurse Navigator**

A cancer nurse navigator is a registered nurse who has experience in caring for patients who have a specific type of cancer. There are cancer nurse navigators available for people who have breast, colorectal, lung, prostate, head and neck, and neuro-oncology cancers. The cancer nurse navigator helps guide you through your diagnosis and treatment. He or she is available to help address your needs and concerns, and to ensure that you have access to all the social and emotional support services that are available to help you and your family at this difficult time.

### **Nurse Practitioner (NP) and Physician Assistant (PA)**

Nurse practitioners and physician assistants are clinical experts who have advanced training in oncology and hematology, and work with your doctor in providing direct care to meet your needs. They provide comprehensive exams, order and interpret diagnostic tests, prescribe drugs and treatments and monitor your progress. A nurse practitioner is a licensed master's-prepared advanced practice nurse. A physician assistant is an advanced practice clinician licensed to practice medicine under the supervision of a licensed physician.

### **Pharmacist/Pharmacy Technician/Chemotherapy Technician**

The intravenous (IV) drugs your doctor prescribes are prepared by trained technicians under the direction of a licensed pharmacist. These technicians follow strict procedures to ensure that you safely receive the drugs prescribed by your doctor.

### **Financial Counselor**

This representative is available to help you with the financial aspects of your treatment. They will answer any questions about your insurance, Medicare and other plans to help minimize your financial concerns.

### **Research Coordinator**

Research provides a critical foundation for the progressive advancement of new, more effective cancer treatment therapies – the latest of which can be found at Aurora Cancer Care. As impersonal as research and data may be perceived, our research team plays as much a role in our patients' care as any other part of our program.

## My Personal Care Record cont.

Each clinical research coordinator is highly dedicated to personalized care outcomes and is readily available to help guide you through the clinical trial process. For more information about clinical trials, please talk to your health care provider.

### Registered Dietitian

Registered dietitians are nutrition specialists in the areas of cancer and hematology. Proper attention is given to diet and nutritional status by offering education and support to patients and families. The dietitians will work with you to help maintain an adequate diet and to answer any nutrition-related questions or concerns you may have. If you would like to meet with a registered dietitian, please talk to your health care provider.

### Social Worker

Board-certified oncology social workers work closely with patients who are faced with illness as well as their family and friends. The goal is to help those impacted by cancer maintain maximum independence throughout treatment and recovery. Social workers link patients to various community resources and support options. Oncology social workers understand that each patient is unique and help to provide guidance and personalized care to meet their needs. If you would like to meet with an oncology social worker, please ask your health care provider.

### Acupuncturist

Board-certified oncology acupuncturists insert very fine needles into specific points on the body. Acupuncture is the most common form of Traditional Chinese Medicine (TCM) used in this country. Acupuncture is used to treat side effects in patients with cancer. These can include nausea, vomiting, numbness in the hands or feet, fatigue, and pain. Acupuncture is NOT a substitute for standard cancer treatment.

### Massage Therapist

Licensed massage therapists use touch to loosen and heal the muscles and soft tissues of the body. Massage therapists use different degrees of pressure and types of movements based on your individual needs.

Massage therapy can address health issues that include muscle tension, range of motion and flexibility problems, chronic pain, circulation problems, and stress.

- Muscular tension
- Range of motion and flexibility problems
- Chronic pain
- Circulation problems
- Stress

### Chaplain

Spiritual care provided by a chaplain is available at many Aurora Cancer Care locations. If you are interested, please discuss with your nurse and let her know you are interested in these services.

## Tips for Meeting with Your Doctor or Nurse

- Make a list of your questions before each appointment. Some people keep a “running list” and write down new questions as they think of them. Make sure to have space on this list to write down the answers from your doctor or nurse.
- Bring a family member or trusted friend to your medical visits. This person can help you understand what the doctor or nurse says and talks with you about it after the visit is over.
- Ask all your questions. There is no such thing as a stupid question. If you do not understand an answer, keep asking until you do.
- Take notes. You can write them down or use a tape recorder. Later, you can review your notes and remember what was said.
- Ask for printed information about your type of cancer and anti-cancer treatment.
- Let your doctor or nurse know how much information you want to know, when you want to learn it, and when you have learned enough. Some people want to learn everything they can about cancer and its treatment. Others only want a little information. The choice is yours.
- Find out how to contact your doctor or nurse in an emergency. This includes who to call and where to go. Write important phone numbers in the spaces provided on the inside front cover of this booklet.

## Questions to Ask

### About My Cancer

- What kind of cancer do I have?
- What is the stage of my cancer?

### About Anti-cancer Treatment

- Why do I need anti-cancer treatment?
- What is the goal of this anti-cancer treatment?
- What are the benefits of anti-cancer treatment?
- What are the risks of anti-cancer treatment?
- Are there other ways to treat my type of cancer?
- What is the standard care for my type of cancer?
- Are there any clinical trials for my type of cancer?
- How many cycles of anti-cancer treatment will I get? How long is each treatment? How long between treatments?
- What types of anti-cancer treatment will I get?
- How will these drugs be given?
- Where do I go for this treatment?
- How long does each treatment last?
- Should someone drive me to and from treatments?

## My Personal Care Record cont.

### About Side Effects

- What side effects can I expect right away?
- What side effects can I expect later?
- How serious are these side effects?
- How long will these side effects last?
- Will all the side effects go away when treatment is over?
- What can I do to manage or ease these side effects?
- What can my doctor or nurse do to manage or ease side effects?
- When should I call my doctor or nurse about these side effects?



# Anti-Cancer Treatment

## Anti-Cancer Treatment

There are many different treatment options including chemotherapy, immunotherapy, targeted therapy, biotherapy, hormone therapy, radiation therapy, and holistic approaches to help treat your cancer.

### Chemotherapy [key-mo-THER-uh-pee]

Chemotherapy is treatment with drugs that kill cancer cells. Chemotherapy is often used, either alone or with surgery and/or radiation, to treat cancer that has spread or come back (recurred), or when there is a strong chance that it could come back.

### Immunotherapy [im-yuh-no-THER-uh-pee]

Treatments that use the body's immune system to fight cancer. This is done by boosting the patient's own immune system or giving man-made versions of the immune system.

### Targeted Therapy [tahr-git-id-THER-uh-pee]

Targeted therapy is a type of anti-cancer treatment that uses drugs or other substances to precisely identify and attack certain types of cancer cells. Targeted therapy can be used by itself or in combination with other treatments, such as traditional or standard chemotherapy, surgery, or radiation therapy.

### Biotherapy [bio-THER-uh-pee]

A type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory.

### Hormone Therapy [hor-MOAN-THER-uh-pee]

Cancer treatment using drugs that interfere with hormone production or hormone action, or the surgical removal of hormone-producing glands. Hormone therapy may help kill or slow the growth of cancer cells that depend on hormones to grow. For example, it is a common form of treatment for certain breast and prostate cancers.

### Holistic Approaches [HO-li-stik-ap-pro-CH-is]

Holistic care aims to treat the whole person: mind, body, and spirit. This type of treatment is usually a combination of traditional therapy and integrative medicine.

## Chemotherapy

### What is chemotherapy?

Chemotherapy, also called chemo, is a type of cancer treatment that uses drugs to destroy cancer cells.

### How does chemotherapy work?

Chemotherapy works by stopping or slowing the growth of cancer cells, which grow and divide quickly. But it can also harm healthy cells that divide quickly, such as those that line your mouth and intestines or cause your hair to grow. Damage to healthy cells may cause side effects. Often, side effects get better or go away after chemotherapy is over.

### What does chemotherapy do?

Depending on your type of cancer and how advanced it is, chemotherapy can:

- Cure cancer – when chemotherapy destroys cancer cells to the point that your doctor can no longer detect them in your body, and they will not grow back.
- Control cancer – when chemotherapy keeps cancer from spreading, slows its growth, or destroys cancer cells that have spread to other parts of your body.
- Ease cancer symptoms, (also called palliative care), -- when chemotherapy keeps cancer from spreading, slows its growth, or destroys cancer cells that have spread to other parts of your body.

### Where do I go for chemotherapy?

You may receive chemotherapy during a hospital stay, at home, or in a doctor's office, clinic, or **outpatient** unit in a hospital (which means you do not have to stay overnight). No matter where you go for chemotherapy, your doctor and nurse will watch for side effects and make any needed drug changes.

### How often will I receive chemotherapy?

Treatment schedules for chemotherapy vary widely. How often and how long you get chemotherapy depends on:

- Your type of cancer and how advanced it is
- The goals of treatment (whether chemotherapy is used to cure your cancer, control its growth, or ease the symptoms)
- The type of chemotherapy
- How your body reacts to chemotherapy

You may receive chemotherapy in cycles. A cycle is a period of chemotherapy treatment followed by a period of rest. For instance, you might receive 1 week of chemotherapy followed by 3 weeks of rest. These 4 weeks make up one cycle. The rest period gives your body a chance to build new healthy cells.

# Anti Cancer Treatment cont.

## Can I miss a dose of chemotherapy?

It is not good to skip a chemotherapy treatment. But sometimes your doctor may change your chemotherapy schedule. This can be due to side effects you are having. If this happens, your doctor or nurse will explain what to do and when to start treatment again.

## How is chemotherapy given?

Chemotherapy may be given in many ways.

- **Injection.** The chemotherapy is given by a shot in a muscle in your arm, thigh, or hip, or right under the skin in the fatty part of your arm, leg, or belly.
- **Intra-arterial (IA).** The chemotherapy goes directly into the artery that is feeding the cancer.
- **Intraperitoneal (IP).** The chemotherapy goes directly into the peritoneal cavity (the area that contains organs such as your intestines, stomach, liver, and ovaries).
- **Intrathecal (IT).** The chemotherapy goes directly into the cerebrospinal fluid for central nervous system cancers such as brain tumors.
- **Intravenous (IV).** The chemotherapy goes directly into a vein.
- **Intravesicular.** The chemotherapy goes directly into your bladder through a catheter. It is used to treat bladder cancer.
- **Topical.** The chemotherapy comes in a cream that you rub onto your skin.
- **Oral.** The chemotherapy comes in pills, capsules, or liquids that you swallow.

## Immunotherapy

### What is the immune system?

The immune system is the system of barriers, organs, and cells that protect humans against infections and some diseases. The immune system identifies substances that it does not recognize. In a healthy person, these foreign substances are usually attacked and destroyed before they cause illness. Cancer cells are harder to identify and destroy because they are usually normal cells that became altered or began to grow out of control.

### What is immunotherapy/Immuno-oncology and how does it work?

**Immunotherapy/Immuno-oncology (IO)** is a targeted approach to treating cancer that works differently from other cancer treatments. Some IO drugs work with the patient's immune system to defend the body while others stimulate the patient's immune system to destroy cancer cells. Immunotherapy works better for some types of cancer than for others.

# Anti Cancer Treatment cont.

## What are the different types of IO?

There are several types of immunotherapy and each works differently. The main types of IO being used to treat cancer are:

- **Monoclonal antibodies** are man-made immune system proteins that race through the patient's body looking for and destroying very specific targets.
- **Immune checkpoint inhibitors** are immune system proteins that take the brakes off the immune system allowing it to recognize and continuously attack specific cancer cells.
- **Cancer vaccines** are substances put into the body to cause an immune response against cancer.
- **CAR T-cell therapy** uses a type of white blood cells which are changed in a lab. These cells identify and destroy only very specific cancer cells while leaving healthy cells alone.

## How is it administered?

IO may be given in different ways depending on the type of cancer being treated and the type of IO drug the physician is planning to use. The most common methods of receiving immunotherapy are:

- **Injection.** The immunotherapy is given by a shot in a muscle in your arm, thigh, or hip, or right under the skin in the fatty part of your arm, leg, or belly.
- **Intralesional.** The immunotherapy is injected into a cancer lesion or given as a vaccine.
- **Intravenous (IV).** The immunotherapy goes directly into a vein.
- **Oral.** The immunotherapy comes in pills, capsules, or liquids that you swallow.

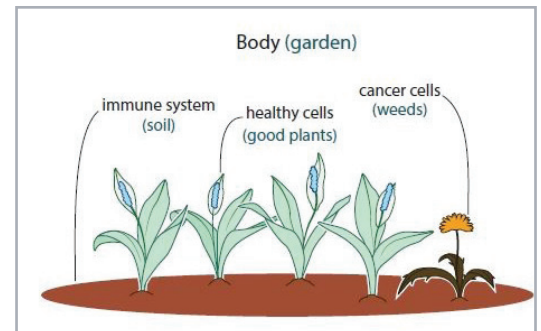
## How will I know if my immunotherapy is working?

Early response or apparent lack of response can be misleading. Patients should adhere to their treatment plan and provider recommendations. Periodic blood tests and imaging will determine how well you are responding to treatment.

# Anti Cancer Treatment cont.

## A short introduction to immunotherapy

The following pages will introduce you to immunotherapy as a type of cancer treatment. We will use an analogy of your body as a garden to explain how immunotherapy works and how it is different from other treatments.



### How might immunotherapy work with my immune system to fight cancer?

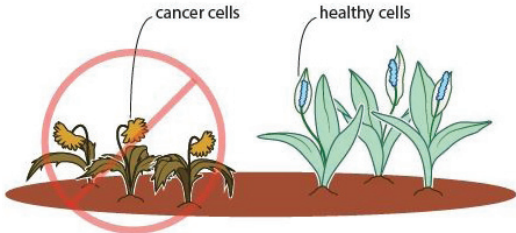
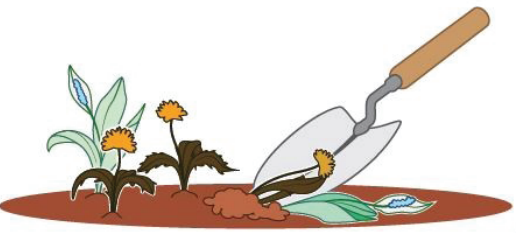

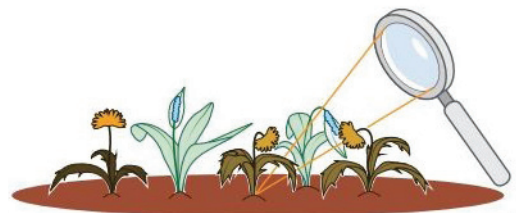

Immunotherapy may help your body's own immune system fight cancer. Here is an analogy to explain the concept.

<p><b>Imagine your body as a garden, where the soil is your immune system.</b> When you're healthy, the soil is rich and well-tended, and the garden is green. Normally, the soil is able to prevent weeds from growing out of control.</p>	
<p><b>Cancer cells are like weeds in your garden.</b> Sometimes, the soil can allow weeds to grow and spread, and soon, the entire garden suffers as your plants compete for space and nutrients.</p>	
<p><b>Immunotherapy is like adding weed-control fertilizer to the soil.</b> It enriches the garden's existing soil.</p>	
<p><b>Now the soil can help keep the weeds under control</b> and can maintain the garden's health. But too much fertilizer may harm your garden.</p>	

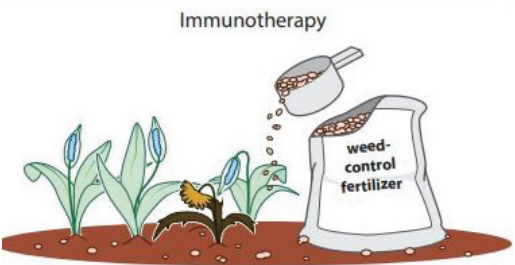
# Anti Cancer Treatment cont.

## How is immunotherapy different from other types of Cancer treatment?

Immunotherapy is a unique approach that may **help your body's own immune system fight cancer**. To understand how immunotherapy is different from other types of cancer treatment, let's continue with the garden analogy.


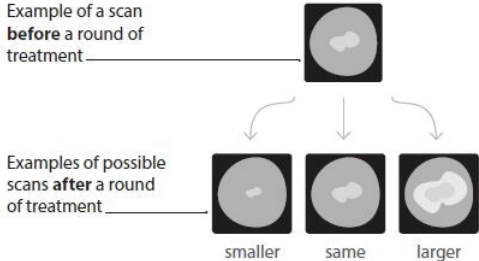
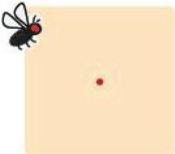
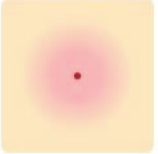


<p>If your body is like a garden, you and your cancer care team will decide <b>how to remove the weeds (cancer cells) while doing the smallest amount of harm to the good plants (healthy cells)</b>.</p>	 <p>The diagram shows a garden with two groups of plants. On the left, there are three yellow flowers with dark green leaves, labeled 'cancer cells'. A red circle with a diagonal slash is drawn over these flowers. On the right, there are three green plants with blue buds, labeled 'healthy cells'.</p>
<p>Surgery removes large patches of weeds and the soil around them, sometimes disturbing the good plants and leaving some weed roots behind.</p>	<p>Surgery</p>  <p>The diagram shows a garden with a shovel digging up a large patch of soil. The shovel is lifting a clump of soil that contains several weeds and some healthy plants. The remaining garden has a few healthy plants and some weeds.</p>
<p>Chemotherapy is like spraying a general weed killer on the whole garden. This approach may not kill all the weeds and may also harm some good plants.</p>	<p>Chemotherapy</p>  <p>The diagram shows a garden with a green sprayer spraying a general weed killer over the entire garden. The sprayer is spraying a green liquid that is covering all the plants, both weeds and healthy plants.</p>
<p><b>Radiation</b> is like increasing the power of the sun with a magnifying glass to target and dry out the weeds, but in the process, some of the good plants can also be harmed.</p>	<p>Radiation</p>  <p>The diagram shows a garden with a magnifying glass focusing sunlight on a weed. The weed is being dried out. The magnifying glass is also focusing sunlight on some healthy plants, which are also being dried out.</p>
<p>With <b>targeted therapy</b>, weeds are directly sprayed with weed killer. Good plants may still be harmed.</p>	<p>Targeted therapy</p>  <p>The diagram shows a garden with a spray bottle spraying a weed killer directly onto a weed. The spray bottle has a red circle with a diagonal slash on it. The weed is being sprayed, and the healthy plants are nearby.</p>

# Anti Cancer Treatment cont.

<p>Instead of targeting the weeds, <b>immunotherapy</b> is like adding a weed-control fertilizer to the soil. This fertilizer enriches the soil to help control weeds, which in turn restores the health of your garden. But too much fertilizer in the soil might harm your garden.</p>	 <p style="text-align: center;">Immunotherapy</p>
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## How might my tumor respond to immunotherapy?

Tumors can respond differently to immunotherapy depending on the type of immunotherapy and how your immune system reacts to it. For some people, immunotherapy can help shrink the tumor. For others, the tumor may stop growing even if it does not get smaller. It is also possible that the tumor may not respond to immunotherapy at all.

<p>At your hospital or clinic visits, your cancer care team may use scans to monitor your progress.</p>		
<p>After a round of treatment, the tumor may look <b>smaller, the same, or larger</b> compared to before.</p> <p>If your tumor looks larger in the scans, it may not mean that the immunotherapy isn't working.</p>	 <p>Example of a scan <b>before</b> a round of treatment</p> <p>Examples of possible scans <b>after</b> a round of treatment</p> <p style="display: flex; justify-content: space-around;"> <span>smaller</span> <span>same</span> <span>larger</span> </p>	
<p>Here is an analogy to explain why this could happen.</p> <p>Think of a bug bite, where the skin becomes red, hot, and swollen around the site of the bite. This is a sign of <b>inflammation</b>, which results from your <b>immune system's reaction to a threat, not from the bite itself.</b></p>	<p>Illustration of a bug bite at first</p>  <p style="text-align: center;">site of the bug bite</p>	<p>Illustration of a bug bite later on</p>  <p style="text-align: center;">inflammation around the site of the bite</p>
<p>A similar thing could appear in your scans. If the immunotherapy is working, <b>inflammation may occur around the tumor</b> as your immune system moves to surround it. This can make your tumor look larger on the scans.</p>	<p>Example of a scan before a round of treatment</p>  <p style="text-align: center;">site of the tumor</p>	<p>Example of a scan after a round of treatment</p>  <p style="text-align: center;">inflammation around the site of the tumor</p>

## Anti Cancer Treatment cont.

In other cases, when the tumor appears larger on scans, it might be that immunotherapy isn't working and the tumor is growing. **Everyone responds to immunotherapy differently.**

Scans are not the only way to see if immunotherapy is working. Your cancer care team will also be looking at other lab results and your overall well-being.

Your cancer care team will also be looking at other lab results and your overall well-being.



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## Targeted Therapy

### What is Targeted Therapy?

Targeted therapy is a type of cancer treatment that uses drugs or other substances to precisely identify and attack certain types of cancer cells. A targeted therapy can be used by itself or in combination with other treatments, such as traditional or standard chemotherapy, surgery, or radiation therapy.

Cancer cells typically have changes in their genes that make them different from normal cells. Genes are the proteins in a cell's DNA that tell the cell to do certain things. When a cell has certain gene changes, it doesn't behave like a normal cell. For example, gene changes in cancer cells might allow the cell to grow and divide very quickly. These types of changes are what make it a cancer cell.

But there are many different types of cancer, and not all cancer cells are the same. For example, colon cancer and breast cancer cells have different gene changes that help them grow and/or spread. Even among different people with the same general type of cancer (such as colon cancer), the cancer cells can have different gene changes, making one person's specific type of colon cancer different from another person's cancer.

## Biotherapy

### What is Biotherapy?

Biotherapy is a type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory. In cancer, some biotherapies stimulate or suppress the immune system to help the body fight cancer. Other biotherapies attack specific cancer cells, which may help keep them from growing or kill them. They may also lessen certain side effects caused by some cancer treatments. Types of biotherapy include immunotherapy (such as cytokines, cancer treatment vaccines, and some antibodies) and some targeted therapies.



## Hormone Therapy

### What is Hormone therapy?

Hormones are proteins or substances made by the body that help to control how certain types of cells work. For example, some parts of the body rely on sex hormones, such as estrogen, testosterone, and progesterone, to function properly. There are other types of hormones in our bodies, too, such as thyroid hormones, cortisol, adrenaline, and insulin. Different types of hormones are made by different organs or glands.

Some cancers depend on hormones to grow. Because of this, these cancers can sometimes be treated by using medicines that block or alter a hormone. This can slow or stop the growth of the cancers that depend on that hormone to grow. Treating cancer with hormones is called *hormone therapy*, *hormonal therapy*, or *endocrine therapy*. Hormone therapy is mostly used to treat certain kinds of breast cancer and prostate cancer that depend on sex hormones to grow. A few other cancers can be treated with hormone therapy, too.

## Radiation

### What is Radiation Therapy?

Radiation therapy is a cancer treatment, which is also called radiotherapy. It uses high doses of radiation to kill cancer cells and shrink tumors. At low doses, radiation may be used for an x-ray to see inside your body and take pictures, such as x-rays of your teeth or broken bones.

### Who gets Radiation Therapy?

Many people who have cancer need radiation therapy for treatment. In fact, about 60% of people with cancer get radiation therapy. Sometimes, this is the only kind of treatment a person will get.

### What does Radiation Therapy do to cancer cells?

When radiation is given in high doses, it kills or slows the growth of cancer cells. Radiation therapy can be used to:

- cure cancer
- to prevent it from returning
- to stop or slow its growth
- reduce symptoms
- prevent problems that may be caused by a growing tumor (examples; blindness or loss of bowel and bladder control)

# Anti Cancer Treatment cont.

## How long does Radiation Therapy take to work?

Radiation therapy does not kill cancer cells right away. It takes days or weeks of treatment before cancer cells start to die. Then, cancer cells keep dying for weeks or months after radiation therapy ends.

## What does radiation therapy do to healthy cells?

Radiation not only kills or slows the growth of cancer cells; it can also affect nearby healthy cells. The healthy cells almost always recover after treatment is over. But sometimes people may have side effects that are severe or do not get better. Other side effects may show up months or years after radiation therapy is over. These are called late side effects.

With the arrival of more accurate radiation techniques, patients' symptoms are often not a result of the radiation treatments. Make sure you talk to your radiation team about the side effects that you might get during your therapy.

## Concurrent Radiation and Anti-Cancer Treatment

Sometimes, chemotherapy, immunotherapy, targeted biotherapy, or hormone therapy are used as the only cancer treatment. But more often, you will get systemic treatment along with surgery and **radiation therapy**. Anti-cancer treatment can:

- Make a tumor smaller before surgery or radiation therapy. This is called **neo-adjuvant therapy**.
- Destroy cancer cells that may remain after surgery or radiation therapy. This is called **adjuvant therapy**.
- Help radiation therapy work better.
- Destroy cancer cells that have come back (**recurrent** cancer) or spread to other parts of your body (**metastatic** cancer).

## Radiation therapy and surgery

Radiation may be given before, during, or after surgery. Sometimes, radiation therapy is given during surgery, so that it goes straight to the cancer without passing through the skin. Radiation therapy given during surgery is called intraoperative radiation.

Your Radiation nurse and your oncology nurse stay in constant communication to make sure to coordinate your schedule appropriately, to make sure everything stays on target. You may also have a Cancer Nurse Navigator to help with this coordination.

### References

National Cancer Institute. (2016). Radiation Therapy and You: Support for People with Cancer. U.S. Department of Health and Human Services. National Institutes of Health.

[www.cancer.gov/publications/patient-education/radiationtherapy.pdf](http://www.cancer.gov/publications/patient-education/radiationtherapy.pdf)

Pirschel, C. (2018). The Intersection of Radiation and Medical Oncology Nursing. *ONS Voice*. [voice.ons.org/news-and-views/the-intersection-of-radiation-and-medical-oncology-nursing](http://voice.ons.org/news-and-views/the-intersection-of-radiation-and-medical-oncology-nursing)

# Anti Cancer Treatment cont.

## How does my doctor decide which anti-cancer treatment to use?

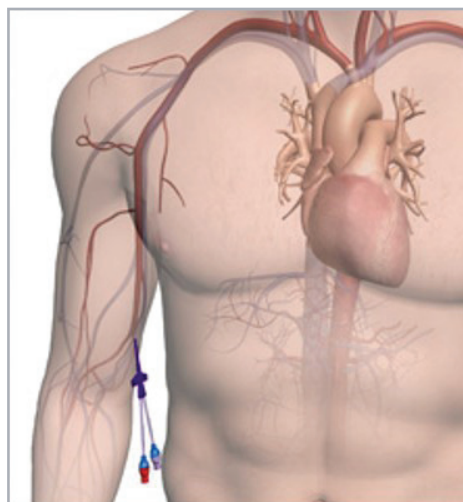
This choice depends on:

- The type of cancer you have. Different anti-cancer therapies are used to treat different types of cancer.
- The types of anti-cancer therapy you have already received.
- Your overall health and any health problems you have, such as diabetes or heart disease.

## Things to Know About Getting Anti-Cancer Treatment Through an IV

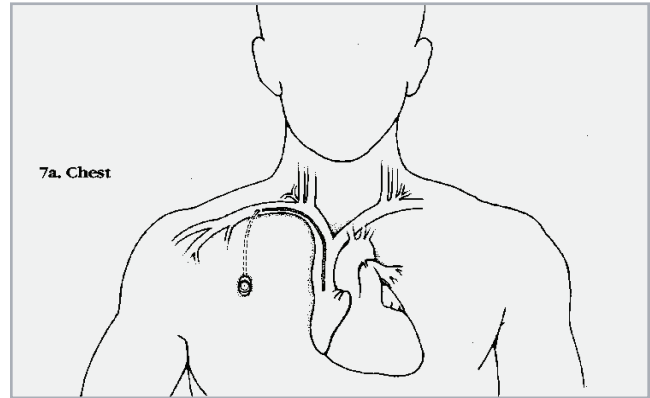
Chemotherapy, immunotherapy, hormone therapy, and biotherapy are often given through a thin needle that is placed in a vein on your hand or lower arm. Your nurse will put the needle in at the start of each treatment and remove it when treatment is over. Let your doctor or nurse know right away if you feel pain or burning while you are getting IV chemotherapy. IV chemotherapy is also given through **catheters** or **ports**, sometimes with the help of a pump.

**Catheters:** A catheter is a soft, thin tube. There are many types of catheters with various names including PICC (Peripherally Inserted Central Catheter), Hickman, Neostar, and Groshong. A surgeon places one end of the catheter in a large vein, often in your chest area. The other end of the catheter stays outside your body. The visible portion of the catheter is located on the chest or near the elbow on the inside of the arm. Most catheters stay in place until all your chemotherapy treatments are done. Catheters can also be used for drugs other than chemotherapy and to draw blood. Be sure to watch for signs of infection around your catheter. If your catheter tears or the end cap/clamp falls off, pinch off the catheter where it enters your skin and seek help immediately.



## Anti Cancer Treatment cont.

**Ports:** A port is a small, round disc made of plastic or metal that is placed under your skin. A catheter connects the port to a large vein, most often in your chest. Your nurse can insert a needle into your port to give you chemotherapy or draw blood. This needle can be left in place for chemotherapy treatments that are given for more than one day. The port allows blood to be drawn more easily, allows more than one medicine to be given at a time, and reduces the number of times you need to be poked with a needle. The port also reduces the risk that medicine will leak into the surrounding tissue. Be sure to watch for signs of infection around your port.



**Pumps:** Pumps are often attached to catheters or ports. They control how much and how fast chemotherapy goes into a catheter or port. Pumps can be internal or external. Most times, the pump will be used by your nurse to give the chemotherapy. Your treatment may include an external pump that you carry around with you at home for a few days.

## Things to Know About Getting Anti-Cancer Treatment by Mouth

If your anti-cancer treatment is taken by mouth, you swallow the pill, capsule, or liquid just like other medicines. **Do not crush, chew or dissolve this medication! Like other types of anti-cancer treatment,** sometimes oral treatment is given in rounds or cycles. You take the medication for a period of time and then have a period of time where you do not take your medicine. This cuts down on the harm to healthy cells and allows the medicine to kill more cancer cells.

Oral anti-cancer medications are usually taken at home. Because of this, it's very important to make sure you know exactly how it should be taken. If you and your doctor have decided oral therapy is the best treatment option for you, be sure to ask about and have instructions about:

- **How and when to take it.** You should have clear instructions on how much and when to take your anti-cancer treatment. You need to take the exact dosage, at the exact right

## Anti Cancer Treatment cont.

time, for exactly as long as you're supposed to do so. Oral anti-cancer treatment doses are set up so that the same level of drug stays in your body to kill the cancer cells. Not taking your medication the right way can affect how well it works. Sometimes dose changes are needed, but don't make any changes unless your doctor tells you to do so. If you miss a dose or are late taking one, tell your doctor or nurse about it. They need to know about this when deciding if treatment is working. It may also help the doctor decide whether to change how much of the medicine you take or when you take it.

- **Special handling.** Anti-cancer medication you swallow is as strong as other forms of anti-cancer treatment. Many are also considered hazardous. There are usually special precautions for storing and handling these drugs. You might be told to be careful not to let others come into contact with it or your body fluids while taking it and for a time after taking it. Sometimes you need to wear gloves when touching the pills or capsules. Some drugs have to be kept in the bottle or box they came in. Do not crush, chew, or dissolve your oral chemotherapy unless otherwise directed by your doctor or pharmacist. Some drugs and the packages they come in need to be disposed of in a certain way. Some might have to be taken back to the drug store to be thrown away safely.
- **Cost.** Oral anti-cancer treatment drugs can be expensive. Make sure you ask your doctor about the cost of your treatment, so you are not surprised when you get to the pharmacy or when you get your bill if the treatment is not available at pharmacies. Depending on the type of drug, some insurances don't cover the full cost, or may not cover it at all. Sometimes you can get assistance, but many people have to pay more of their own money for them than what they would pay for anti-cancer treatment that's given with a needle in the hospital or clinic. If you have health insurance, this might mean a higher co-pay. Make sure you know how much you'll have to pay for each treatment. Ask your clinic's social worker if you need financial assistance.

Be sure to tell your doctor or nurse about any problems you have taking your anti-cancer treatment. For instance, if you're throwing up or feel sick to your stomach, you may feel too sick to take your medication. Or, you may not be able to keep your pill or capsule down and may throw it up. Your doctor needs to know about any problems so they can change your treatment plan, if needed. (retrieved from the American Cancer Society website).

## Questions and Answers About Anti-Cancer Treatment

### How will I feel during anti-cancer treatment?

Anti-cancer treatment affects people in different ways. How you feel depends on how healthy you are before treatment, your type of cancer, how advanced it is, the kind of chemotherapy you are getting, and the dose. Doctors and nurses cannot know for certain how you will feel during treatment.

## Anti Cancer Treatment cont.

Most people feel well right after anti-cancer treatment. The most common side effect is **fatigue**, feeling exhausted and worn out. You can prepare for fatigue by:

- Asking someone to drive you to and from anti-cancer treatment.
- Planning time to rest on the day of and day after anti-cancer treatment.
- Getting help with meals and childcare the day of and at least one day after anti-cancer treatment.

### Can I work during anti-cancer treatment?

Many people can work during anti-cancer treatment, if they match their schedule to how they feel. Whether or not you can work may depend on what kind of work you do. If your job allows, you may want to see if you can work part-time or work from home on days you do not feel well.

Many employers are required by law to change your work schedule to meet your needs during cancer treatment. Talk with your employer about ways to adjust your work during treatment. You can learn more about these laws by talking with a social worker.

### Should I exercise?

Ask your healthcare provider about starting exercise. It may help you sleep better and sometimes even help balance your appetite. It is also good for your sense of well-being.

### Make sure to:

- Exercise when you feel most energetic.
- Keep the pace moderate. Even small amounts of exercise can help. Instead of jogging, walk or ride a stationary bike.

### Can I take over the counter and prescription drugs while I get anti-cancer treatment?

This depends on the type of treatment you get and the other types of drugs you plan to take. Take only drugs that are approved by your doctor or nurse. Tell your doctor or nurse about all the over the counter and prescription drugs you take, including laxatives, allergy medicines, cold medicines, pain relievers, aspirin, and ibuprofen.

One way to let your doctor or nurse know about these drugs is by bringing in all your pill bottles.

Your doctor or nurse needs to know:

- The name of each drug
- The reason you take it
- How much you take
- How often you take it

# Anti Cancer Treatment cont.

## Can I take vitamins, minerals, dietary supplements, or herbs while I get anti-cancer treatment?

Some of these products can change how anti-cancer treatment works. For this reason, it is important to tell your doctor or nurse about all the vitamins, minerals, dietary supplements, and herbs that you take before you start treatment. During treatment, talk with your doctor before you take any of these products.

## Can I receive vaccinations during anti-cancer treatment?

Some vaccinations may be avoided during anti-cancer treatment. Please ASK your oncologist before receiving any vaccinations. Also avoid EXPOSURE to anyone who has been vaccinated with a live vaccine.

## How will I know if my anti-cancer treatment is working?

Your doctor will give you physical exams and medical tests (such as blood tests and x-rays). He or she will also ask you how you feel.

You cannot tell if anti-cancer treatment is working based on its side effects. Some people think that severe side effects mean that anti-cancer treatment is working well, or that no side effects mean that anti-cancer treatment is not working. The truth is that side effects have nothing to do with how well anti-cancer therapy is fighting your cancer.

## Anti-Cancer Treatment Safety

Anti-cancer drugs are given to destroy cancer cells. But they can also affect normal cells. Being exposed to small amounts of anti-cancer drugs over a long time may damage normal cells in people who do not have cancer. Health care workers use protective equipment when they give anti-cancer drugs. We know very little about the possible harm to people who care for patients receiving anti-cancer treatment in their homes. Always avoid unnecessary exposure.

### General safety guidelines

Be sure to take your medications as scheduled.

1. Wash your hands well with soap and water.
2. Gather anti-cancer treatment medicine containers.
3. Remove the plastic cover from the medicine container.
4. Pour out the prescribed number of pills into the plastic cover or use a medication cup or other small container. Use the cup only for medicines. Do not touch the medicine.
5. Do not crush pills.
6. Take or give the medicine as directed.
7. Replace the cap on the medicine container.
8. Store all medicine containers in a dry place that is out of the reach of children.
9. Wash hands with soap and water.

# Anti Cancer Treatment cont.

## Special precautions you should take for 48 hours after chemotherapy

1. Your family must wear gloves to handle your blood, sputum, vomit, urine, stool or contaminated articles (towels, linens, etc.). If they come into contact with any of these, they should wash well with soap and water.
2. If you get blood, sputum, vomit, urine, or stool on your clothes or linens, wash the clothes separately from other laundry.
3. Ensure that pregnant women, children, and pets do not come in contact with your blood, sputum, vomit, urine, or stool.
4. Wear a condom during sexual intercourse.
5. Flush toilet twice if anything is left in the toilet bowl after a single flush (lid down after each use).
6. Tell your dentist that you had chemotherapy.
7. Being with the ones you love is important. Hugging and kissing, eating together, and sharing favorite activities are all safe.

## Medication spills

If you are receiving home intravenous anti-cancer treatment, keep a spill kit in your home.

1. Put on gloves.
2. Use paper towels to pick up or wipe spilled medicine. Place spilled medicine, gloves and paper towels in a plastic bag.
3. Wash the area with clean paper towels and soap and water.
4. Rinse and dry the area well.
5. Place the gloves and paper towels in the plastic bag.
6. Seal the bag tightly. Throw it out with home garbage.
7. Wash your hands with soap and water.

If you spill medicine on your skin, wash right away with soap and water, then dry. If redness lasts more than one hour or if a rash occurs, call your doctor.

If you spill medicine in your eyes, rinse out eye with fast-running lukewarm water for five minutes. Keep affected eye open while rinsing. Then call the regional poison control center for your area. (An eye exam may be needed after any spill in the eyes.)

## Disposal of medicines and supplies

1. Return all unused medicines and supplies to the health care agency providing the home anti-cancer treatment.
2. Do not remove needles from syringes.
3. Return all supplies used to give anti-cancer treatment in a sealed container. The container should be puncture-proof and leak-proof (like a coffee can or plastic milk container).



# Managing Potential Side Effects

## Side Effects and Ways to Manage Them

### What are side effects?

Side effects are problems caused by cancer treatment. Some common side effects from chemotherapy are fatigue, **nausea, vomiting**, decreased **blood cell counts**, hair loss, mouth sores, and pain.

### What causes side effects?

Chemotherapy is designed to kill fast-growing cancer cells, but it can also affect healthy cells that grow quickly. These include cells that line your mouth and intestines, cells in your **bone marrow** that make blood cells, and cells that make your hair grow. Chemotherapy causes side effects when it harms these healthy cells.

### Will I get side effects from chemotherapy?

You may have a lot of side effects, some, or none. This depends on the type and amount of chemotherapy you get and how your body reacts. Before you start chemotherapy, talk with your doctor or nurse about which side effects to expect.

### How long do side effects last?

How long side effects last depends on your health and the kind of chemotherapy you get. Most side effects go away after chemotherapy is over. But sometimes it can take months or even years for them to go away.

Sometimes, chemotherapy causes **long-term side effects** that do not go away. These may include damage to your heart, lungs, nerves, kidneys, or reproductive organs. Some types of chemotherapy may cause a second cancer years later. Ask your doctor or nurse about your chance of having long-term side effects.

### What can be done about side effects?

Doctors have many ways to prevent or treat chemotherapy side effects and help you heal after each treatment session. Talk with your doctor or nurse about which ones to expect and what to do about them. Make sure to let your doctor or nurse know about any changes you notice—they may be signs of a side effect.

# Managing Potential Side Effects cont.

## Infection

### What it is and why it occurs

Some types of chemotherapy make it harder for your bone marrow to produce new white blood cells. White blood cells help your body fight infection. Therefore, it is important to avoid infections, since chemotherapy decreases the number of your white blood cells.

There are many types of white blood cells. One type is called neutrophil. When your neutrophil count is low, it is called neutropenia. Your doctor or nurse may do blood tests to find out whether you have neutropenia.

It is important to watch for signs of infection when you have neutropenia. Check for fever at least once a day, or as often as your doctor or nurse tells you to. You may find it best to use a digital thermometer.

**Call your doctor or nurse if your temperature is 100.4° F or higher.**

### Ways to manage

- Your doctor or nurse will check your white blood cell count throughout your treatment. If chemotherapy is likely to make your white blood cell count very low, you may get medicine to raise your white blood cell count and lower your risk of infection.
- Wash your hands often with soap and water. Be sure to wash your hands before cooking and eating, and after you use the bathroom, blow your nose, cough, sneeze, or touch animals. Carry hand sanitizer for times when you are not near soap and water.
- Use sanitizing wipes to clean surfaces and items that you touch. This includes public telephones, ATM machines, doorknobs, and other common items.
- Be gentle and thorough when you wipe yourself after a bowel movement. Instead of toilet paper, use a baby wipe or squirt of water from a spray bottle to clean yourself. Let your doctor or nurse know if your rectal area is sore or bleeds or if you have hemorrhoids.
- Stay away from people who are sick. This includes people with colds, flu, measles, or chicken pox. You also need to stay away from children who just had a “live virus” vaccine for chicken pox or polio. Call your doctor, nurse, or local health department if you have any questions.
- Stay away from crowds. Try not to be around a lot of people. For instance, plan to go shopping or to the movies when the stores and theaters are less crowded.
- Be careful not to cut or nick yourself. Do not cut or tear your nail cuticles. Use an electric shaver instead of a razor. And be extra careful when using scissors, needles, or knives.

## Managing Potential Side Effects cont.

- Watch for signs of infection around your catheter or port. Signs include drainage, redness, swelling, or soreness. Let your doctor or nurse know about any changes you notice near your catheter.
- Maintain good mouth care. Brush your teeth after meals and before you go to bed. Use a very soft toothbrush. You can make the bristles even softer by running hot water over them just before you brush. Use a mouth rinse that does not contain alcohol. Check with your doctor or nurse before going to the dentist.
- Take good care of your skin. Do not squeeze or scratch pimples. Use lotion to soften and heal dry, cracked skin. Dry yourself after a bath or shower by gently patting (not rubbing) your skin.
- Clean cuts right away. Use warm water, soap, and an antiseptic to clean your cuts. Do this every day until your cut has a scab over it.
- Be careful around animals. Do not clean your cat's litter box, pick up dog waste, or clean bird cages or fish tanks. Be sure to wash your hands after touching pets and other animals.
- Do not get a flu shot or other type of vaccine without first asking your doctor or nurse. Some vaccines contain a live virus, which you should not be exposed to.
- Keep hot foods hot and cold foods cold. Do not leave leftovers sitting out. Put them in the refrigerator as soon as you are done eating.
- Wash raw vegetables and fruits well before eating them.
- Do not eat raw or undercooked fish, seafood, meat, chicken, or eggs. These may have bacteria that can cause infection.
- Do not have food or drinks that are moldy, spoiled, or past the freshness date.
- Do not take drugs that reduce fever without first talking with your doctor or nurse.

**Call your doctor right away (even on the weekend or in the middle of the night) if you think you have an infection.**

Be sure you know how to reach your doctor after office hours and on weekends. Call if you have a fever of 100.4° F or higher, or when you have chills or sweats. Do not take aspirin, acetaminophen (such as Tylenol), ibuprofen products, or any other drugs that reduce fever without first taking with your doctor or nurse. Other signs of infection include:

- |                          |                                       |
|--------------------------|---------------------------------------|
| • Redness                | • Chills                              |
| • Swelling               | • Painful or frequent need to urinate |
| • Stiff Neck             | • Cough                               |
| • Rash                   | • Sinus pain or pressure              |
| • Bloody or cloudy urine | • Earache                             |

# Managing Potential Side Effects cont.

## Bleeding

Platelets are cells that make your blood clot when you bleed. Chemotherapy can lower the number of platelets because it affects your bone marrow's ability to make them. A low platelet count is called thrombocytopenia. This condition may cause bruises (even when you have not been hit or have not bumped into anything), bleeding from your nose or in your mouth, or a rash of tiny, red dots.

### Ways to manage

#### Do:

- Brush your teeth with a very soft toothbrush.
- Soften the bristles of your toothbrush by running hot water over them before you brush.
- Blow your nose gently.
- Be careful when using scissors, knives, or other sharp objects.
- Use an electric shaver instead of a razor.
- Apply gentle but firm pressure to any cuts you get until the bleeding stops.
- Wear shoes all the time, even inside the house or hospital.

#### Do not:

- Use dental floss or toothpicks.
- Play sports or do other activities during which you could get hurt.
- Use tampons, enemas, suppositories, or rectal thermometers.
- Wear clothes with tight collars, wrists, or waistbands.

#### Check with your doctor or nurse before:

- Drinking beer, wine, or other types of alcohol
- Having sex
- Taking vitamins, herbs, minerals, dietary supplements, aspirin, or other over-the-counter medicines. Some of these products can change how chemotherapy works.
- Check with your doctor or nurse before taking any vitamins, herbs, minerals, dietary supplements, aspirin, or other over-the-counter medicines. Some of these products can change how chemotherapy works.

### Let your doctor know if you are constipated.

He or she may prescribe a stool softener to prevent straining and rectal bleeding when you go to the bathroom.

### Your doctor or nurse will check your platelet count often.

You may need medication, a platelet transfusion, or a delay in your chemotherapy treatment if your platelet count is too low.

## Managing Potential Side Effects cont.

### Call your doctor or nurse if you have any of these symptoms:

- Bruises, especially if you did not bump into anything
- Small, red spots on your skin
- Red- or pink-colored urine
- Black or bloody bowel movements
- Bleeding from your gums or nose
- Heavy bleeding during your menstrual period or for a prolonged period
- Vaginal bleeding not caused by your period
- Headaches or changes in your vision
- A warm or hot feeling in your arm or leg
- Feeling very sleepy or confused

## Anemia (Low Red Blood Cell Count)

### What it is and why it occurs

**Red blood cells** carry oxygen throughout your body. Anemia is when you have too few red blood cells to carry the oxygen your body needs. Your heart works harder when your body does not get enough oxygen. This can make it feel like your heart is pounding or beating very fast. Anemia can also make you feel short of breath, weak, dizzy, faint, or very tired. Some types of chemotherapy cause anemia because they make it harder for bone marrow to produce new red blood cells.

### Ways to manage

- Get plenty of rest. Try to sleep at least eight hours each night. You might also want to take one or two short naps (one hour or less) during the day.
- Limit your activities. This means doing only the activities that are most important to you. For example, you might go to work but not clean the house. Or you might order take-out food instead of cooking dinner.
- Accept help. When your family or friends offer to help, let them. They can help care for your children, pick up groceries, run errands, drive you to doctor's visits, or do other chores you feel too tired to do.
- Eat a well-balanced diet. Choose a diet that contains all the calories and protein your body needs. Calories will help keep your weight up, and extra protein can help repair tissues that have been harmed by cancer treatment. Talk to your doctor, nurse, or dietitian about the diet that is right for you.
- Stand up slowly. You may feel dizzy if you stand up too fast. When you get up from lying down, sit for a minute before you stand.

# Managing Potential Side Effects cont.

## Your doctor or nurse will check your blood cell count throughout your chemotherapy.

You may need a blood transfusion if your red blood cell count falls too low. Your doctor may also prescribe a medicine to boost (speed up) the growth of red blood cells or suggest that you take iron or other vitamins.

## Fatigue

### What it is and why it occurs

Fatigue from chemotherapy can range from a mild to extreme feeling of being tired. Many people describe fatigue as feeling weak, weary, worn out, heavy, or slow.

Resting does not always help. Many people say they feel fatigue during chemotherapy and even for weeks or months after treatment is over. Fatigue can be caused by the type of chemotherapy, the effort of making frequent visits to the doctor, or feelings such as stress, anxiety, and depression. If you receive radiation therapy along with chemotherapy, your fatigue may be more severe. Fatigue can happen all at once or little by little. Different people feel fatigue in different ways.

### Ways to manage

- Try not to do too much. With fatigue, you may not have enough energy to do all the things you want to do. Choose the activities you want to do and let someone else help with the others. Try quiet activities, such as reading, knitting, or learning a new language on tape.
- Sleep at least eight hours each night. This may be more sleep than you needed before chemotherapy. You are likely to sleep better at night when you are active during the day. You may also find it helpful to relax before going to bed. For instance, you might read a book, work on a jigsaw puzzle, listen to music, or do other quiet hobbies.
- Plan a work schedule that works for you. Fatigue may affect the amount of energy you have for your job. You may feel well enough to work your full schedule, or you may need to work less – maybe just a few hours a day or a few days each week. If your job allows, you may want to talk with your boss about ways to work from home. Or you may want to go on medical leave (stop working for a while) while getting chemotherapy.
- Let others help. Ask family members and friends to help when you feel fatigued. Perhaps they can help with household chores or drive you to and from doctor's visits. They might also help by shopping for food and cooking meals for you to eat now or freeze for later.
- Learn from others who have cancer. People who have cancer can help by sharing ways that they manage fatigue. One way to meet others is by joining a support group—either in person or online. Talk with your doctor or nurse to learn more.

## Managing Potential Side Effects cont.

- Keep a diary of how you feel each day. This will help you plan how to best use your time. Share your diary with your nurse. Let your doctor or nurse know if you notice changes in your energy level, whether you have lots of energy or are very tired.
- Talk with your doctor or nurse. Your doctor may prescribe medication that can help decrease fatigue, give you a sense of well-being, and increase your appetite. He or she may also suggest treatment if your fatigue is from anemia.

### Nausea and Vomiting

#### What they are and why they occur

Some types of chemotherapy can cause nausea, vomiting, or both. Nausea is when you feel sick to your stomach, like you are going to throw up. Vomiting is when you throw up. You may also have **dry heaves**, which is when your body tries to vomit even though your stomach is empty.

Nausea and vomiting can occur while you are getting chemotherapy, right after, or many hours or days later. You will most likely feel better on the days you do not get chemotherapy.

New drugs can help prevent nausea and vomiting. These are called **antiemetic** or **anti-nausea** drugs. You may need to take these drugs one hour before each chemotherapy treatment and for a few days after. How long you take them after chemotherapy will depend on the type of chemotherapy you are getting and how you react to it. If one anti-nausea drug does not work well for you, your doctor can prescribe a different one. You may need to take more than one type of drug to help with nausea. **Acupuncture** may also help. Talk with your doctor or nurse about treatments to control nausea and vomiting caused by chemotherapy.

#### Ways to manage

One way to prevent vomiting is to prevent nausea. Try having bland, easy-to-digest foods and drinks that do not upset your stomach. These include plain crackers, toast, and gelatin.

- Plan when it's best for you to eat and drink. Some people feel better when they eat a light meal or snack before chemotherapy. Others feel better when they have chemotherapy on an empty stomach (nothing to eat or drink for two to three hours before treatment). After treatment, wait at least one hour before you eat or drink.
- Eat small meals and snacks. Instead of three large meals each day, you might feel better if you eat five or six small meals and snacks. Do not drink a lot before or during meals. Also, do not lie down right after you eat.

## Managing Potential Side Effects cont.

- Have foods and drinks that are warm or cool (not hot or cold). Give hot foods and drinks time to cool down, or, make them colder by adding ice. You can warm up cold foods by taking them out of the refrigerator one hour before you eat or warming them slightly in a microwave. Drink cola or ginger ale that is warm and has lost its fizz.
- Stay away from foods and drinks with strong smells. These include coffee, fish, onions, garlic, and foods that are cooking.
- Try small bites of popsicles or fruit ices. You may also find sucking on ice chips helpful.
- Suck on sugar-free mints or tart candies. Do not use tart candies if you have mouth or throat sores.
- Relax before treatment. You may feel less nausea if you relax before each chemotherapy treatment. Meditate, do deep breathing exercises, or imagine scenes or experiences that make you feel peaceful. You can also do quiet hobbies such as reading, listening to music, or knitting.
- When you feel like vomiting, breathe deeply and slowly or get fresh air. You might also distract yourself by chatting with friends or family, listening to music, or watching a movie or TV.
- Talk with your doctor or nurse. Your doctor can give you drugs to help prevent nausea during and after chemotherapy. Be sure to take these drugs as ordered and let your doctor or nurse know if they do not work. You might also ask your doctor or nurse about acupuncture, which can help relieve nausea and vomiting caused by cancer treatment. Tell your doctor or nurse if you vomit for more than one day or right after you drink.

## Mouth and Throat Changes

### What they are and why they occur

Some types of chemotherapy harm fast-growing cells, such as those that line your mouth, throat, and lips. This can affect your teeth, gums, the lining of your mouth, and the glands that make saliva. Most mouth problems go away a few days after chemotherapy is over.

### Mouth and throat problems may include:

- Dry mouth (having little or no saliva)
- Changes in taste and smell (such as when food tastes like metal or chalk, has no taste, or does not taste or smell like it used to)
- Infections of your gums, teeth, or tongue
- Increased sensitivity to hot or cold foods
- Mouth sores
- Trouble eating when your mouth gets very sore



# Managing Potential Side Effects cont.

## Ways to manage

- **Visit a dentist at least two weeks before starting chemotherapy.** It is important to have your mouth as healthy as possible. This means getting all your dental work done before chemotherapy starts. If you cannot go to the dentist before chemotherapy starts, ask your doctor or nurse when it is safe to go. Be sure to tell your dentist that you have cancer and about your treatment plan.
- **Check your mouth and tongue every day.** This way, you can see or feel problems (such as mouth sores, white spots, or infections) as soon as they start. Inform your doctor or nurse about these problems right away.
- **Keep your mouth moist.** You can keep your mouth moist by sipping water throughout the day, sucking on ice chips or sugar-free hard candy, or chewing sugar-free gum. Ask your doctor or nurse about saliva substitutes if your mouth is always dry.
- **Clean your mouth, teeth, gums, and tongue.**
  - Brush your teeth, gums, and tongue after each meal and at bedtime.
  - Use an extra-soft toothbrush. You can make the bristles even softer by rinsing your toothbrush in hot water before you brush.
  - If brushing is painful, try cleaning your teeth with cotton swabs or Toothettes®.
  - Use a fluoride toothpaste or special fluoride gel that your dentist prescribes.
  - Do not use mouthwash that has alcohol. Instead, rinse your mouth three to four times a day with a solution of 1/4 teaspoon baking soda and 1/8 teaspoon salt in 1 cup of warm water. Follow this with a plain water rinse.
  - Gently floss your teeth every day. If your gums bleed or hurt, avoid those areas but floss your other teeth. Ask your doctor or nurse about flossing if your platelet count is low.
  - If you wear dentures, make sure they fit well and keep them clean. Also, limit the length of time that you wear them.
- **Be careful what you eat when your mouth is sore.**
  - Choose foods that are moist, soft and easy to chew or swallow. These include cooked cereals, mashed potatoes, and scrambled eggs.
  - Use a blender to puree cooked foods so that they are easier to eat. To help avoid infection, be sure to wash all blender parts before and after using them. If possible, it is best to wash them in a dishwasher.
  - Take small bites of food, chew slowly, and sip liquids while you eat.
  - Soften food with gravy, sauces, broth, yogurt, or other liquids.
  - Eat foods that are cool or at room temperature. You may find that warm and hot foods hurt your mouth or throat.
  - Suck on ice chips or popsicles. These can relieve mouth pain.
  - Ask your dietitian for ideas of foods that are easy to eat.
  - Call your doctor, nurse or dentist if your mouth hurts a lot. Your doctor or dentist may prescribe medicine for pain or to keep your mouth moist. Make sure to give your dentist the phone number of your doctor and nurse.

## Managing Potential Side Effects cont.

- **Stay away from things that can hurt, scrape, or burn your mouth, such as:**
  - Sharp or crunchy foods, such as crackers and potato or corn chips
  - Spicy foods, such as hot sauce, curry dishes, salsa, and chili
  - Citrus fruits or juices such as orange, lemon, and grapefruit
  - Food and drinks that have a lot of sugar, such as candy or soda
  - Beer, wine, and other types of alcohol
  - Toothpicks or other sharp objects
  - Tobacco products, including cigarettes, pipes, cigars, and chewing tobacco

### Ways to learn more

#### National Oral Health Information Clearinghouse

A service of the National Institutes of Dental and Craniofacial Research that provides oral health information for special care patients.

- Call: 866-232-4528
- Visit: [www.nidcr.nih.gov](http://www.nidcr.nih.gov)
- E-mail: [nidcrinfo@mail.nih.gov](mailto:nidcrinfo@mail.nih.gov)

#### Smokefree.gov

Provides resources including information on quit lines, a step-by-step cessation guide, and publications to help you or someone you care about quit smoking.

- Call: 877-44U-QUIT (877-448-7848)
- Visit: <http://www.smokefree.gov>

## Appetite Changes

### What they are and why they occur

Chemotherapy can cause appetite changes. You may lose your appetite because of nausea (feeling like you are going to throw up), mouth and throat problems that make it painful to eat, or drugs that cause you to lose your taste for food. The changes can also come from feeling depressed or tired. Appetite loss may last for a day, a few weeks, or even months.

It is important to eat well, even when you have no appetite. This means eating and drinking foods that have plenty of protein, vitamins, and calories. Eating well helps your body fight infection and repair tissues that are damaged by chemotherapy. Not eating well can lead to weight loss, weakness, and fatigue.

Some cancer treatments cause weight gain or an increase in your appetite. Be sure to ask your doctor, nurse, or dietitian what types of appetite changes you might expect and how to manage them.

# Managing Potential Side Effects cont.

## Ways to manage

- Eat five or six small meals or snacks each day instead of three big meals. Choose foods and drinks that are high in calories and protein.
- Set a daily schedule for eating your meals and snacks. Eat when it is time to eat, rather than when you feel hungry. You may not feel hungry while you are on chemotherapy, but you still need to eat.
- Drink milkshakes, smoothies, juice, or soup if you do not feel like eating solid foods. Liquids like these can help provide the protein, vitamins, and calories your body needs.
- Use plastic forks and spoons. Some types of chemo give you a metal taste in your mouth. Eating with plastic can help decrease the metal taste. Cooking in glass pots and pans can also help.
- Increase your appetite by doing something active. For instance, you might have more of an appetite if you take a short walk before lunch. Also, be careful not to decrease your appetite by drinking too much liquid before or during meals.
- Change your routine. This may mean eating in a different place, such as the dining room rather than the kitchen. It can also mean eating with other people instead of eating alone. If you eat alone, you may want to listen to the radio or watch TV. You may also want to vary your diet by trying new foods and recipes.
- Talk with your doctor, nurse, or dietitian. He or she may want you to take extra vitamins or nutrition supplements (such as high protein drinks). If you cannot eat for a long time and are losing weight, you may need to take drugs that increase your appetite or receive nutrition through an IV or feeding tube.

## Constipation

### What it is and why it occurs

Constipation is when bowel movements become less frequent and stools are hard, dry, and difficult to pass. You may have painful bowel movements and feel bloated or nauseous. You may belch, pass a lot of gas, and have stomach cramps or pressure in the rectum.

Drugs such as chemotherapy and pain medicine can cause constipation. It can also happen when people are not active and spend a lot of time sitting or lying down. Constipation can also be due to eating foods that are low in fiber or not drinking enough fluids.

## Managing Potential Side Effects cont.

### Ways to manage

- **Keep a record of your bowel movements.** Show this record to your doctor or nurse and talk about what is normal for you. This makes it easier to figure out whether you have constipation.
- **Drink at least 8 cups of water or other fluids each day.** Many people find that drinking warm or hot fluids, such as coffee and tea, help with constipation. Fruit juices, such as prune juice, may also be helpful.
- **Be active every day.** You can be active by walking, riding a bike, or doing yoga. If you cannot walk, ask about exercises that you can do in a chair or bed. Talk with your doctor or nurse about ways you can be more active.
- **Ask your doctor, nurse, or dietitian about foods that are high in fiber.** Eating high-fiber foods and drinking lots of fluids can help soften your stools. Good sources of fiber include whole-grain breads and cereals, dried beans and peas, raw vegetables, fresh and dried fruit, nuts, seeds, and popcorn.
- **Let your doctor or nurse know if you have not had a bowel movement in two days.** Your doctor may suggest a fiber supplement, laxative, stool softener, or enema. Do not use these treatments without first checking with your doctor or nurse.

## Diarrhea

### What it is and why it occurs

Diarrhea is frequent bowel movements that may be soft, loose, or watery.

Chemotherapy can cause diarrhea because it harms healthy cells that line your large and small intestines. It may also speed up your bowels. Diarrhea can also be caused by infections or drugs used to treat constipation.

### Ways to manage

- Eat five or six small meals and snacks each day instead of three large meals.
- Ask your doctor or nurse about foods that are high in salts such as sodium and potassium. Your body can lose these salts when you have diarrhea, and it is important to replace them. Foods that are high in sodium or potassium include bananas, oranges, peach and apricot nectar, and boiled or mashed potatoes.
- **Drink 8 to 12 cups of clear liquids each day.** These include water, clear broth, ginger ale, or sports drinks such as Gatorade® or Propel®. Drink slowly and choose drinks that are at room temperature. Let carbonated drinks lose their fizz before you drink them. Add extra water if drinks make you thirsty or nauseous (feeling like you are going to throw up).

## Managing Potential Side Effects cont.

- **Eat low-fiber foods.** Foods that are high in fiber can make diarrhea worse. Low-fiber foods include bananas, white rice, white toast, and plain or vanilla yogurt.
- **Let your doctor or nurse know if your diarrhea lasts for more than 24 hours or if you have pain and cramping along with diarrhea.** Your doctor may prescribe a medicine to control the diarrhea. You may also need IV fluids to replace the water and nutrients you lost. Do not take any medicine for diarrhea without first asking your doctor or nurse.
- **Be gentle when you wipe yourself after a bowel movement.** Instead of toilet paper, use a baby wipe or squirt of water from a spray bottle to clean yourself after bowel movements. Let your doctor or nurse know if your rectal area is sore or bleeds or if you have hemorrhoids.
- **Ask your doctor if you should try a clear liquid diet.** This can give your bowels time to rest. Most people stay on this type of diet for 5 days or less.

### Stay away from:

- Drinks that are very hot or very cold
- Beer, wine, and other types of alcohol
- Milk or milk products, such as ice cream, milkshakes, sour cream, and cheese
- Spicy foods, such as hot sauce, salsa, chili, and curry dishes
- Greasy and fried foods, such as French fries and hamburgers
- Foods or drinks with caffeine, such as regular coffee, black tea, cola, and chocolate
- Foods or drinks that cause gas, such as cooked dried beans, cabbage, broccoli, and soy milk and other soy products
- Foods that are high in fiber, such as cooked dried beans, raw fruits and vegetables, nuts, and whole-wheat breads and cereals

## Hair Loss

### What it is and why it occurs

Hair loss (also called **alopecia**) is when some or all your hair falls out. This can happen anywhere on your body: Your head, face, arms, legs, underarms, or the pubic area between your legs. Many people are upset by the loss of their hair and find it the most difficult part of chemotherapy.

Some types of chemotherapy damage the cells that cause hair growth. Hair loss often starts 2 to 3 weeks after chemotherapy begins. Your scalp may hurt at first. Then you may lose your hair, either a little at a time or in clumps. It takes about 1 week for

## Managing Potential Side Effects cont.

all your hair to fall out. Almost always, your hair will grow back 2 to 3 months after chemotherapy is over. You may notice that your hair starts growing back even while you are getting chemotherapy.

Your hair will be very fine when it starts growing back. Also, your new hair may not look or feel the same as it did before. For instance, your hair may be thin instead of thick, curly instead of straight, and darker or lighter in color.

### Ways to manage

#### Before hair loss:

- **Talk with your doctor or nurse.** He or she will know if you are likely to have hair loss.
- **Cut your hair short or shave your head.** You might feel more in control of hair loss if you first cut your hair or shave your head. This often makes hair loss easier to manage. If you shave your head, use an electric shaver instead of a razor.
- **The best time to choose your wig is before chemotherapy starts.** This way, you can match the wig to the color and style of your hair. You might also take it to your hairdresser who can style the wig to look like your own hair. Make sure to choose a wig that feels comfortable and does not hurt your scalp.
- **Ask if your insurance company will pay for a wig.** If it will not, you can deduct the cost of your wig as a medical expense on your income tax. Some groups also have free “wig banks”. Your doctor, nurse, or social worker will know if there is a wig bank near you.
- **Be gentle when you wash your hair.** Use a mild shampoo, such as a baby shampoo. Dry your hair by patting (not rubbing) it with a soft towel.
- **Do not use items that can hurt your scalp.** These include:
  - Straightening or curling irons
  - Electric hair dryers
  - Hairsprays
  - Products to perm or relax your hair
  - Brush rollers or curlers
  - Hair bands and clips
  - Hair dyes

#### After hair loss:

- **Protect your scalp.** Your scalp may hurt during and after hair loss. Protect it by wearing a hat, turban, or scarf when you are outside. Try to avoid places that are very hot or very cold. This includes tanning beds and outside in the sun or cold air. And always apply sunscreen or sunblock to protect your scalp.
- **Stay warm.** You may feel colder once you lose your hair. Wear a hat, turban, scarf, or wig to help you stay warm.
- **Sleep on a satin pillowcase.** Satin creates less friction than cotton when you sleep on it. Therefore, you may find satin pillowcases more comfortable.

## Managing Potential Side Effects cont.

- **Talk about your feelings.** Many people feel angry, depressed, or embarrassed about hair loss. If you are very worried or upset, you might want to talk about these feelings with a doctor, nurse, family member, close friend, or someone who has had hair loss caused by cancer treatment.

### Ways to learn more

**American Cancer Society** offers a variety of services to people with cancer and their families, including referrals to low-cost wig banks.

Call: 800-ACS-2345 (800-227-2345)

TTY: 866-228-4327

Visit: [www.cancer.org](http://www.cancer.org)

## Scalp Cooling

Scalp Cooling therapy minimizes hair loss from certain chemotherapy treatments for men and women with solid tumors. Aurora Cancer Care offers the option of scalp cooling using the DigniCap® Delta Scalp Cooling System.

### What is scalp cooling?

Scalp cooling is a proven way to reduce hair loss from chemotherapy that has been used successfully by thousands of patients worldwide for several decades. In this treatment the scalp is cooled while cytostatic drugs are being administered.

### How does scalp cooling work?

Two reactions occur during scalp cooling:

1. **Reduced blood flow:** Vasoconstriction in the scalp area limits the amount of chemotherapy agent delivered to the hair follicles.
2. **Reduced metabolism:** Lower scalp temperature decreases the reaction rate causing normal cellular activity in the localized scalp area to slow dramatically. With these two reactions the follicles absorb less chemotherapy and hair loss is significantly reduced.

### Why is scalp cooling important?

A patient's hair can be a major part of their identity and many patients rate hair loss as the most devastating side effect of chemotherapy. Hair loss can negatively affect self-image, confidence, overall sense of well-being and attitude toward treatment.

Ask your provider if you are a candidate for this hair loss treatment.

*(retrieved from [Dignicap.com](http://Dignicap.com))*

## Nervous System Changes

### What they are and why they occur

Chemotherapy can cause damage to your nervous system. Many nervous system problems get better within a year of when you finish chemotherapy, but some may last the rest of your life. Symptoms may include:

- Tingling, burning, weakness, or numbness in your hands or feet
- Feeling colder than normal
- Pain when walking
- Weak, sore, tired, or achy muscles
- Being clumsy and losing your balance
- Trouble picking up objects or buttoning your clothes
- Shaking or trembling
- Hearing loss
- Stomach pain, such as constipation or heartburn
- Fatigue
- Confusion and memory problems
- Dizziness
- Depression

### Ways to Manage

- Let your doctor or nurse know right away if you notice any nervous system changes. It is important to treat these problems as soon as possible.
- Be careful when handling knives, scissors, and other sharp or dangerous objects.
- Avoid falling. Walk slowly, hold onto handrails when using the stairs, and put no-slip bathmats in your bathtub or shower. Make sure there are no area rugs or cords to trip over.
- Always wear sneakers, tennis shoes, or other footwear with rubber soles.
- Check the temperature of your bath water with a thermometer. This will keep you from getting burned by water that is too hot.
- Be extra careful to avoid burning or cutting yourself while cooking.
- Wear gloves when working in the garden, cooking, or washing dishes.
- Rest when you need to.
- Steady yourself when you walk by using a cane or other device.
- Talk to your doctor or nurse if you notice memory problems, feel confused, or are depressed.
- Ask your doctor for pain medicine if you need it.



# Managing Potential Side Effects cont.

## Infertility

### What it is and why it occurs

Some types of chemotherapy can cause infertility. For a woman, this means that you may not be able to get pregnant. For a man, this means you may not be able to get a woman pregnant.

In women, chemotherapy may damage the ovaries. This damage can lower the number of healthy eggs in the ovaries. It can also lower the hormones produced by them. The hormone level drop can lead to early menopause. Early menopause and fewer healthy eggs can cause infertility.

In men, chemotherapy may damage sperm cells, which grow and divide quickly. Infertility may occur because chemotherapy can lower the number of sperm, make sperm less able to move, or cause other types of damage.

Whether or not you become infertile depends on the type of chemotherapy you get, your age, and whether you have other health problems. Infertility can last the rest of your life.

### Ways to manage

#### For WOMEN, talk with your doctor or nurse about:

- Whether you want to have children. Before you start chemotherapy, let your doctor or nurse know if you might want to get pregnant in the future. He or she may talk with you about ways to preserve your eggs to use after treatment ends or refer you to a fertility specialist.
- Birth control. It is very important that you do not get pregnant while getting chemotherapy. These drugs can hurt the fetus, especially in the first three months of pregnancy. If you have not yet gone through menopause, talk with your doctor or nurse about birth control and ways to keep from getting pregnant.
- Pregnancy. If you still have menstrual periods, your doctor or nurse may ask you to have a pregnancy test before you start chemotherapy. If you are pregnant, your doctor or nurse will talk with you about other treatment options.

#### For MEN, talk with your doctor or nurse about:

- Whether you want to have children. Before you start chemotherapy, let your doctor or nurse know if you might want to father children in the future. He or she may talk with you about ways to preserve your sperm to use in the future or refer you to a fertility specialist.
- Birth control. It is very important that your spouse or partner does not get pregnant while you are getting chemotherapy. Chemotherapy can damage your sperm and cause birth defects.

## Sexual Changes

### What they are and why they occur

Some types of chemotherapy can cause sexual changes. These changes are different for women and men. In women, chemotherapy may damage the ovaries, which can cause changes in hormone levels. Hormone changes can lead to problems like vaginal dryness and early menopause.

In men, chemotherapy can cause changes in hormone levels, decreased blood supply to the penis, or damage to the nerves that control the penis, all of which can lead to erectile dysfunction.

Whether or not you have sexual changes during chemotherapy depends on if you have had these problems before, the type of chemotherapy you are getting, your age, and whether you have any other illnesses. Some problems, such as loss of interest in sex, are likely to improve once chemotherapy is over.

### Problems for WOMEN include:

- Symptoms of menopause (for women not yet in menopause). These symptoms include:
  - Hot flashes
  - Vaginal dryness
  - Feeling irritable
  - Irregular or no menstrual periods
- Bladder or vaginal infections
- Vaginal discharge or itching
- Being too tired to have sex or not being interested in having sex Feeling too worried, stressed, or depressed to have sex

### Problems for MEN include:

- Not being able to reach climax
- Impotence (not being able to get or keep an erection)
- Being too tired to have sex or not being interested in having sex
- Feeling too worried, stressed, or depressed to have sex

## Ways to manage

### For WOMEN:

#### Talk with your doctor or nurse about:

- Sex. Ask your doctor or nurse if it is okay for you to have sex during chemotherapy. Most women can have sex, but it is a good idea to ask.
- Birth control. It is very important that you not get pregnant while having chemotherapy. Chemotherapy may hurt the fetus, especially in the first three months of pregnancy. If you have not yet gone through menopause, talk with your doctor or nurse about birth control and ways to keep from getting pregnant.

## Managing Potential Side Effects cont.

- Medications. Talk with your doctor, nurse, or pharmacist about medications that help with sexual problems. These include products to relieve vaginal dryness or a vaginal cream or suppository to reduce the chance of infection.
- Wear cotton underwear (cotton underpants and pantyhose with cotton linings).
- Do not wear tight pants or shorts.
- **Use a water-based vaginal lubricant (such as K-Y Jelly® or Astroglide®) when you have sex.**
- **If sex is still painful because of dryness, ask your doctor or nurse about medications to help restore moisture in your vagina.**
- Cope with hot flashes by:
  - Dressing in layers, with an extra sweater or jacket that you can take off.
  - Being active. This includes walking, riding a bike, or other types of exercise.
  - Reducing stress. Try yoga, meditation, or other ways to relax.

### For MEN:

#### Talk with your doctor or nurse about:

- Sex. Ask your doctor or nurse if it is okay for you to have sex during chemotherapy. Most men can have sex, but it is a good idea to ask. Also, ask if you should use a condom when you have sex, since traces of chemotherapy may be in your semen.
- Birth control. It is very important that your spouse or partner not get pregnant while you are getting chemotherapy. Chemotherapy can damage your sperm and cause birth defects.

### For men AND women:

- Be open and honest with your spouse or partner. Talk about your feelings and concerns.
- Explore new ways to show love. You and your spouse or partner may want to show your love for each other in new ways while you go through chemotherapy. For instance, if you are having sex less often, you may want to hug and cuddle more, bathe together, give each other massages, or try other activities that make you feel close to each other.
- Talk with a doctor, nurse, social worker, or counselor. If you and your spouse or partner are concerned about sexual problems, you may want to talk with someone who can help. This can be a psychiatrist, psychologist, social worker, marriage counselor, sex therapist, or clergy member.

### Ways to learn more

**American Cancer Society**, [www.cancer.org](http://www.cancer.org), offers a variety of services to people with cancer and their families.

Call: 800-ACS-2345 (800-227-2345)

TTY: 866-228-4327

# Managing Potential Side Effects cont.

## Pain

### What it is and why it occurs

Some types of chemotherapy cause painful side effects. These include burning, numbness, and tingling or shooting pains in your hands and feet. Mouth sores, headaches, muscle pains, and stomach pains can also occur. Pain can be caused by the cancer itself or by chemotherapy. Doctors and nurses have ways to decrease or relieve your pain.

### Ways to manage

- **Talk about your pain with a doctor, nurse, or pharmacist. Be specific and describe:**
  - Where you feel pain. Is it in one part of your body or all over?
  - What the pain feels like? Is it sharp, dull, or throbbing? Does it come and go, or is it steady?
  - How strong the pain is. Describe it on a scale of 0 to 10.
  - How long the pain lasts. Does it last for a few minutes, an hour, or longer?
  - What makes the pain better or worse? For instance, does an ice pack help? Or does the pain get worse if you move a certain way?
  - Which medicines you take for pain. Do they help? How long do they last? How much do you take? How often?
- **Let your family and friends know about your pain.** They need to know about your pain so they can help you.
- **Practice pain control**
  - Take your pain medicine on a regular schedule (by the clock) even when you are not in pain. This is very important when you have pain most of the time.
  - Do not skip doses of your pain medicine. Pain is harder to control and manage if you wait until you are in a lot of pain before taking medicine.
  - Try deep breathing, yoga, or other ways to relax. This can help reduce muscle tension, anxiety, and pain.
- **Ask to meet with a pain or palliative care specialist.** This can be an oncologist, anesthesiologist, neurologist, neurosurgeon, nurse, or pharmacist who will talk with you about ways to control your pain.
- **Let your doctor, nurse, or pain specialist know if your pain changes.** Your pain can change over the course of your treatment. When this happens, your pain medications may need to be changed.

You are responsible for the safety of your prescribed pain medications. Pain medications should be kept in a locked or safe place. Do not share medications and do not take more than the recommended dose without calling your provider first.

NCI's book, *Pain Control: Support for People with Cancer*, provides more tips about how to control pain from cancer and its treatment. You can download free copies from the website of the National Cancer Institute ([www.cancer.gov](http://www.cancer.gov)).

## Skin and Nail Changes

### What they are and why they occur

Some types of chemotherapy can damage the fast-growing cells in your skin and nails. While these changes may be painful and annoying, most are minor and do not require treatment. Hyperpigmented (darker) or Vitiligo (lighter) skin changes from anti-cancer treatment are usually temporary. Many of these changes will get better once you have finished treatment. Some changes may be permanent. However, major skin changes need to be treated right away because they can cause lifelong damage.

### Minor skin changes may include:

- **Itching, dryness, redness, rashes, and peeling**
- **Darker veins.** Your veins may look darker when you get chemotherapy through an IV.
- **Sensitivity to the sun** (when you burn very quickly). This can happen even to people who have very dark skin color.
- **Nail problems.** This is when your nails become dark, turn yellow, or become brittle and cracked. Sometimes your nails will loosen and fall off, but new nails will grow back in.

### Major skin changes can be caused by:

- **Radiation recall.** Some chemotherapy causes skin in the area where you had radiation therapy to turn red (ranging from very light to bright red). Your skin may blister, peel, or be very painful.
- **Chemotherapy leaking from your IV.** You need to let your doctor or nurse know right away if you have burning or pain when you get IV chemotherapy.
- **Allergic reactions to chemotherapy.** Some skin changes mean that you are allergic to the chemotherapy. Let your doctor or nurse know right away if you have sudden and severe itching, rashes, or hives, along with wheezing or other trouble breathing.

### Ways to manage

- **Itching, dryness, redness, rashes, and peeling**
- Apply cornstarch, as you would dusting powder.
- Take quick showers or sponge baths instead of long, hot baths.
- Pat (do not rub) yourself dry after bathing.
- Wash with a mild, moisturizing soap.
- Put on cream or lotion while your skin is still damp after washing. Tell your doctor or nurse if this does not help.
- Do not use perfume, cologne, or aftershave lotion that has alcohol.
- Take a colloidal oatmeal bath (special powder you add to bath water) when your whole-body itches.

## Managing Potential Side Effects cont.

- **Acne**
  - Keep your face clean and dry.
  - Ask your doctor or nurse if you can use medicated creams or soaps and which ones to use.
- **Sensitivity to the sun**
  - Avoid direct sunlight. This means not being in the sun from 10 a.m. until 4 p.m. (the time when the sun is strongest).
  - Use sunscreen lotion with an SPF (skin protection factor) of 15 or higher. Or use ointments that block the sun's rays, such as those with zinc oxide.
  - Keep your lips moist with a lip balm that has an SPF of 15 or higher.
  - Wear light-colored pants, long-sleeve cotton shirts, and hats with wide brims.
  - Do not use tanning beds.
- **Nail problems**
  - Wear gloves when washing dishes, working in the garden, or cleaning the house.
  - Use products to make your nails stronger. (Stop using these products if they hurt your nails or skin.)
  - Let your doctor or nurse know if your cuticles are red and painful.
- **Radiation recall**
  - Protect the area of your skin that received radiation therapy from the sun.
  - Do not use tanning beds.
  - Place a cool, wet cloth where your skin hurts.
  - Wear clothes that are made of cotton or other soft fabrics. This includes your underwear (bras, underpants, and t-shirts).
  - Let your doctor or nurse know if you think you have radiation recall.

## Urinary, Kidney, and Bladder Changes

### What they are and why they occur

Some types of chemotherapy damage cells in the kidneys and bladder. Problems may include:

- Burning or pain when you begin to urinate or after you empty your bladder
- Frequent, more urgent need to urinate
- Not being able to urinate
- Not able to control the flow of urine from the bladder (incontinence)
- Blood in the urine
- Fever
- Chills
- Urine that is orange, red, green, or dark yellow or has a strong medicine odor.
- Some kidney and bladder problems will go away after you finish chemotherapy. Other problems can last for the rest of your life.

# Managing Potential Side Effects cont.

## Ways to manage

- Your doctor or nurse will take urine and blood samples to check how well your bladder and kidneys are working.
- Drink plenty of fluids. Fluids will help flush the chemotherapy out of your bladder and kidneys.
- Limit drinks that contain caffeine (such as black tea, coffee, and some cola products).
- Talk with your doctor or nurse if you have any of the problems listed above.

## Other Side Effects

### Flu-like symptoms

Some types of chemotherapy can make you feel like you have the flu. This is more likely to happen if you get chemotherapy along with biological therapy.

#### Flu-like symptoms may include:

- Muscle and joint aches
- Fatigue
- Fever
- Appetite loss
- Headache
- Nausea
- Chills

These symptoms may last from one to three days. An infection or the cancer itself can also cause them. Let your doctor or nurse know if you have any of these symptoms.

### Fluid retention

Fluid retention is a buildup of fluid caused by chemotherapy, hormone changes caused by treatment, or your cancer. It can cause your face, hands, feet, or stomach to feel swollen and puffy. Sometimes fluid builds up around your lungs and heart, causing coughing, shortness of breath, or an irregular heartbeat. Fluid can also build up in the lower part of your belly, which can cause bloating.

#### You and your doctor or nurse can help manage fluid retention by:

- Weighing yourself at the same time each day, using the same scale. Let your doctor or nurse know if you gain weight quickly.
- Avoiding table salt or salty foods.
- Limiting the amount and type of liquids you drink.
- If you retain a lot of fluid, your doctor may prescribe medicine to get rid of the extra fluid.

# Managing Potential Side Effects cont.

## Eye changes

- **Trouble wearing contact lenses.** Some types of chemotherapy can bother your eyes and make wearing contact lenses painful. Ask your doctor or nurse if you can wear contact lenses while getting chemotherapy.
- **Blurry vision.** Some types of chemotherapy can clog your tear ducts, which can cause blurry vision.
- **Watery eyes.** Sometimes, chemotherapy can seep out in your tears, which can cause your eyes to water more than usual.

If your vision gets blurry or your eyes water more than usual, tell your doctor or nurse.

## What are the side effects of immunotherapy and how can I manage them?

The immunotherapy side effects you experience are related to the specific drug you are taking and how your immune system reacts to the medication. It is helpful to understand your body and know what is normal for you. Knowing your body allows you to watch for changes in things like energy level or number of daily bowel movements. Noticing changes in your normal body function and reporting them early allows your healthcare team to treat side effects right away.

Some side effects you may experience with immunotherapy are:

- Fatigue
- Lung problems (pneumonitis)
- Diarrhea/intestinal problems (colitis)
- Liver problems (hepatitis)
- Rash, itching, or other skin problems
- Blood changes (hematologic)

Your healthcare team will provide a list of common side effects for the drug you are taking. Tell your healthcare team about any side effects that are new, different, or bothersome.



# Managing Potential Side Effects cont.

## Call Us First Campaign

Many side effects of cancer treatment can be controlled or even avoided. Your doctors and nurses can help you control your symptoms before they worsen. We want to help you avoid unnecessary trips to the emergency room or hospital admissions.

The emergency department is not the best place for oncology patients. There may be long delays for care; immunocompromised patients are at high risk for infection; and ED clinicians and staff may not have oncology-specific training or care coordination protocols.

**Before visiting the emergency department, CALL US FIRST!**

You will receive a magnet with your clinic's phone number and a list of symptoms to remind you to call the clinic first.

**Go directly to the emergency department if you are experiencing uncontrolled bleeding or heart attack or stroke symptoms.**

## General Guidelines for When to Call Your Provider or Clinic

### Call for:

- Pain unrelieved by prescribed pain medications
- New, MILD, shortness of breath (Sudden difficulty breathing needs emergency care. Go the emergency department or call 911)
- Nausea and/or vomiting uncontrolled by prescribed medications
- Inability to eat or drink fluids within a 24-hour time period
- Uncontrolled diarrhea (watery stools, more than four times in one day)
- Uncontrolled constipation (may cause abdominal pain. Call if no regular bowel movement after normal bowel movement schedule)
- Signs of blood clots (dull aching over veins including tenderness, warmth, redness or swelling, or pain in your calves)
- Signs of anemia (pale appearance, swollen ankles, moderate weakness, or fatigue)
- Signs of dehydration (nausea, vomiting, diarrhea, moderate/severe headaches, weakness, and lightheaded or dizzy when standing)
- Fever equal to or over 100.4° or frequent and severe chills in the same day
- Changes in urination, new pain or burning with urination, or if you are unable to produce urine
- Bleeding from anywhere (including signs of bloody stool)

# Nutrition

## Eating Well During Cancer Treatment

This guide had been prepared for your use by registered dietitians. If you have questions or concerns, please call the nearest Aurora facility for a referral to a dietitian.

### Consult with a dietitian if you have:

- Poor appetite for more than six days.
- Unintentional weight loss of more than 10 pounds in six months.
- Side effects or other issues that prevent you from eating as you normally do.
- Need for more information or have questions regarding herbals, vitamins/minerals, or other nutrition supplements.

This is especially important if you have other diet restrictions.

Eating well is very important for everyone but especially for people with cancer. Doctors and researchers have found that patients who eat well during their treatment periods – especially those who eat diets high in protein and calories – are better able to stand the side effects of the treatments. Those who eat well may even be able to withstand a higher dose of certain treatments.

A balanced diet can help maintain your strength, can prevent body tissues from breaking down and can help rebuild the normal tissues that have been affected by the treatments.

### Some general advice about eating

- **Give food a chance.** Remember what sounds unappealing today may sound good tomorrow. An open mind and willingness to try new recipes is important.
- **Take advantage of the up times.** When you're feeling well, prepare meals you can freeze for the down days. On the good days, eat when you feel hungry, even if it isn't mealtime. Those nutrients can be stored in your body for later use.
- **Make use of time savers.** There are many foods available which can be prepared with little time or cooking. Frozen dinners, or some canned foods can be served with fruit, milk, and a buttered roll to give you a nutritious meal. There are also appliances that can help save time, such as food processors, blenders, toaster ovens, or microwaves.
- **Discuss your eating problems with your doctor and dietitian.** Do not hesitate to ask questions. Before trying home remedies, be sure your problems are not symptoms needing medical attention.

## Nutrition cont.

- **Surroundings make a difference.** An attractively set table with flowers or other such items can take your mind off a poor appetite. Good odors also help – freshly baked bread or a cake baking. Eating with friends or family, having music at dinner time, varying the place in your house where you eat, or even having a picnic may provide a pleasant feeling for your meal.
- **Avoid foods that don't interest you.** Do not make yourself eat something that does not sound appetizing. There are many ways to get the needed protein and calories.

Food Group	Recommended Foods	Tips to Boost Calories and Protein
<b>Meats, Poultry, Fish, Dry Beans and Peas, Eggs, and Nuts</b> (at least 4 to 6 ounces of these each day)		
Foods from this group provide the best source of protein.	<ul style="list-style-type: none"> <li>• All beef, pork, lamb, veal, turkey, chicken, and fish</li> <li>• Eggs</li> <li>• Dried beans and peas</li> <li>• Nuts and peanut butter</li> <li>• Tofu</li> </ul>	<ul style="list-style-type: none"> <li>• Add extra chopped meat, hard-boiled egg, and tofu to soups, vegetables, salads, and casseroles.</li> <li>• Eat bean and pea soups.</li> <li>• Add cooked or canned beans into rice dishes, casseroles, pasta, or salads.</li> <li>• If red meat, such as beef, tastes or smells strange, try chicken, turkey, eggs, dairy products, or mild tasting fish instead.</li> </ul>
<b>Milk, Yogurt, and Cheese</b> (at least 3 cups each day)		
Foods and beverages from this group are high in protein.	<ul style="list-style-type: none"> <li>• All kinds of milk, especially whole milk, malts, and milk shakes</li> <li>• Cheese, cottage cheese, and yogurt</li> <li>• Pudding and custard</li> <li>• Cream soups</li> </ul>	<ul style="list-style-type: none"> <li>• Add 1/4 cup powdered milk to each cup of regular milk and use as a beverage or in cooking.</li> <li>• Use milk instead of water when making soups, cereals, puddings, and custards.</li> <li>• Stir powdered milk into soups, sauces, egg dishes, and casseroles.</li> <li>• Have milk as a beverage with meals and snacks.</li> <li>• Add shredded cheese to vegetables, eggs, casseroles, soups, and salads.</li> <li>• Melt cheese on hamburgers, fish, and sandwiches.</li> <li>• Have macaroni and cheese as a side dish.</li> <li>• Add cheese and yogurt as snack foods.</li> <li>• High fat dairy products will increase calorie intake.</li> </ul>

## Nutrition cont.

Food Group	Recommended Foods	Tips to Boost Calories and Protein
<b>Breads, Cereals, Rice and Pasta</b> (at least 6 to 10 ounce equivalents each day)		
Foods from this group provide calories and a small amount of protein	1 ounce is about 1 slice of bread, about 1 cup of breakfast cereal, or ½ cup of cooked rice, cereal, or pasta	<ul style="list-style-type: none"> <li>• Top breads, pancakes, waffles, and muffins with extra butter, margarine, peanut butter, jam, cream cheese, nuts, syrup, whipped cream or granola.</li> <li>• Prepare pasta and rice dishes with cream or cheese sauces.</li> <li>• Stir powdered milk into hot cereals, batters, and mixes.</li> <li>• Eat at least 3 ounces of whole grains per day.</li> </ul>
<b>Vegetables</b> (at least 2 - 4 cups each day)		
Vegetables provide important vitamins, minerals, and phytochemicals to help your body maintain good health. (Only a small amount of protein is in vegetables.)	<ul style="list-style-type: none"> <li>• All fresh, frozen, or canned vegetables</li> <li>• Vegetable juices</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare vegetables with cream or cheese sauce.</li> <li>• Add butter, margarine, or salad dressings to cooked and raw vegetables.</li> <li>• Use meat, cheese, and hard-boiled eggs with vegetable salads.</li> <li>• Stuff fruits and vegetables with cottage cheese, ricotta cheese, meat, or peanut butter.</li> <li>• Try avocado slices or guacamole in salads, dips, and sandwiches.</li> </ul>
<b>Fruits</b> (at least 1 ½ - 2 ½ cups each day)		
Foods from this group provide vitamins, minerals, and phytochemicals to help your body maintain good health. (There is no protein in fruits.)	<ul style="list-style-type: none"> <li>• All fresh, dried, or canned fruit</li> <li>• All fruit juices</li> </ul>	<ul style="list-style-type: none"> <li>• Select canned fruit with added sugar or canned in syrup for extra calories.</li> <li>• Sweeten fruit with sugar, honey, or syrup to add calories.</li> <li>• Blend or whip ice cream, yogurt, cottage cheese, or cream with fruit.</li> <li>• Add dried fruits to muffins, pancakes, and cereal.</li> <li>• Eat any dried fruits or fruit and nut mixtures for snacks.</li> <li>• Add peanut butter to fruits such as apples or bananas.</li> </ul>

## Nutrition cont.

Food Group	Recommended Foods	Tips to Boost Calories and Protein
<b>Fats, Snacks, Sweets, and Condiments</b> (use as desired)		
These foods provide little protein but are high in calories.	<ul style="list-style-type: none"> <li>• Margarine, butter, cream, salad dressings, gravy, and cream cheese</li> <li>• Jams, jellies, sugar, honey, syrup, and candy</li> <li>• Cakes, cookies, pies, ice cream, and sherbet</li> </ul>	<ul style="list-style-type: none"> <li>• Boost calories by adding margarine, butter, sour cream, and other fats to food whenever possible.</li> <li>• Keep snacks handy like granola, ice cream, cookies, sherbet, and flavored gelatin.</li> <li>• These foods should not replace meats, milk, breads, fruits, and vegetables.</li> <li>• Limit beverages that provide no calories or protein such as coffee, tea, or broth.</li> </ul>

### Important points

- Eat smaller meals and snacks every couple of hours.
- Eat foods from the meat group at each meal and as snacks.
- Nutritional beverage supplements (Boost, Ensure, Carnation Instant Breakfast) can increase protein and calorie intake. Talk to a registered dietitian about the use of these products.
- Drink plenty of fluids. It is important to stay well hydrated during cancer treatment. **We recommend you drink** a minimum of **64 ounces of water** or caffeine-free liquids **daily** (unless told differently by your provider). Alcohol does not count! Ask your provider if it is safe to have **any** alcoholic beverages during anti-cancer treatment.
- If you have other diet concerns, ask your dietitian/health care provider for suggestions to maintain your nutritional health

### A Registered Dietitian Can Help

Diet counseling with a Registered Dietitian is available if further help is needed.

**For a list of Aurora facilities with a dietitian, please call  
Aurora Health Care toll free at 888-863-5502.**

### Nutrition Tips for Managing Side Effects

Patients undergoing treatment for cancer may have side effects that affect food intake. Side effects are different for every patient. By following the tips below, you can take an active role in your care.

#### Loss of appetite

- Eat every 2 to 3 hours and choose foods and fluids that are high in calories and protein.
- Avoid fried or greasy foods.
- Keep snacks available, such as peanut butter on toast, cheese and crackers, nuts and dried fruit.
- Eat your largest meal when you are most hungry.
- Try light exercise before a meal to stimulate your appetite.

#### Weight loss

- Include high-calorie foods, such as honey, jam, dried fruit and fruit juices, granola, olive or canola oil, butter, cream cheese, and avocado.
- Include high-protein foods, such as eggs, nuts, nut butters, cooked meats, poultry, fish, milk, yogurt, and cottage cheese.
- Try nutritional supplement drinks, such as Carnation Instant Breakfast, Boost or Ensure.
- Try a homemade milkshake or smoothie.

#### Changes in taste and smell

- Eat foods cold or at room temperature to decrease the smell.
- If you have a metallic taste in your mouth, try using plastic utensils and avoid canned foods or drinking out of aluminum cans.
- For salty or bitter tastes, try adding honey, maple syrup or jam to foods.
- For overly sweet tastes, increase salty and tart flavors with lemon, citrus fruits or tomatoes.
- Experiment with seasonings.

#### Constipation

- Increase fiber and fluids.
- Try dry cereals with more than 4 grams of fiber per servings, such as All Bran, Fiber One, Raisin Bran, or Shredded Wheat.
- Eat whole grains, such as brown rice, barley, quinoa, oats, and 100 percent whole-grain breads.

## Nutrition cont.

- Add wheat germ or bran to cereal, yogurt or baked products.
- Eat more fruits, vegetables, nuts, beans, and legumes.
- Try warm prune juice or other warm fluids. Include light activity to help move stool through the digestive tract.

### Mouth sores

- Choose soft, moist foods. Avoid rough-textured, acidic, tart and spicy foods.
- Cut foods into small bites, chew thoroughly.
- Avoid extremely hot or extremely cold foods.
- Drink through a straw to help push the food and fluids beyond painful areas in the mouth.
- Puree foods in a blender by adding liquids, such as broth or milk.

### Nausea and vomiting

- Eat small amounts of food six to eight times per day.
- Choose dry, bland foods, such as crackers, toast, cereal, breadsticks, and potatoes.
- Avoid greasy, spicy or strong-smelling foods. Try lemon drops, mints or ginger candy.
- Drink fluids between meals instead of with meals.
- Drink fluids from a cup with a lid if smells trigger nausea.
- Try clear soups, flavored gelatin, lemonade, popsicles, mint or ginger tea.
- Eat in a well-ventilated area or outside to avoid strong smells.

### Diarrhea

- Drink 8 to 10 cups of fluids per day; try electrolyte drinks, such as Gatorade, Powerade, or Pedialyte.
- Eat small, frequent meals. Choose bland foods, such as crackers, pretzels, potatoes, bananas, rice, and toast.
- Limit high-fiber foods, such as dried peas and beans, seeds, as well as fruits and vegetables with thick skins and peels.
- Limit high-fat foods, such as fried or greasy foods, rich desserts, and excessive amounts of butter, oil or cream.
- Avoid alcohol, caffeine, spicy foods, and hot fluids, which cause food to move more quickly through the intestines.
- Limit or avoid dairy products if diarrhea worsens.

Distributed by Aurora Health Care's registered dietitians. For more information or to speak to a dietitian, please call the nearest Aurora facility.

## Food Tips

### Liquid Foods

This list may help if you:

- Do not feel like eating solid foods
- Have urinary, kidney, or bladder changes

Type	Examples
<b>Soups</b>	<ul style="list-style-type: none"> <li>• Bouillon</li> <li>• Broth</li> <li>• Cheese soup</li> <li>• Soup that has been strained or put through a blender</li> <li>• Soup with pureed potatoes</li> <li>• Tomato soup</li> </ul>
<b>Drinks</b>	<ul style="list-style-type: none"> <li>• Carbonated beverages</li> <li>• Coffee</li> <li>• Eggnog (pasteurized and alcohol free)</li> <li>• Fruit drinks</li> <li>• Fruit juices</li> <li>• Fruit punch</li> <li>• Ice chips</li> <li>• Jello</li> <li>• Koolaid</li> <li>• Milk (all types)</li> <li>• Milkshakes</li> <li>• Popsicles</li> <li>• Smoothies</li> <li>• Sports Drinks</li> <li>• Tea</li> <li>• Tomato juice</li> <li>• Vegetable juice</li> <li>• <b>Water</b></li> </ul>
<b>Fats</b>	<ul style="list-style-type: none"> <li>• Butter</li> <li>• Cream</li> <li>• Margarine</li> <li>• Oil</li> <li>• Sour Cream</li> </ul>
<b>Sweets</b>	<ul style="list-style-type: none"> <li>• Custard (soft or baked)</li> <li>• Frozen yogurt</li> <li>• Fruit purees that are watered down</li> <li>• Gelatin</li> <li>• Honey</li> <li>• Ice cream with no chunks (such as nuts or cookie pieces)</li> <li>• Ice milk</li> <li>• Jelly</li> <li>• Pudding</li> <li>• Syrup</li> <li>• Yogurt (plain or vanilla)</li> </ul>
<b>Replacements and supplements</b>	<ul style="list-style-type: none"> <li>• Instant breakfast drinks</li> <li>• Liquid meal replacements</li> </ul>



# Nutrition cont.

## Foods and Drinks That are High in Calories or Protein

This list may help if you do not feel like eating.

Type	Examples
<b>Soups</b>	<ul style="list-style-type: none"><li>• Cream soups</li><li>• Soups with lentils, dried peas or beans (such as pinto, black, red, or kidney)</li></ul>
<b>Drinks</b>	<ul style="list-style-type: none"><li>• Instant breakfast drinks</li><li>• Milkshakes</li><li>• Smoothies</li><li>• Whole milk</li></ul>
<b>Main meals and other foods</b>	<ul style="list-style-type: none"><li>• Beef</li><li>• Cream cheese</li><li>• Butter, margarine, or oil added to your food</li><li>• Croissants</li><li>• Deviled ham</li><li>• Cheese</li><li>• Eggs</li><li>• Chicken</li><li>• Fish</li><li>• Cooked dried peas and beans (such as pinto, black, red, or kidney)</li><li>• Nuts, seeds, and wheat germ</li><li>• Peanut butter</li><li>• Sour cream</li><li>• Cottage cheese</li></ul>
<b>Sweets</b>	<ul style="list-style-type: none"><li>• Custards (soft or baked)</li><li>• Frozen yogurt</li><li>• Ice cream</li><li>• Muffins</li><li>• Pudding</li><li>• Yogurt (plain or vanilla)</li></ul>
<b>Replacements and supplements</b>	<ul style="list-style-type: none"><li>• Liquid meal replacements</li><li>• Powdered milk added to foods such as pudding, milkshakes, and scrambled eggs</li></ul>

# Nutrition cont.

## High-Fiber Foods

This list may help if you have constipation.

Type	Examples
<b>Main meals and other foods</b>	<ul style="list-style-type: none"><li>• Bran muffins</li><li>• Bran or whole-grain cereals</li><li>• Brown or wild rice</li><li>• Cooked dried peas and beans (such as pinto, black, red, or kidney)</li><li>• Whole wheat bread</li><li>• Whole wheat pastas</li></ul>
<b>Fruits and vegetables</b>	<ul style="list-style-type: none"><li>• Dried fruit, such as apricots, dates, prunes, and raisins</li><li>• Fresh fruit, such as apples, blueberries, and grapes</li><li>• Raw or cooked vegetables, such as broccoli, corn, green beans, peas, and spinach</li></ul>
<b>Snacks</b>	<ul style="list-style-type: none"><li>• Granola</li><li>• Nuts</li><li>• Popcorn</li><li>• Seeds, such as sunflower</li><li>• Trail mix</li></ul>

## Low-Fiber Foods

This list may help if you have diarrhea.

Type	Examples
<b>Main meals and other foods</b>	<ul style="list-style-type: none"><li>• Chicken or turkey (skinless)</li><li>• Cooked refined cereals</li><li>• Cottage cheese</li><li>• Eggs</li><li>• Fish</li><li>• Noodles</li><li>• Potatoes (baked or mashed without the skin)</li><li>• White bread</li><li>• White rice</li></ul>
<b>Fruits and vegetables</b>	<ul style="list-style-type: none"><li>• Asparagus</li><li>• Bananas</li><li>• Canned fruit, such as peaches, pears, and applesauce</li><li>• Clear fruit juice</li><li>• Vegetable juice</li></ul>
<b>Snacks</b>	<ul style="list-style-type: none"><li>• Angel food cake</li><li>• Gelatin</li><li>• Saltine crackers</li><li>• Sherbet or sorbet</li><li>• Yogurt (plain or vanilla)</li></ul>

# Nutrition cont.

## Foods That Are Easy on a Sore Mouth

This list may help if your mouth or throat are sore.

Type	Examples
<b>Main meals and other foods</b>	<ul style="list-style-type: none"><li>• Baby food</li><li>• Cooked refined cereals</li><li>• Cottage cheese</li><li>• Eggs (soft boiled or scrambled)</li><li>• Macaroni and cheese</li><li>• Mashed potatoes</li><li>• Pureed cooked foods</li><li>• Soups</li></ul>
<b>Snacks</b>	<ul style="list-style-type: none"><li>• Custards</li><li>• Fruit (pureed or baby food)</li><li>• Gelatin</li><li>• Ice Cream</li><li>• Milkshakes</li><li>• Puddings</li><li>• Smoothies</li><li>• Soft fruits (bananas and applesauce)</li><li>• Yogurt (plain or vanilla)</li></ul>

## Foods and Drinks That Are Easy on the Stomach

This list may help if you have nausea and vomiting.

Type	Examples
<b>Soups</b>	<ul style="list-style-type: none"><li>• Clear broth, such as chicken, vegetable, or beef</li><li>• Clear carbonated beverages that have lost their fizz</li><li>• Cranberry or grape juice</li><li>• Fruit-flavored drinks</li><li>• Fruit punch</li><li>• Sports drinks</li><li>• Tea</li><li>• Water</li></ul>
<b>Main meals and other foods</b>	<ul style="list-style-type: none"><li>• Chicken (broiled or baked without its skin)</li><li>• Cream of rice</li><li>• Instant oatmeal</li><li>• Noodles</li><li>• Potatoes (boiled without skins)</li><li>• Pretzels</li><li>• Saltine crackers</li><li>• White rice</li><li>• White toast</li></ul>
<b>Snacks</b>	<ul style="list-style-type: none"><li>• Angel food cake</li><li>• Canned fruit, such as applesauce, peaches, and pears</li><li>• Gelatin</li><li>• Popsicles</li><li>• Sherbet or sorbet</li><li>• Yogurt (plain or vanilla)</li></ul>

# Well Being

## Palliative Care

### **How Palliative Care can enhance the quantity and quality of your life.**

At Aurora Cancer Care, we recognize that when you are living with serious illness, coping with treatment may become harder over time and your quality of life comes into question. Whether inpatient, outpatient or at home, palliative care provides you with expert symptom management, as well as spiritual and emotional support for both you and your loved ones.

### **What is palliative care?**

Palliative (PA-lee-uh-tiv) care is specialized medical care for people with serious illnesses. It is focused on providing you with relief from the symptoms, pain and stress of a serious illness - whatever the diagnosis. Palliative care is provided by a team of doctors, nurses and other experts including acupuncturists and massage therapists. They work with your doctors to provide an extra layer of support. It helps you and your family enjoy the best quality of life possible.

### **Is palliative care the same as hospice?**

No. People in hospice (end-of-life care) always receive palliative care; however, you don't have to be in hospice or at the end of life. Palliative care is available at any age and at any stage in a serious illness. It can be provided at the same time as other treatments that are meant to control your illness.

### **When do I need palliative care?**

Many people living with illnesses such as cancer, heart disease, lung disease, kidney failure, Alzheimer's disease, AIDS, etc., have physical symptoms and emotional distress related to their diseases. Sometimes, these symptoms are related to the medical treatments they are receiving.

Palliative care may be appropriate if you or your loved one:

- Have pain or other symptoms (e.g., nausea, shortness of breath, anxiety or depression) due to any serious illness
- Experience physical or emotional pain that is not under control
- Need help understanding the situation and options, determining the next steps and coordinating care
- Require frequent trips to the hospital or emergency room for the same condition

## How can palliative care help?

Palliative care experts work closely with your health care team to:

- Relieve your pain and other distressing symptoms, such as nausea or shortness of breath
- Improve communication with your doctors and family members
- Provide you with emotional and spiritual support
- Ensure medical care is more in line with your wishes
- Anticipate future problems and needs
- Assist smooth transitions between hospital and other services, such as home care or nursing facilities

To provide the best care, your palliative care team may suggest a family conference to review your medical situation, discuss treatment options and clarify your goals.

## How do I get palliative care?

Your primary care provider or cancer doctor may discuss palliative care and suggest a referral. You or your family may also request a referral. Our palliative care experts see inpatients and outpatients.

**To learn more about palliative care services at Aurora Health Care, please contact your oncology provider.**

## Your Feelings During Chemotherapy

At some point during chemotherapy, you may feel:

- Anxious
- Lonely
- Afraid
- Depressed
- Helpless
- Frustrated
- Angry

It is normal to have a wide range of feelings while going through chemotherapy. After all, living with cancer and getting treatment can be stressful. You may also feel fatigue, which can make it harder to cope with your feelings.

- **Relax.** Find some quiet time and think of yourself in a favorite place. Breathe slowly or listen to soothing music. This may help you feel calmer and less stressed.
- **Exercise.** Many people find that light exercise helps them feel better. There are many ways for you to exercise, such as walking, riding a bike, and doing yoga. Talk with your doctor or nurse about ways you can exercise.
- **Talk with others.** Talk about your feelings with someone you trust. Choose someone who can focus on you, such as a close friend, family member, chaplain, nurse, or social worker. You may also find it helpful to talk with someone else who is getting chemotherapy.

## Well Being cont.

- **Join a support group.** Cancer support groups provide support for people with cancer. These groups allow you to meet others with the same problems. You will have a chance to talk about your feelings and listen to other people talk about theirs. You can find out how others cope with cancer, chemotherapy, and side effects. Your doctor, nurse, or social worker may know about support groups near where you live. Some support groups also meet online (over the Internet), which can be helpful if you cannot travel.

Talk to your doctor or nurse about things that worry or upset you. You may want to ask about seeing a counselor. Your doctor may also suggest that you take medication if you find it very hard to cope with your feelings.

### Ways to learn more

To learn more about coping with your feelings and relationships during cancer treatment, read *Taking Time: Support for People with Cancer*, a book from the National Cancer Institute. You can get a free copy at [www.cancer.gov/publications](http://www.cancer.gov/publications) or 800-4-CANCER (800-422-6237).

### Cancer Support Community

Dedicated to providing support, education, and hope to people affected by cancer.

Call: 888-793-9355 or 202-659-9709  
Visit: [www.cancersupportcommunity.org](http://www.cancersupportcommunity.org)  
E-mail: [help@cancersupportcommunity.org](mailto:help@cancersupportcommunity.org)

### CancerCare, Inc.

Offers free support, information, financial assistance, and practical help to people with cancer and their loved ones.

Call: 800-813-HOPE (800-813-4673)  
Visit: [www.cancercares.org](http://www.cancercares.org)  
E-mail: [info@cancercares.org](mailto:info@cancercares.org)

### What is Distress?

It is our desire to provide you with cancer care that is as comprehensive and personalized as possible. We have learned that identifying and responding to distress helps our patients and their loved ones better navigate their treatment and maintain a good quality of life.

Distress is a word that has many meanings. For cancer patients, it is used to describe unpleasant feelings or emotions that may cause problems for you, your family members and loved ones.

Saying that you are distressed can mean that you feel sad, hopeless, powerless, afraid, guilty, anxious, discouraged, depressed or uncertain. Each person's experience with cancer is different, and there is no "standard" or typical response. Because you are unique, you may experience none, some or all these feelings.

During treatment for your cancer, we will occasionally ask you to fill out the "distress thermometer." This important tool asks you to choose a number from 0 to 10, with 0 meaning no distress and 10 meaning the most distress. Not only does the distress thermometer tell your cancer care team about your emotional health, but it also gives you a chance to talk about and help us to work out problems with you during your visit.

## Short-Circuiting Stress: The Main Messages

### Message #1: The cure for stress isn't "out there."

- Even more important than what is happening around you is how you perceive what's happening. A perceived threat to your well-being will bring on a stress response.
- Stress brings on physical changes in the body, some of which can be harmful in the long term. You can learn to help control how stress affects you.
- Stress management is about changing inside. With practice you can learn to change how you think about stress, what you say to yourself when stressors occur, and how you respond to each stressor.

### Message #2: Know your ABCs: Awareness Brings Control.

- The first step in managing your stress level is to learn more about it by identifying your stressors (those things that trigger your stress) and how you usually respond to them.
- Healthy lifestyle habits - a well-balanced diet, exercise, getting enough sleep - can keep you "armed" for controlling how you respond to your stressors.
- Your first line of defense is the three A's: Can you **avoid** or prevent the stressor, **alter** the situation in some way, or **adapt** by changing your response to the stressor?

### Message #3: Taking a deep breath really does work!

- In any stressful situation, several deep breaths will slow down your stress response by helping you release tension and relax. Make it a habit to practice deep breathing for five minutes each day.
- There are many techniques for relaxation and imagery that can help you feel more at peace and in control. Try several techniques to find out what works best for you. The key to success is daily practice.

### Coping with Depression

#### You're a partner in your treatment.

The best course of treatment for your depression is one in which you become a partner with your therapist and doctor. Stay informed. Ask questions. Make sure you understand your treatment plan.

While you are being treated, you can play a big part in taking control of your depression. Here are some ways to do this:

#### Seek support

Do you have a friend or relative who has been depressed in the past? He or she will most likely understand what you are going through and may help you recognize your “depressed thinking.” You can then start to focus more on positive thoughts and “say no” to the negative ones.

Many support groups are available in the community. Talk with your therapist if you are interested in a group.

#### Challenge your thoughts

It may be time to challenge some thoughts. You may find that you jump to negative thoughts too quickly. Do you worry a great deal about things you cannot control? Do you blame yourself for things that go wrong in life? When something does go well, do you tend to think it was just an accident, or that you don't deserve it?

With time and practice, you can learn to replace your negative thoughts with positive ones. Talk with your therapist about how to begin changing your thought patterns.

#### Exercise

Being inactive may help “feed” your low mood. Think about starting a simple activity program, such as walking at a brisk pace three times a week. Start with five- or ten-minute walks and slowly work your way up to 30 minutes.

As you recover from your depression, you may notice that you enjoy these walks more each week. As you walk, focus on the world around you rather than on worries or problems. Take in the sights and sounds and smells in detail. Always check with your doctor before starting a new exercise program.



## Well Being cont.

### Avoid extremes in diet and drink

Keep a healthy approach to eating and drinking. Giving in to every craving is not healthy for anyone; it could lead to abuse of food or drink. A sensible goal for most people is to neither gain nor lose weight when recovering from depression.

### Stay active

Depression can take the pleasure out of hobbies and social outings. But as best you can, try to keep up with most of your activities. Focus on those things you enjoy. Try to push away any negative thoughts that come to mind during the activity. Remind yourself that this activity is part of your healthy life. You need it to help regain your balance and enjoy your life again.

### Continue your treatment

As you feel better, be sure to keep up with your treatment plan. Talk with your health care provider about concerns that come up. It will take time to make permanent changes in your behavior patterns.

Remember that some medications have an “activating” effect—a return of energy and good mood after just a few weeks. This is not a true measure that depression is gone. There may still be issues you need to explore in therapy. But these sessions may be more successful now that your mood and energy level are better.

### We’re here for you

Even after you are finished with treatment and you feel good, an issue or concern might come up that you need help with. In that case, a “tune-up” session may be in order. Call your therapist to arrange this.

Depression, like any other illness, can happen again, even after treatment. If you notice your symptoms coming back, or if you feel yourself “sinking,” don’t ignore it.

Call your health care provider or therapist to talk about what you feel. If treatment worked for you before, it can work again.

### For further help, you may contact:

Aurora Behavioral Health Services Monday – Friday, 8:30 a.m. to 4:30 p.m.  
877-666-7223

Information is also available at [Aurora.org/ABHS](http://Aurora.org/ABHS)

### Strengthening the Spirit

Life can change in many ways when you or a loved one develops cancer. Spiritually, you might find yourself turning more often to your beliefs to help you to cope. Or you may begin to question your faith. Don't be alarmed. Both reactions are normal as you try to reorient your life during this crisis

It's important to remember that you're not alone at this time. Many people have walked this road of spiritual search before you, and regardless of your religion or spiritual orientation, we think you will gain some comfort and inspiration from their ideas.

### Everyone has a spiritual dimension

Whether or not you venture into a church, synagogue, or mosque, you are a spiritual person. Everyone holds certain beliefs and values about what makes life worthwhile, and many people have experienced peak moments when they have felt connected to a deeper meaning or reality — whether they call that reality God, or Truth, or as Native Americans do, the Great Mysterious. Spiritual moments can happen at any time: when you feel close to nature, or look into the face of a loved one, or enter a house of worship and sense a greater power. Each person's spiritual beliefs and experiences are nurtured in different ways. For some, participation in a religious tradition is important. Others draw spiritual understanding from philosophy or the arts. Whatever your spiritual orientation, remember that it's a dimension of your life that can be strengthened and developed.

### A strong sense of spirituality can help

A sense of meaning, purpose, and connection beyond yourself can help you to have a better quality of life during cancer. Some studies show that patients have less anxiety and depression, even pain, when they feel spiritually connected. Spirituality can also help you to put your problems in perspective. Spiritual practices such as prayer, meditation, and worship can help you to calm and restore yourself. Many people also find the support of other members of spiritual communities to be a great help practically and emotionally.

### Spiritual crisis as a path to spiritual growth

Still, you may at times feel deeply troubled spiritually by a diagnosis of cancer. Many people feel angry and betrayed by God or the universe because they have not been spared this misfortune. Others realize that they have never had to probe the meaning of their lives.

## Well Being cont.

Remember that your spiritual beliefs and outlook can change dramatically throughout life as you mature and have new experiences. A crisis, though very unfortunate, can be a normal part of this process, a time to reexamine your beliefs and seek deeper insights into life.

Also, remember that you are entitled to have doubts, to question God or the way you've understood God, even to be angry. Most religious traditions have prayers of doubt and complaint. Nearly one-third of the psalms in the Bible, for example, are songs of lament or complaint (see Psalm 22 or 88). Having doubts or distress certainly doesn't mean that you are not a spiritual person.

### Strengthening your spirituality

Whether you are in the process of strengthening or re-evaluating your spiritual beliefs, you might want to try the following:

1. Take time regularly to meditate or pray. These practices can create calm and stability in difficult times.
2. Read spiritual writing such as the Bible, Koran, or Baghavat Gita. Delving into sacred texts can put you in touch with long traditions of wisdom and give you a sense of connection with the holy. Recently published books on spirituality can also give new insights. (See, for example, *Care of the Soul* by Thomas Moore; and *When Bad Things Happen to Good People* by Harold Kushner.)
3. Seek the help of others. You might begin an ongoing dialogue with your clergy person or counselor, or join a group for meditation, prayer, and support.
4. Retreat to spiritual spaces, natural settings, or concerts and museums to cultivate a spiritual sense of peace.
5. Keep a journal to express your feelings, thoughts and memories. It can contribute to your process of self-discovery and spiritual development.

Above all, remember that you are a spiritual person. A diagnosis of cancer can start a process of looking inward for a stronger connection to what is most meaningful and sacred. Out of the turmoil of this crisis you can strengthen and deepen your life.

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### Interacting with Your Family

In most families, each family member takes part in the overall functioning of the family financially, emotionally, and physically. The roles and contributions vary with age of family members and other factors, including illness.

#### Effects of illness on family roles

Illness of any kind, especially terminal/life-threatening illness, affects family roles. The ill person often has decreased ability to contribute financially and emotionally and to help with daily tasks and decision making. There is a disruption of normal family role, with other family members having to take on additional responsibility, and family stress may increase.

#### Temperamental differences

In addition to these changes, both the ill person and the other family members may respond differently to an illness, depending on personality styles or temperaments. Some of these differences can be discussed by considering the type styles outlined by Myers-Briggs:

- **Extroversion/Introversion** – According to Myers-Briggs, extroverts turn their energy to the outside world of people and events. Extroverts like a lot of action and interaction with people. In contrast, introverts turn their energy inward and prefer quiet time with few people and activities.
- **Sensing/Intuition** – Sensing types get their information about the world from their senses and prefer to deal in reality and the concrete. In contrast, intuitives obtain information indirectly through imagination and prefer to deal with possibilities and relationships.
- **Thinking/Feeling** – Thinking types like to make decisions based on logical, objective analysis. Feeling types reach conclusions by comparing personal values.
- **Judging/Perceiving** – Some types of people, judging, like a structured, predictable lifestyle without surprises. Other types, perceives, prefer to have a spontaneous, “laid-back” lifestyle.

It is not difficult to see that if two or more people in a family have strong, opposite preferences, conflict could arise. Family members may vary considerably in their temperaments, and people who are different may come into conflict for reasons having nothing to do with illness. You may find interacting with people different from you to be stressful, and it is helpful to realize that all people see the world differently. Neither person is right nor wrong, these are just normal differences.

## Family Rights & Responsibilities

Just as the person with an illness has both rights and responsibilities, so do family members in coping with the illness.

### Rights

All family members have the following rights:

- Not to be abused or blamed for the illness
- To have a normal family life
- To have information about the illness and ways to cope

### Responsibilities

All family members have the following responsibilities:

- To accept the illness and the ill person
- To participate in treatment and rehabilitation
- To learn as much as possible about the illness and family role

## Family roles in treatment and management

There are many ways that your family can help you in coping with your illness. These include the following:

- **Brokering** – The family members can help you get services and communicate with professionals when you are too ill to take care of these responsibilities yourself.
- **Managing the illness** – Family members can help you maintain a low-stress environment; monitor medication and other treatment adherence; and monitor illness symptoms, set limits, and develop skills.
- **Hospitalization** – Family members can help prevent hospitalization, develop alternative living arrangements as necessary, and help you get into a hospital if hospitalization becomes necessary.
- **Partnership** – The most important thing to remember is that the illness can best be managed by a partnership of you, your family, and the professionals who help with your treatment. None of the three individually can do as good a job as the three combined.

## Well Being cont.

It is important to communicate with your family about the illness. There are several ways that you can learn to communicate and work together to fight the illness. Your family wants and needs to understand the following:

- What symptoms you are experiencing (family members will not know about it unless you tell them)
- The “whys” of your behavior (why you do the things you do)
- How you feel about the illness
- What is helpful to you and what is not

You also will want and need to understand how your family is coping with the illness and about their desire to help you. Communication occurs when you do the following:

- Talk openly about the illness.
- Sit down with family members and explain the experiences you are having.
- Ask their help in giving you feedback about your behavior.
- Listen when they want to talk with you.

## Family Conferences: Information for Patients and Families

Communication with members of the health care team is very important when a family member is ill. Because it can be difficult to coordinate schedules, this communication may need to be planned and scheduled. One way to bring everyone together is to set up a family conference. This is a meeting of the patient and family with the health care team. A family conference is particularly important when complex issues arise, or unexpected changes occur. Anyone may ask for a family conference.

### When are these conferences needed?

- To better explain complex medical situations
- To discuss a change in a patient’s condition
- To clarify changing goals of care
- To identify a family’s strengths and available resources to care for a loved one
- To provide an opportunity to discuss different points of view
- To find additional ways to support a patient and family

### Who attends?

- The patient (if possible)
- Family members and others invited by the patient
- Doctors and nurses
- Others involved in caring for the patient: This may include a social worker, chaplain, rehabilitation therapist, pharmacist or dietitian.

### What is the goal of a family conference?

Family conferences help the patient and family understand the medical situation, address family concerns, describe decisions that need to be made and outline a plan. This is sometimes referred to as “getting everyone on the same page.” Patients and families have an opportunity to talk about what to expect and how to prepare for the future.

### What happens during the conference?

The conference begins with introductions. The facilitator will review and clarify the goals of the conference. The facilitator will ask the patient and family members what they understand about the current medical condition. Doctors explain the medical situation—reviewing what has happened and what can be expected. Possible treatments are described, including expected outcomes, benefits and burdens.

Other team members also contribute information from their perspectives. If there are any decisions that need to be made, these are listed. The facilitator ensures that questions are answered or that a plan is made to obtain more information.

Everyone has a chance to speak, to ask questions and to share concerns. In cases where a patient is not able to speak for him or herself, the choices the patient would have wanted are discussed. This involves the person chosen by the patient to express their views. At the conclusion of the meeting, decisions may be made. Sometimes, there is a decision to meet again in the near future.

Conference Date and Time: \_\_\_\_\_

### Advance Directives

#### Letting Others Know Your Health Care Wishes

##### The Main Points . . .

###### An Advance Directive

- It is a legal form
- Speaks for you when you are not able to express your wishes
- Ensures your wishes are carried out
- Can be made free of cost
- Can be changed or canceled any time

###### The Power of Attorney for Health Care

- Is the form we recommend
- Is the most detailed kind of Advance Directive
- Allows you to appoint someone to speak for you when you are not able to do so
- Allows you to make many choices about future care

###### Need help or have questions?

- Ask your doctor or nurse for more information
- Visit our website at: [www.AuroraHealthCare.org/ACP](http://www.AuroraHealthCare.org/ACP)
- Call 888-863-5502 for a free packet of information

You have the right to choose what kind of care you want. At Aurora Health Care, we will listen to and follow your wishes. But what if you became unable to decide for yourself? Who would speak for you? Would they know what you want and don't want? Please think about taking steps now to make sure your wishes are known.

##### **Write down your wishes in an Advance Directive.**

One way to make your wishes known is to write them down in an Advance Directive. This is a legal form that tells your choices about the health care you would or would not want if you became unable to decide for yourself.

##### **An Advance Directive helps you and your family.**

An Advance Directive speaks for you when you are unable to do so. It serves as a guide for your health care team. It also relieves your family of trying to guess what you would want.



### **Plan now for the future.**

If you are 18 years of age or older, please think about having an Advance Directive. It's a good idea to fill one out while your health is good, and you can think clearly about your choices. Talk about your wishes with your loved ones and health care provider. You will also want to review your Advance Directive as changes occur in your health or life.

### **Without an Advance Directive, others decide for you.**

If you cannot speak for yourself and have no Advance Directive, your health care provider will ask your family or close friends to help decide on your care. If they are unsure or do not agree about your care, they may ask the court to appoint a guardian who will decide for you. This guardian may not be the person you would have chosen.

## **Two kinds of Advance Directives**

### **1. Power of Attorney for Health Care**

This is a form in which you appoint another person as your “health care agent.” Your agent is your legal decision-maker. He or she will work with your health care provider to make sure your wishes are carried out, if you are not able to do so. This form goes into effect only when two doctors, or a doctor and a psychologist, agree in writing that you are no longer able to understand your health care choices or express your wishes.

The Power of Attorney for Health Care is more detailed than a Living Will. More choices can be made about future care, such as whether you would want to:

- Be placed on life support machines
- Go to a long-term care home
- Receive nutrients or fluids through a tube in your vein, nose or stomach
- Stop any measures keeping you alive

### **2. Living Will**

This form describes what type of care you would want—or not want—to prolong your life. It would be used if you had a terminal illness or were in a persistent vegetative state. (Two doctors must agree to this in writing.)

The Living Will does not give anyone else the right to make health care decisions on your behalf. In some cases, if no one has been named to speak for the patient, the courts become involved in these decisions.

## Well Being cont.

### Choose between Power of Attorney for Health Care and Living Will.

You do **not** need both. We recommend the Power of Attorney for Health Care because it names your health care agent who can speak for you. It also allows you to express more of your values and wishes. If you do have both forms, the Power of Attorney for Health Care would be the one that goes into effect for you.

### You can change or cancel an Advance Directive.

Advance Directives can be changed or canceled at any time. You can make changes by writing a new form. You can cancel by destroying the form. Be sure to tell your health care provider in either case.

### Keep the form in a safe place.

Keep your Power of Attorney or Living Will in a safe place. Let your family or others close to you know where they can find it if needed. If you travel, take a copy with you. Ask your doctor or nurse for a wallet card to carry with you at all times.

### Give a copy to:

- Your health care provider (you'll want to discuss the form and make sure he or she agrees to honor your wishes)
- Your health care agent(s) named in your Power of Attorney for Health Care
- Your family or others close to you
- Your lawyer if you have one
- The clinic or hospital where you go for care (for your medical record)

### An Advance Directive is free.

An Advance Directive can be made free of cost. You can get help and needed forms by calling your health care provider or by calling Aurora Health Care at 888-863-5502. A lawyer can also help you, but this is not required.

## Survivorship

Our goal is to help you stay as healthy as possible and to make sure that your needs as a cancer survivor are being met. A “cancer survivor” is anyone who has been diagnosed with cancer, from the time of diagnosis through the rest of their life. Cancer also affects family members, friends and caregivers. Sometimes they are called “co-survivors.” We want to help you manage all aspects of your life after cancer. We believe that survivorship is about living the best quality of life possible.

To assist you in achieving that goal, we have the resources to help you deal with the questions, concerns or problems that you might experience after diagnosis and

treatment. As difficult as a diagnosis of cancer is, it can also be a time of growth and change. It can lead to a new outlook on life. Many cancer survivors find the motivation to make positive changes in their lives. In addition, many survivors become advocates for others diagnosed with cancer.

At the completion of your cancer treatment, your team will provide you with a detailed, written record of your cancer care called a “Survivor Care Plan.” Your individual plan will include a description of your cancer stage and grade, a treatment summary that gives you the names of any medicines you were given and the dates of treatment, including radiation and surgery, and contact information for follow-up care. It will also give you information about the recommended schedule for follow-up appointments and tests and all the important things that you need to know to be as healthy as possible. This information will be shared with your other health care providers and will help give a clear picture of your experience and future needs.

### Follow-up care

Cancer survivorship begins when an individual is first diagnosed with cancer and continues after treatment is complete. During treatment individuals may experience feelings of loss of control. Follow-up with the physician after treatment and knowing how to find resources often helps to gain back a feeling of control.

After treatment you need to know the following:

- When to see the oncologist
- Whether you need to see a specialist
- When testing will need to be done
- What symptoms to report
- How long recovery might take

Some survivors choose to develop a wellness plan at this time. Things that might be included in the plan are basic to every individual. These are physical, emotional, spiritual and social needs which often overlap. The resources in this binder will help you to find what you need. Your health care providers may also be of help in directing you toward resources.

### Getting questions answered

In order to receive the most from a follow-up visit, come prepared. Write down questions before the visit. It is often helpful to have a notebook or journal. Remember, time is limited so ask the most important questions first. If possible, bring a friend or family member who will provide another pair of eyes and ears. Make sure you understand what the physician has said. Do not be afraid to ask the physician to explain answers in terms you understand. If you don't get all your questions answered, ask to schedule another appointment.

### Your medical records

It may be necessary at some time to see a new oncologist for follow-up care. In order to provide continuous care, it is necessary to have copies of your medical records. These records will provide pertinent information about the diagnosis and treatment of your cancer. A consent will need to be signed in order to obtain the information.

Necessary information to obtain includes the type of cancer and when it was diagnosed; all cancer treatments including surgery, radiation and chemotherapy; pertinent reports such as lab, x-ray and pathology; and problems that occurred during or after treatment. The more information you have the easier it is to transition to a new physician if necessary.

### Changes in your body

Recovery from the effects of cancer treatment takes time. The rate of recovery is different for every individual. Some problems that can occur after treatment are fatigue, pain, lymphedema/swelling, mouth/tooth problems, bladder/bowel problems, symptoms of menopause, and changes in your sex life.

Fatigue is a common complaint in the first year after treatment. It is important to speak with your physician about the fatigue or any other symptoms that concern you. Some people have found things to help with their fatigue.

Some things that may be helpful for you include pacing your activities during the day. Pick two or perhaps three activities that need the most attention. Rest between activities.

Save energy by working efficiently. For example, sit on a chair when doing chores at home. Get adequate sleep and wake up at the same time every day. Allow others to help. Say NO to activities that are tiring. Explain to your family and friends that recovery will take time.

### Dealing with feelings

Fear or worry about the cancer returning is common. The fear lessens as time passes, but even after years of treatment there are things that can cause people to worry. These worries might include visits to the physician, reminders connected to treatment such as eating at a specific restaurant, the date of cancer diagnosis, and events like birthdays.

People may even experience symptoms like those at the time of diagnosis. In dealing with fear it is important to express feelings, to keep informed about your cancer and develop a positive attitude. Explain to your family and friends that recovery will take time.

## Well Being cont.

Some people begin to feel the stressors of daily life that they now must face. Activities that may be helpful to reduce stress are music and art, exercise, dance and movement, and a support group. Some find being in a church group or volunteer work satisfying.

### Social relationships

After treatment has ended you may experience a role change. Give yourself time to recover and get back to your normal role in the family unit. It may be necessary to still be dependent on people to help you. If family members are having difficulty coping with changes, consider getting help from Social Services.

You may have experienced some changes in your body from surgery or radiation. You may also be concerned about how your partner or others look at you. It is important to communicate with your partner about your sex life. Tell him/her what you would like to change, don't blame, and listen to your partner's point of view.

### Issues at work

Many cancer survivors return to work after treatment and are productive. *You are not under legal obligation to tell your employer about your illness unless it will impact the job you do.* If you decide to change jobs, the focus of the resume should be on your skills instead of any blocks of time you have not been working. In thinking about relating to people at work, plan what you will say about your cancer. Some people will find it difficult to talk to you. They think they will say something that will upset you. You can help others know how to talk to you by how you talk about the cancer and your experiences.

## Care for Caregivers

Caring for an ill loved one can be physically, emotionally, and mentally draining. The following information is provided to help caregivers with the challenges that they face caring for an ill loved one.

### 10 Tips for Caregivers

- Avoid unproductive time waiting for physician appointments. Try to call ahead to see if the doctor is on time. When you do visit the doctor, bring some reading materials or a project with you to pass the time.
- Make a list of all the people you contact on a regular basis. For example, various doctors, hospital personnel, your pharmacist, etc. Having this list prepared will save you and anyone that may be helping you time from searching for numbers. Post the list in a convenient location.

## Well Being cont.

- Also post a list of all emergency numbers and services near all your telephones. Keep a copy with you at all times.
- If you and your loved one are traveling, never pack their medication in a suitcase that is being checked, always carry it with you.
- Do not underestimate the power of music and memories. When a loved one is suffering and you have tried everything you know to comfort them, try some soft relaxing music and talking to them softly about some of their favorite memories.
- Make sure the house is well lit. Shadowed areas, high gloss floors, area rugs, and glare from bright lights, may affect the vision and balance of your loved one, causing them to trip or fall.
- Join a support group or collect a group of support friends to talk to and share the challenges that you may be facing. This will help to alleviate negative feelings that you may be developing due to the stress of caregiving.
- Don't let what you need to do for your loved one become more important than the person you are caring for. Instead of making a full meal, try just having some sandwiches so you can spend some time just enjoying their company.
- Keep a list of some small things that you may need done around the house. Then, when someone asks what they can do to help, don't be afraid to have them look at the list and see if they can help, even with small tasks like doing the dishes.
- Maintain balance in your life; try to take some time to do things for yourself.

If you find yourself overwhelmed and feel that you need some time to yourself but don't know how to get that time due to the demands of caregiving, there are options available to you.

### Respite care

Respite care is a short term and temporary relief from the duties of caregiving. The purpose is to give family members some time away from the demands of caregiving. It can be as short as a day or for as long as a few weeks. Respite Centers may send an individual to your home or may require that your loved one stay at a respite facility. Cost of respite services may depend on funds available to the family.

For more information on respite services and other issues in caregiving, please contact the following sources:

#### **The Arc of the United States**

1010 Wayne Avenue; Suite 650  
Silver Spring, MD 20910  
[www.thearc.org](http://www.thearc.org)

## Well Being cont.

### **Milwaukee County Department on Aging**

414-289-6874 or toll free 866-229-9695

[info@milwaukeecounty.com](mailto:info@milwaukeecounty.com)

### **National Council on Aging Benefits Check U**

[www.benefitscheckup.org](http://www.benefitscheckup.org)

### **National Association of Professional Geriatric Care Managers**

[www.caremanager.org](http://www.caremanager.org)

### **The American Association of Retired Persons**

[www.aarp.org](http://www.aarp.org)

### **Elder Care Locator**

[www.aoa.gov.elderpage](http://www.aoa.gov.elderpage)

## **Balancing work and caregiving**

Of the 22 million caregivers in America, most work full- or part-time. Trying to manage stressful deadlines and crises at work add another dimension of stress to a caregiver. The following are some suggestions to deal with the stresses of caregiving and employment.

- Ask your employer if there is any sort of employee assistance for people in your situation.
- Talk to your human resources department or manager about the Family Medical Leave Act. This law allows eligible employees a maximum of 12 weeks per year of unpaid leave to care for a family member without the loss of job security or benefits.
- Talk with co-workers about job sharing or cutting back on some of your hours. See if there is any way you can do some of your work from home.
- Don't mix caregiving and work. If you need to make phone calls or find information regarding your loved one's care, try to do this on your breaks.
- Take time to talk with your supervisor about your caregiving issues. This may help them understand why you may be late or need to leave early on occasion.
- Be sure to thank your co-workers for their help in your time of need.

Finally, it is important that you do not forget about yourself and your health. Make sure you eat well, get enough sleep, get your regular medical checkups, exercise regularly, and be aware if you start to exhibit signs of depression. If you do feel depressed, talk with your doctor.

### Books to help deal with issues of caregiving

*Caregiving: The Spiritual Journey of Love, Loss, and Renewal*, by Beth Witogen McLeod

*The Aging Handbook*, by Virginia Schomp

*How to Care for Aging Parents*, by Virginia Morris

*How to Care for Your Parents*, by Nora Jean Levin

### Stress management exercises

The following exercises are designed to help caregivers to take care of themselves. These simple, short relaxation techniques can enable caregivers to take a few minutes for themselves. Remember, we cannot give quality energy to others if we haven't taken a little time for ourselves. The first three exercises will help a person become more aware of their responses to the environment and to others.

1. **Daily Review:** This first, very simple technique allows a person's mind to slow down and become more objective about daily life.

*Sit in a relaxed position and create the image of a movie screen.*

Project the thoughts and activities of the day from awakening to the present upon the movie screen.

Should a negative or unsatisfying event come into view, hold the picture still and see how this event could have been changed to become more positive. This allows learning from a past situation.

Keep the picture on the screen until you can appreciate what you learned instead of holding it against yourself or still worrying about it.

2. **Building Awareness:** This exercise is very easy to do almost anywhere in just a few minutes. It helps you separate and appreciate the differences between your inner and outer worlds and your reactions to the them. The mental break is refreshing.

**Focus attention** on what is going on around you. Say to yourself, I am aware of \_\_\_\_\_." (For example, "I am aware of cars passing by, wind blowing, birds chirping, and a saw buzzing.")



## Well Being cont.

**Shift attention** to your body and physical sensations. Say to yourself, “I am aware of \_\_\_\_\_.” (For example, “I am aware of my stomach gurgling, tension in my shoulders, and my legs aching.”)

*Move awareness back and forth* between what is going on around you and what is going on inside of you. (For example, “I smell cookies baking. I feel my thighs pressed against the chair. My shoulders are tense. I hear traffic sounds.”)

- 3. Body Awareness:** This exercise promotes body awareness and helps identify areas of tension.

*On a firm surface, lie on your back with your legs a few inches apart and your arms a few inches from your side.*

Check yourself for comfort. You may need to shift your body around. You may want to place a pillow under your knees and your neck. Become aware of your breathing. Feel the air moving into your body and back out.

## Relaxation

**Progressive Relaxation:** a deep muscle relaxation technique developed and published by Edmond Jacobson in 1929. He believed that the body responds to anxiety provoking thoughts and events with muscle tension. The tense muscles, in return, increase the feeling of anxiety. Deep muscle relaxation reduces physiological tension, reduces pulse rate and blood pressure, and decreases perspiration and respiration rates.

*This technique has been effective in the treatment of muscular tension, anxiety, insomnia, depression, fatigue, irritable bowel, muscle spasms, neck and back pain, high blood pressure, milk phobias and stuttering.*

### References

Elder Care Locator, [aoa.gov.elderpage](http://aoa.gov.elderpage)

Milwaukee County Department on Aging, [info@milwaukeecounty.com](mailto:info@milwaukeecounty.com)

National Association of Professional Geriatric Care Managers, [caremanager.org](http://caremanager.org)

National Council on Aging Benefits Checkup, [benefitscheckup.org](http://benefitscheckup.org)

Progressive relaxation can be practiced while lying on your back or sitting in a chair with your head supported. Each muscle or muscle group is tensed for five seconds and then relaxed for 20 seconds. This procedure is repeated at least once. At first, only partial relaxation may occur, but after practice the whole body can relax within a few minutes. (Caution: Do not tense the neck, back, toes and feet excessively tight. Tensing these may result in muscle cramping.)

## Well Being cont.

Follow the directions below to use the progressive relaxation technique:

1. Lie on your back with your eyes closed, feet slightly apart, arms slightly away from sides, and palms upward.
2. Allow your breath to slow down. Put your entire attention on the breath as it moves in and out. (Pause 20 counts.)
3. Tense the muscles of your feet. (Pause 5 counts and gently relax. Pause 20 counts. REPEAT.)
4. Tense the muscles of your calves. (Pause 5 counts. Relax. Pause 20 counts. REPEAT.)
5. Tense the muscles of your stomach. (Pause 5 counts. Relax. Pause 20 counts. REPEAT)
6. Tense the muscles of your chest. (Pause 5 counts. Relax. Let the tension go. Pause 20 counts. REPEAT.)
7. Clench your fists tightly. (Pause 5 counts. Relax. Let the tension go.
8. Tense your elbows and tense your biceps. Hold them tight. (Pause 5 counts. Relax and straighten arms. Pause 20 counts. REPEAT.
9. Tense the muscles of your chest. (Pause 5 counts. Relax. Let the tension go. Pause 20 counts. REPEAT.)
10. Tense the muscles of your head and face. (Pause 5 counts. Relax. Let the tension go. Pause 20 counts. REPEAT.)

### References

*The American Association of Retired Persons, aarp.org*

*The ARC National Headquarters, thearc@metronet.com, thearc.org*

*Wingate, Anita L. and Lackey, Nancy. (1989) A description of the need of noninstitutionalized cancer patients and their primary caregivers. Cancer Nursing 12(4), 216-225*

# Resources and Support Services

## Aurora Cancer Care Resources

We know that having cancer presents many challenges to daily living. A variety of different health care professionals are available to help you deal with your concerns:

### Consult with a pharmacist if you want:

- More information about medicines.
- Information on drug side effects, food/drug interactions, drug/drug interactions.

### Consult with precision medicine if you:

- Are interested in personalized medicine
- Want additional information on genetic risks for cancer

### Consult with a social worker if you or your family members:

- Need help coping with illness or treatment.
- Are living alone with little or no support system.
- Have decreasing ability to care for the person who is ill.
- Need economic transportation, legal, mental health assistance.
- Need alternative living or additional supportive services in the home.
- Require end of life, hospice care and/or an Advance Directive.

## Pharmacist

Behind the scenes, your clinic pharmacy team is working hard to see that your medication is prepared in a safe and timely manner. Aurora has oncology pharmacists and technicians that are an important part of your healthcare team. Your pharmacist will work closely with your oncologist to ensure that you receive the correct dose of medication for you. Specially trained technicians will carefully prepare your medications, which are double checked by the pharmacist for added safety.

Pharmacists at select Aurora clinics meet with patients when they start a new treatment. During the meeting, they discuss how to control some of the side effects of chemotherapy at home. Your pharmacist will start the meeting by going over the prescriptions that you will be taking. You will discuss how to take the prescription, what it is used for and common side effects. If your chemotherapy regimen includes a medication taken on certain days, a calendar may be provided to help you remember when to take it.

## Resources and Support Services cont.

At the end of the meeting, your pharmacist may ask if they can call you at home a few days after your treatment to see how you are feeling. During this phone call, your pharmacist will ask you several questions. Please be honest with your pharmacist and tell them how you are really feeling and what you have tried to feel better. If necessary, your pharmacist will work closely with the other members of your care team to get you feeling better quickly. Your team may change how you are taking your current medicines, or they might start a new medication. They may also recommend over-the-counter treatments to help relieve symptoms you may be experiencing.

Everyone on your team brings their own special set of skills to your care. The pharmacists on your team are highly trained medication experts. We hope that by teaching you to use your medications to control side effects and by calling you at home to see how your treatment is affecting you, we can help you get the best results possible from your medications. We also want to ensure that all the medications you are taking can be used together safely. If you have questions about any of the medications you are taking (at any point during your treatment), please ask your nurse to help put you in touch with your pharmacist.

### Aurora Outpatient Pharmacy

At Aurora Pharmacy, it's easy to get the medication you need, when you need it. And with over 65 locations, you can always talk to trusted, expert pharmacists close to your home.

With a wide range of services and a commitment to medical excellence, we're a true pharmacy, helping you reach your best possible health.

Aurora Pharmacy Services Include:

- **FREE** Chairside Delivery during your infusion appointments offered at a majority of locations. Ask your nurse for details.
- **FREE** Compliance Packaging
- **FREE** Home Delivery at [aurorapharmacy.org/mail](http://aurorapharmacy.org/mail)
- **FREE** Sharps Containers and Disposal after initial purchase)
- Automatic Refill
- Customized Compounding
- Medications available for \$3.99/30 days or \$9.99/90 days
- Personal Patient Consultation and Appointments with a Pharmacist
- Vaccine Administration, Many for \$0 Copay

**We accept most major insurance including Medicare D, Medicaid, Express Scripts, CVS, and more!**

Visit [www.aurora.org/pharmacy](http://www.aurora.org/pharmacy) for more information.

### Oncology Social Work Services

After receiving a cancer diagnosis, it will bring different questions, concerns and mixed feelings. Aurora Cancer Care's social workers are available to keep you informed and support you during your cancer journey. They work closely with your doctors and nurses. Social workers can provide information about resources and support programs to help answer some of your questions and acknowledge your feelings.

Support is available upon receiving your diagnosis, during treatment and after treatment has ended. Your social worker can help you and your family in many ways. Some examples include information and support regarding:

- Transportation services
- Support programs for patient and families
- Counseling services
- Community resources available to help with daily activities
- Employment rights and work benefits
- Financial assistance for medication expenses
- Insurance options
- Advanced care planning

### **Aurora Cancer Care's social workers are here to answer your questions and concerns.**

You will likely have many questions or concerns about your cancer care experience. Do not hesitate to contact a social worker. Here are some of the more common questions our patients ask:

#### **I have been diagnosed with cancer and am looking for emotional support. What options are available for me?**

A healthy outlook is vital to your care. Oncology social workers can provide one – on – one support. They can help you locate support groups, cancer counselors and other community services that are right for you.

#### **I live alone and I am worried I may not be able to take care of myself or my home if I become ill. Is there help available for me?**

It is important for you to receive the care you need, at the clinic and at home. If you feel you could benefit from some extra help at home, a social worker is available to talk to you more about what this help can look like. There are a lot of different kinds of home care services and a social worker can help you determine what type of home care may be most helpful for you.

## Resources and Support Services cont.

### **I am concerned about the cost of my cancer care. Is there help available for me?**

A cancer diagnosis can cause financial stress. Patients often ask, “What if I cannot work?” “Will I need to apply for disability benefits?” “What will my health insurance cover and what will I have to pay for my treatment?” Oncology social workers can help you:

1. Identify available employment benefits
2. Understand your health insurance coverage
3. Determine if financial assistance is available to help you

### **I have been advised to complete a power of attorney for health care. What does this mean and why is it important?**

A Power of Attorney for Healthcare is an important document that allows you to choose someone to express your healthcare wishes for you in the event you are unable to express them yourself. Whether you have cancer or not, it is a very good idea for every person, 18 years of age and older, to have this document completed and available for your loved ones and your medical team. It is important for you to identify someone you can trust and knows your wishes.

If you are not comfortable selecting a person, please consider completing a document called the Living Will. This document provides doctors with valuable information about decisions you would make about your medical care. Aurora Cancer Care’s social workers can help you complete the appropriate documents.

Our oncology social workers will be with you every step of the way. By providing education and guidance during this time, social workers can help you regain control over as much of your life as possible. Using a team approach, Aurora Cancer Care’s social workers support people living with cancer and their loved ones, so their focus can be on getting well.

If you would like to meet with an oncology social worker, talk with your nurse or doctor.

## **Integrative Medicine**

Complementary and alternative therapies are a group of health care practices, systems and products that are not part of usual medical treatment. They may include products such as vitamins, herbs or dietary supplements, or procedures such as acupuncture, yoga, meditation, aromatherapy, and massage therapy. There is a great deal of interest today in complementary and alternative treatments for cancer. Many are being studied to see if they are truly helpful to people with cancer.

## Resources and Support Services cont.

You may hear about different treatments from family, friends and others, which may be offered to treat your cancer or help you feel better. Some of these treatments are harmless in certain situations, while others have been shown to cause harm. Most of them are of unproven benefit.

The American Cancer Society defines complementary medicine or methods as those used along with your regular medical care. These treatments may add to your comfort and well-being. Alternative medicines are defined as those that are used instead of your regular medical care. Some have been proven not to be useful or even to be harmful. Others are promoted as “cures.” If you choose to use these alternatives, they may reduce your chance of fighting cancer by delaying, replacing or interfering with regular cancer treatment.

Before changing your treatment or adding any of these methods, discuss this openly with your doctor or nurse. Some methods can be safely used along with standard medical treatment. Others, however, can interfere with standard treatment or cause serious side effects. That is why it’s important to talk with your doctor.

### Cancer Rehabilitation

The National Cancer Comprehensive Network (NCCN) tells us that most people being treated for cancer will have one or more physical side effects during or after their cancer treatment. Therapy and exercise during and after cancer treatment can help to lessen or even prevent many side effects.

#### **Common long term/late side effects of cancer treatment include:**

- Pain
- Feeling tired (fatigue)
- Numbness/tingling (nerve problems)
- Swelling (lymphedema)
- Bone loss (osteopenia)
- Sexual problems
- Weight loss
- Weight gain (some of the drugs you are taking, such as steroids, may increase appetite and make the body retain fluid)
- Dry mouth
- Swallowing problems
- Memory and thinking problems
- Hearing loss

## Resources and Support Services cont.

Therapeutic exercise and rehabilitation during and after cancer care will help to lessen side effects and decrease the chance of side effects coming back.

- Therapeutic exercise has also been shown to:
  - Lower anxiety
  - Decrease depression
  - Improve your mood
  - Improve your blood counts
  - Lower fatigue and pain

If you have any of the side effects listed above, call any of your doctors for a referral to cancer therapy. Your therapy will be based on your side effects and may include physical therapy, occupational therapy, speech therapy or audiology (treatment of hearing problems).

### Regain Your Life.

You would never expect to finish a triathlon, climb a mountain or enjoy a round of golf without the proper training. Let us “train” you to take on cancer.

Aurora Cancer rehabilitation specialists – physical, occupational and speech therapists, and audiologists – will work with you to regain the life you love. Whether it’s returning to your job, hosting a holiday get-together or attending a ball game, tell us what matters to you, and we’ll help you achieve it.

### Get Started.

The American Cancer Society and National Comprehensive Cancer Network confirm that exercise during chemotherapy and radiation treatments provides critical benefits to patients, helping them to live better and longer.

Don’t wait! Ask your doctor or nurse for a referral for therapy. The good news – cancer rehabilitation can provide healing benefits throughout the course of and following treatment, even years later. And, you can bring a family member or friend to therapy with you.

- Rehabilitation can help you get strong and stay strong.
- Don’t put your life on hold or give up the things you enjoy.
- Research shows that cancer rehabilitation can relieve, eliminate or even prevent many treatment side effects.
- Be a champion of your life.



## Resources and Support Services cont.

### Feel Better.

Cancer rehabilitation can help improve:

- Fatigue
- Pain
- Loss of strength and mobility
- Difficulty walking
- Scarring
- Balance
- Swelling/lymphedema
- Bowel/bladder incontinence
- Difficulty speaking or swallowing
- Pelvic pain
- Sexual health
- Loss of hearing

Our cancer rehabilitation specialists are conveniently located throughout Wisconsin. To confirm the availability of specific services at a clinic, call 414-219-5241.

[aurora.org/cancerrehab](http://aurora.org/cancerrehab)

### Team Phoenix

Cancer treatment can cause survivors to struggle with post-treatment side effects such as weakness, fatigue, scarring, weight gain, depression and the threat of recurrence. Exercise has been shown to improve the overall survival after a diagnosis of cancer. The American Cancer Society recommends that cancer survivors get at least 150 minutes of moderately intense physical activity each week.

Team Phoenix provides a comprehensive 14-week training program designed to encourage and assist cancer survivors to regain physical fitness, endurance, strength and flexibility after cancer treatment. Survivors of all ages, stages and fitness levels train together to reach the finish line of sprint-distance triathlon.

Exercise also prevents problems such as stiff joints, weak muscles, constipation, and mental changes. It also helps to reduce stress and relieve fatigue.

Contact your oncologist to obtain a medical referral to join because we want to make sure it will be safe for you to participate.

To join Team Phoenix, there is participation fee that can be covered by scholarship opportunities. Contact the Team Phoenix staff at [teamphoenix@aurora.org](mailto:teamphoenix@aurora.org) if you would like more information.

### Genetic Counseling

The Cancer Genetic Counseling Program provides information and counseling regarding genetic risk for cancer and genetic testing options to individuals who have or had cancer or have a family history of cancer. Genetic counselors provide a personalized risk assessment based on your family and personal history of cancer.

This risk assessment can help you:

- Devise a personal cancer surveillance or management program with your doctors
- Make decisions about genetic testing and understand the impact of results on your cancer risks
- Educate yourself about the difference between hereditary and sporadic cancers
- Understand the risk factors for the development of cancer

Although most cancer is not inherited and happens by chance, approximately 5 to 10% of all cancers are due to a hereditary factor. If you answer “yes” to any of the following questions, ask your doctor about a referral for genetic counseling:

- Have you and several of your relatives had cancer, especially breast, ovarian, colon, pancreatic, endometrial (cancer of the uterus), melanoma, or thyroid cancer?
- Have you or any of your relatives with cancer been diagnosed before the age of 50 (especially breast, colon or uterine)?
- Do you or a relative have more than one primary cancer (such as breast cancer and ovarian cancer)?
- Do you or a family member have unusual cancer, such as male breast cancer?

If you have questions or would like more information about genetic counseling please call 877-647-2502.

### Precision Medicine

#### What is Precision Medicine?

Precision medicine (also known as personalized medicine) is an approach to treating cancer that is customized to the individual patient.

#### Why do we use it?

Every patient’s cancer is driven by a specific pattern of DNA mutations and other changes, known as a “tumor profile”. By understanding a unique “tumor profile”, we can determine which treatment or clinical trial options will be most effective.

# Resources and Support Services cont.

## How is it done?

A “tumor profile” is uncovered through a series of steps:

- **Order:** The provider’s team will place an order in the electronic medical record to start the process. The Oncology Precision Medicine team will then facilitate ordering the test from the company.
- **Sample:** A sample of the tumor is needed to perform testing. Tissue or blood samples may be used. The Oncology Precision Medicine team will work with pathology and/or the provider team to send the most appropriate specimen for testing.
- **Analysis:** The tumor sample is sent to one of many testing companies. Once it is received, the company will analyze the sample to determine a patient’s “tumor profile”.
- **Report:** After analysis is complete, the testing company will send a report with the results to the Oncology Precision Medicine team. These results will then be posted in the electronic medical record.

## What do the results mean?

Each report is discussed by our Oncology Precision Medicine team during our Molecular Tumor Board. During this meeting we determine if there are treatments or clinical trials that would be appropriate for an individual patient based on their “tumor profile” results. These recommendations are recorded in the electronic medical record.

## Clinical Trials

### What is a clinical trial?

Clinical trials are research studies in which people help doctors find ways to improve health and cancer care. Each study tries to answer scientific questions and to find better ways to prevent, diagnose or treat cancer.

### Why are there clinical trials?

A clinical trial is one of the final stages of a long and careful cancer research process. Studies are done with cancer patients to find out whether promising approaches to cancer prevention, diagnosis and treatment are safe and effective. Treatment trials test new treatments, like a new cancer drug, new approaches to surgery or radiation therapy, new combinations of treatments, or new methods such as gene therapy.

## Resources and Support Services cont.

### Should I take part in a clinical trial?

Only you can make the decision about whether to participate in a clinical trial. Before you make your decision, you should learn as much as possible about your disease and the trials that are available to you. Then, discuss this information and how you feel about it with your doctor and/ or nurse, family members and friends to help you determine what is right for you.

Don't hesitate to ask any questions until you have all the information you need. Informed consent continues as long as you are in the study. You can change your mind and leave the study at any time.

## National Cancer Resources

### American Brain Tumor Association

800-86-ABTA • [www.abta.org](http://www.abta.org)

Provides publications about brain tumors, support groups, as well as referral information. Helps to fund brain cancer research.

### American Cancer Society

800-ACS-2345 • [www.cancer.org](http://www.cancer.org)

Offers numerous resources, including printed materials, counseling for patients and their families.

### American Kidney Fund

800-638-8299 • [www.kidneyfund.org](http://www.kidneyfund.org)

Provides financial assistance to people who have kidney cancer as well as other kidney diseases. The Fund also helps patients find appropriate doctors and medical services.

### American Liver Foundation

800-GO-LIVER • [www.liverfoundation.org](http://www.liverfoundation.org)

A national, non-profit health agency that provides support and medical referrals for people with liver cancer and other liver diseases.

### American Lung Association

800-LUNG-USA • [www.lungusa.org](http://www.lungusa.org)

Offers smoking cessation groups, literature on lung disease, and promotes lung health.

### American Urological Association Foundation

866-RING-AUA • [www.auanet.org](http://www.auanet.org)

An organization providing information and support for people dealing with prostate cancer.

## Resources and Support Services cont.

### **Cancer Care, Inc.**

800-813-HOPE • [www.cancercares.org](http://www.cancercares.org)

Provides one-to-one counseling, workshops, and referrals to support services in locations across the country. Also provides online and teleconference educational programs and support groups.

### **Cancer Information Service**

800-4-CANCER • [www.nci.nih.gov](http://www.nci.nih.gov)

A nationwide service providing fast access to the latest cancer information for patients, family members, and health-care professionals. The Information Service is a program of the National Cancer Institute.

### **Cancer Support Community**

888-793-9355 • [www.cancersupportcommunity.org](http://www.cancersupportcommunity.org)

Dedicated to providing support, education, and hope to people affected by cancer.

### **Colon Cancer Alliance**

877-422-2030 • [www.ccalliance.org](http://www.ccalliance.org)

Deeply committed to peer support in the form of a “buddies” program.

### **Corporate Angel Network**

866-328-1313 • [www.corpangelnetwork.org](http://www.corpangelnetwork.org)

Provides free transportation (using corporate jets) to or from a hospital or treatment center for people with cancer and family members. Travelers must be ambulatory and self-sufficient.

### **Cure for Lymphoma Foundation**

800-CFL-6848 • [www.cfl.org](http://www.cfl.org)

Provides support, including aid for patients, as well as education programs, including teleconferences and a newsletter.

### **fertileHOPE**

866-965-7205 • [www.fertilehope.org](http://www.fertilehope.org)

A LIVESTRONG initiative dedicated to providing reproductive information, support, and hope to cancer patients and survivors whose medical treatments present the risk of infertility.

### **Gilda’s Club**

917-305-1200 • [www.gildasclub.org](http://www.gildasclub.org)

Offers emotional and social support as a supplement to medical care. Coordinates a network of groups, lectures, workshops, and social events in a non-residential, homelike setting.

## Resources and Support Services cont.

### **Hereditary Cancer Institute**

800-648-8133 • [www.medicine.creighton.edu](http://www.medicine.creighton.edu)

Studies family-linked cancers. Provides counseling, information on clinical trials, and cancer and genetics. Offers advice on genetic testing.

### **Hospice Link (Hospice Education Institute)**

800-331-1620 • [www.hospiceworld.org](http://www.hospiceworld.org)

Maintains a computerized database of hospice programs throughout the United States.

### **International Association of Laryngectomees**

866-425-3678 • [www.larynxlink.com](http://www.larynxlink.com)

The Association assists people who have lost their voice as a result of cancer. It publishes educational materials and sponsors meetings.

### **International Cancer Alliance**

301-656-3461 • [www.icare.org](http://www.icare.org)

Dedicated to providing cancer information to patients and physicians. Has programs designed to bring patients in contact with top physicians from all over the world.

### **Kidney Cancer Association**

800-850-9132 • [www.kidneycancer.org](http://www.kidneycancer.org)

Provides information to patients and physicians, and sponsors research on kidney cancer. The association also acts as an advocate on behalf of patients.

### **Kids Konnected**

800-899-2866 • [www.kidskonnected.org](http://www.kidskonnected.org)

An organization serving children of parents with cancer. Maintains a 24-hour hotline that children can call with questions and concerns about their parent's illness.

### **Lance Armstrong Foundation**

866-235-7205 • [www.livestrong.org](http://www.livestrong.org)

LIVESTRONG™ SurvivorCare aids all cancer survivors, including the person diagnosed, caregiver, family, and friends through education, qualified referrals, and counseling services.

### **Leukemia and Lymphoma Society**

800-955-4572 • [www.leukemia-lymphoma.org](http://www.leukemia-lymphoma.org)

Among services offers financial assistance, transportation to treatment centers, and blood transfusions. Also offers free booklets and fact sheets on leukemia.

### **Lung Cancer Alliance**

800-298-2436 • [www.lungcanceralliance.org](http://www.lungcanceralliance.org)

An organization dedicated to helping patients and family members deal with lung cancer. Lung Cancer Alliance offers a toll-free number and a quarterly newsletter.

## Resources and Support Services cont.

### **Lymphoma Research Foundation of America, Inc.**

800-500-9976 • [www.lymphoma.org](http://www.lymphoma.org)

Funds research, provides numerous resources, including a nationwide “buddy” program, support groups, newsletter, and clinical trials information.

### **Multiple Myeloma Research Foundation**

203-229-0464 • [www.multiplemyeloma.org](http://www.multiplemyeloma.org)

Funds research, offers services and information on treatment and management of multiple myeloma to patients and their family members.

### **National Alliance of Breast Cancer Organizations (NABCO)**

888-806-2226 • [www.nabco.org](http://www.nabco.org)

Services include physician referrals, advocacy related to job discrimination, professional education, and a speaker’s bureau.

### **National Brain Tumor Foundation**

800-934-CURE • [www.braintumor.org](http://www.braintumor.org)

Provides patients and families with information they need to cope with their illness. Sponsors seminars and support groups, and helps to fund research for more effective treatment.

### **National Cancer Institute**

800-4-CANCER • [www.cancer.gov](http://www.cancer.gov)

Provides nationwide telephone service for cancer patients, their families, friends, and health-care providers. Printed and web-based materials on treatment options, clinical trials, and research news.

### **National Coalition for Cancer Survivorship**

877-622-7937 • [www.canceradvocacy.org](http://www.canceradvocacy.org)

A leading national advocacy organization working on behalf of patients with all types of cancer and those who care for them.

### **National Comprehensive Cancer Network (NCCN)**

888-909-NCCN • [www.nccn.org](http://www.nccn.org)

A referral service, which seeks to facilitate informed decision making for patients and families. Callers requesting general information will be provided with links to institutions or specific cancer clinics.

### **National Hospice and Palliative Care Organization**

800-658-8898 • [www.nhpco.org](http://www.nhpco.org)

Association of groups that provide hospice care. Information about the hospice concept is also available.

## Resources and Support Services cont.

### **National Lymphedema Network**

800-541-3259 • [www.lymphnet.org](http://www.lymphnet.org)

Provides referral service to lymphedema treatment centers and health care professionals. Sends out a quarterly newsletter with information about medical developments, support groups, and pen pals.

### **National Marrow Donor Program**

800-MARROW-2 • [www.marrow.org](http://www.marrow.org)

The program maintains a registry of bone marrow donors, provides information on how to become a donor and helps organize donor-recruitment drives.

### **National Oral Health Information Clearinghouse**

866-232-4528 • [www.nidcr.nih.gov](http://www.nidcr.nih.gov)

A service of the National Institute of Dental and Craniofacial Research that provides oral health information for special care patients.

### **National Ovarian Cancer Coalition**

888-OVARIAN • [www.ovarian.org](http://www.ovarian.org)

An organization of ovarian cancer survivors that seeks increased recognition of the disease by government, media, health officials, and the medical community.

### **National Patient Air Transportation Hotline**

800-296-1217 • [www.npath.org](http://www.npath.org)

Makes referrals, provides special patient discounts on commercial air transportation services based on evaluation of patient's need.

### **National Prostate Cancer Coalition**

888-245-9455 • [www.fightprostatecancer.org](http://www.fightprostatecancer.org)

A national grassroots advocacy group that raises funds for research and works with patients, survivors, families, doctors, and researchers.

### **Oncolink: Abramson Cancer Center of the University of Pennsylvania**

[www.oncolink.com](http://www.oncolink.com)

A comprehensive website dedicated to helping cancer patients, families, and healthcare professionals get accurate cancer-related information.

### **Patient Advocate Foundation**

800-532-5274 • [www.patientadvocate.org](http://www.patientadvocate.org)

Seeks to educate patients about managed-care issues that may affect insurance coverage. Aids patients in treatment who need legal help negotiating with creditors. Also offers legal aid referrals.



## Resources and Support Services cont.

### **Phrma Publications**

202-835-3400 • [www.phrma.org](http://www.phrma.org)

A directory of prescription-drug patient-assistance programs. The website lists programs that provide physicians with drugs for patients who cannot afford to pay for them.

### **Susan G. Komen Breast Cancer Foundation**

800-IM-AWARE • [www.komen.org](http://www.komen.org)

Dedicated to eradicating breast cancer as a life-threatening disease, the Komen Foundation offers the latest breast health information and support from others with the disease.

### **The Skin Cancer Foundation**

800-SKIN-490 • [www.skincancer.org](http://www.skincancer.org)

News about skin cancer.

### **The Testicular Cancer Resource Center**

[www.acor.org](http://www.acor.org)

A website devoted to raising public awareness and educating patients about diagnosis and treatment options.

### **Us Too International, Inc.**

800-808-7866 • [www.ustoo.com](http://www.ustoo.com)

A network providing support and services to prostate cancer survivors.

### **Well Spouse Foundation**

800-838-0879 • [www.wellspouse.org](http://www.wellspouse.org)

A network of support groups and families that provide emotional support to husbands, wives, and children of the chronically ill and/or disabled.

### **Y-Me National Breast Cancer Organization**

800-221-2141 (English) 800-896-9505 (Spanish) • [www.y-me.org](http://www.y-me.org)

Provides professional counseling with two 24-hour/7 day-a-week toll-free hotlines - one for English speakers and one for Spanish speakers.

### **The Wellness Community**

888-793-WELL • [www.wellness-community.org](http://www.wellness-community.org)

Provides free support services including support groups, educational workshops, and stress management sessions in a homelike environment.

# Financial Issues

## Insurance and Financial Issues

Insurance issues can be a major concern for many patients with a diagnosis of cancer. Here are a few tips for making this a more minor concern:

- Get a copy of your insurance policy and find out exactly what your coverage includes.
- Keep careful records of all covered expenses and claims.
- File claims for all covered costs.
- Get help in filing claims, especially if you question something. Ask to speak with the hospital's financial counselors.
- When you question denial of a claim, call to question it. There should be a grievance procedure.

### For more help, call:

- The National Insurance Consumer Organization, 703-549-8050
- The National Cancer Institute,
- 800-4-CANCER
- Your financial advocate
- Your clinic social worker

## How much does chemotherapy cost?

It is hard to say how much chemotherapy will cost. It depends on:

- The types and doses of chemotherapy used
- How long and how often chemotherapy is given
- Whether you get chemotherapy at home, in a clinic or office, or during a hospital stay
- The part of the country where you live

## Does my health insurance pay for chemotherapy?

Talk with your health insurance company about what costs it will pay for. Questions to ask include:

- What will my insurance pay for?
- Do I need to call my insurance company before each treatment for it to be covered? Or, does my doctor's office need to call?
- What do I have to pay for?
- Can I see any doctor I want, or do I need to choose from a list of preferred providers?
- Do I need a written referral to see a specialist?
- Is there a co-pay (money I have to pay) each time I have an appointment?
- Is there a deductible (certain amount I need to pay) before my insurance pays?
- Where should I get my prescription drugs?
- Does my insurance pay for all my tests and treatments, whether I am an inpatient or outpatient?

## Financial Issues cont.

### How can I best work with my insurance plan?

- Read your insurance policy before treatment starts to find out what your plan will and will not pay for.
- Keep records of all your treatment costs and insurance claims.
- Send your insurance company all the paperwork it asks for. This may include receipts from doctors' visits, prescriptions, and lab work. Be sure to also keep copies for your own records.
- As needed, ask for help with the insurance paperwork. You can ask a friend, family member, social worker, or local group such as a senior center.
- If your insurance does not pay for something you think it should, find out why the plan refused to pay. Then talk with your doctor or nurse about what to do next. He or she may suggest ways to appeal the decision or other actions to take.

### Returning to Work

Patients have many concerns about getting back to work. The most commonly asked questions are:

- Will I be able to return to work?
- Can I get the time off I need for ongoing treatments?
- Will I be able to work as hard as I have in the past?
- Will my diagnosis affect advancement of my career?

Be reassured, most people return to work with great support of employers and coworkers. A few do run into some resistance or conflict. This usually stems from incorrect information that many people who have not had a personal experience with cancer have. Talk with your doctor or nurse about how to handle these issues. Open communication between you and your employer is a good place to start.

If your job does appear to be affected by your diagnosis of cancer, you need to understand your rights. The American Disabilities Act bans discrimination by both public and private employers against qualified workers who have disabilities or history of disabilities. While the American Disabilities Act does not specifically include cancer survivors, there have been successful rulings made in favor of cancer survivors because of it. For more information, contact:

The Equal Employment Opportunities Commission at 800-669-4000

The American Cancer Society at 800-ACS-2345

The National Coalition for Cancer Survivorship at 877-622-7937

The National Cancer Institute at 800-4-CANCER

# Procedures

## Some Common Diagnostic Procedures

### X-rays

Radiation is passed through the body, providing images of tissue and bone structure and function. Examples are the KUB (X-ray of the abdomen), CXR (X-ray of the chest), or Panorex (X-ray of the structure of teeth and gums). This is a noninvasive (involves no penetration of the skin) and painless test.

### Computed Tomography (CT)

CT produces cross-sectional views of soft tissue in the body by passing several X-ray beams through the body at different angles and then restructuring information in the shape of a picture using a computer. CT can be done with or without an IV contrast dye.

Some patients experience a salty taste, flushing, and warmth during injection of the contrast dye. Following the CT, you are encouraged to drink fluids to promote excretion of the dye. Notify your doctor if you have allergy to iodinated dye or shellfish. The procedure takes 30 to 60 minutes.

### Magnetic Resonance Imaging (MRI)

An MRI provides multiplane, cross-sectional imaging based on the magnetism in certain cells in the human body and its interaction with radio waves.

There is no exposure to radiation. MRI does not “see bone.” An anti-anxiety medication may help those with mild claustrophobia. The only discomfort you may experience may be from lying still on a hard surface or a possible tingling in metal teeth fillings. The procedure takes 30 to 60 minutes. You must remove all jewelry and metal objects.

### Positron Emission Tomography (PET)

The PET is a non-invasive diagnostic imaging test for measuring the metabolic activity of cells in the human body. Abnormal cells often require more energy and, therefore, use more sugar than surrounding healthy tissue. Glucose attached to a radioactive material is injected into a vein and pictures are taken by a camera.

This test takes 60 to 120 minutes from injection of glucose, 60 minute-wait, and 60-minute scanning.

### Ultrasonography

An ultrasound is a noninvasive technique that uses radar-like sound waves to obtain cross-sectional image.

## Procedures cont.

There is no exposure to radiation. A greasy paste is applied to the skin above the area being examined to enhance sound transmission.

### **Bone Scan**

First, a radioactive material is injected into a vein in the arm. The patient then is encouraged to drink water over the next 1 to 3 hours to promote excretion of any radioisotope not picked up by the bone. After the patient has voided, a scanning camera reveals the degree of radionuclide uptake in the target area.

You must remove all jewelry and metal objects. The radioactive substance will not affect other people and usually is excreted in the urine within 6 to 24 hours.

### **Bone Marrow Aspiration/Biopsy**

This procedure allows the bone marrow to be withdrawn and examined. A needle is inserted into a bone and a sample of bone marrow is aspirated out.

This procedure is performed under local anesthesia. Although the whole appointment is longer, the aspiration procedure takes only 5 or 10 minutes.

### **Lumbar Puncture/Spinal Tap**

This procedure allows the spinal fluid to be examined. A needle is placed in the fluid that surrounds the spinal column.

You must lie still throughout the procedure. After the procedure, you must remain in bed with your head flat to minimize the risk of a “spinal headache.”

### **Thoracentesis/Pleural Tap**

A pleural tap involves inserting a needle into the space within the lining of the lung to remove fluid or air.

You must remain still throughout the procedure. A chest X-ray may be done following the procedure.

### **Pulmonary Function Test (PFT)**

This test measures the capacity of the lungs. It involves various breathing exercises. A sample of blood is taken from the wrist to determine the content of oxygen in the blood.

This test takes 30 to 60 minutes.

### Bronchoscopy

The flexible fiberoptic bronchoscope (a small lighted tube) allows direct inspection of the larynx, trachea, and bronchi in the lungs. Biopsies can be obtained, and secretions can be collected. In most cases, the patient is sedated, and a local anesthetic is sprayed or swabbed over the mouth, tongue, and throat. The bronchoscope is introduced through the mouth, through the trachea, and into the lungs.

You are kept NPO (nothing by mouth) for 6 to 8 hours before the procedure. Throat discomfort is to be expected. This procedure takes about 45 to 60 minutes.

### Endoscopy

Endoscopy allows direct visualization of the upper gastrointestinal tract (esophagus, stomach, duodenum) with a flexible fiberoptic scope. Medicine is given to help the patient relax.

You must be kept NPO (nothing by mouth) after midnight to provide a clear view of the GI tract. You may have a sore throat after the anesthetic wears off.

## Electrocardiogram

### What is an electrocardiogram (ECG)?

The ECG (also known as EKG) is a test that records electrical signals from your heart onto a paper strip. The pattern of these signals can help tell the doctor whether your heart is normal, under stress, or experiencing electrical problems, strain, or damage.

#### Test preparation

- Wear loose, comfortable clothing that allows easy access to the chest.
- Avoid using skin lotion because this may make it difficult for the pads to stick.
- Allow enough time before your ECG to check in. You will likely need to fill out paperwork before the test.

## Echocardiogram

### What is an echocardiogram?

An echocardiogram (echo) is a simple test in which the heart can be seen and studied using sound waves (ultrasound). The four chambers of the heart, the heart valves, and the thickness of the heart wall can be examined. Any abnormal accumulation of fluid around the heart can also be seen.

## Procedures cont.

### Test preparation

There is no special preparation for this test. You may take your regular medications unless you are told otherwise. Your echocardiogram will take 30 to 60 minutes. Afterward, you may resume your normal activities unless you are told otherwise. Results of the test will be sent to your doctor.

### MUGA Scan

This test measures the pumping action of the heart. A radioactive material is injected into a vein, and pictures are taken by camera.

This test takes 60 to 90 minutes.

## Cancer Terms: A Guide for Patients with Cancer

### A

**Acupuncture:** The technique of inserting thin needles through the skin at specific points on the body to control nausea, vomiting and other symptoms.

**Acquired immune deficiency syndrome (AIDS):** A viral disease that destroys the body's ability to fight infections, leaving the body susceptible to many diseases.

**Acute:** Describes a sudden onset of symptoms or disease.

**Adenocarcinoma:** A malignant tumor arising from glandular tissue.

**Adenoma:** A benign tumor made up of glandular tissue. For example, an adenoma of the pituitary gland may cause it to produce abnormal amounts of hormones.

**Adjuvant chemotherapy:** Chemotherapy used to kill cancer cells after surgery or radiation therapy.

**Adrenal glands:** Two small organs near the kidneys that release hormones.

**A.F.P. (Alpha feta protein):** A tumor marker.

**Alopecia:** The loss of hair, which may include all body hair besides scalp hair.

**Analgesic:** Any drug that relieves pain. Aspirin and acetaminophen are mild analgesics.

**Anemia:** A condition in which fewer red blood cells may cause symptoms including tiredness, shortness of breath, and weakness.

**Anorexia:** The loss of appetite.

**Antibody:** A substance formed by the body to help defend it against infection.

**Antiemetic:** A drug that prevents or controls nausea and vomiting.

**Antifungal:** A drug used to treat fungal infections.

**Antigen:** Any substance that causes the body to produce natural antibodies.

**Anti-nausea:** A drug that prevents or controls nausea and vomiting. *Also called antiemetic.*

**Antineoplastic agent:** A drug that prevents, kills, or blocks the growth and spread of cancer cells.

**Arrhythmia:** An irregular heartbeat.

**Aspiration:** The process of removing fluid/tissue from a specific area.

**Autoimmunity:** A condition in which the body's immune system mistakenly fights and rejects body's own tissues.

**Axilla:** The armpit.

**Axillary nodes:** Lymph nodes — *also called lymph glands - found in the armpit (axilla).*



## Terms cont.

### B

**Barium enema:** The milky solution (barium sulfate) given by an enema to allow X-ray examination of the lower intestinal tract.

**Barium swallow:** The milky solution (barium sulfate) given orally to allow X-ray examination of the upper intestinal tract.

**Benign:** Describes a swelling or growth that is not cancerous and does not spread from one part of the body to another.

**(B-HCG):** Beta Human Chorionic Gonadotropin.

**Biological therapy:** Treatment to stimulate or restore the ability of the immune system to fight cancer, infections, and other diseases. Also used to lessen certain side effects that may be caused by some cancer treatments.

**Biopsy:** The surgical removal of tissue for microscopic examination for diagnosis.

**Blood cells:** Minute structures made in the bone marrow; consist of red blood cells, white blood cells, and platelets.

**Blood count:** The number of red blood cells, white blood cells, and platelets in a sample of blood.

**Bone marrow:** The spongy material found inside the bones. Most blood cells are made in the bone marrow.

**Bone marrow biopsy and aspiration:** The procedure by which a needle is inserted into a bone to withdraw a sample of the bone marrow.

**Bone marrow suppression:** A decrease in the production number of blood cells.

**Bone marrow transplant:** The addition of bone marrow into a patient who has been treated with high-dose chemotherapy or radiation therapy. Patients may use their own marrow which has been frozen in some cases.

*Allogeneic:* The infusion of bone marrow from one individual (donor) to another.

*Autologous:* The infusion of a patient's own bone marrow previously taken and stored.

*Syngeneic:* The infusion of bone marrow from one identical twin into another.

**Bone scan:** A picture of the bones using a radioactive dye that shows any injury, disease, or healing. This is a valuable test to determine if cancer has spread to the bone, if anticancer therapy is successful, and if affected bony areas are healing.

**Breast self-examination (BSE):** A manual examination of the breasts.

**Bronchoscopy:** The insertion of a flexible, lighted tube through the mouth into the lungs to examine the lungs and airways.

## Terms cont.

### C

**Cancer:** A group of diseases in which malignant cells grow out of control and spread to other parts of the body.

**Cancer clinical trials:** Type of research study that tests how well new medical approaches work in people. These studies test new methods of screening, prevention, diagnosis or treatment of a disease. *Also called a clinical study or research study.*

**Cancer in-situ:** The stage where the cancer is still confined to the tissue in which it started.

**Candidiasis:** A common fungal infection.

**Carcinogen:** A substance that causes cancer. *For example, nicotine in cigarettes is a carcinogen that causes lung cancer.*

**Carcinoma:** A kind of cancer that starts in the skin or the lining of organs.

**CA 125:** Tumor marker.

**Cardiomegaly:** An enlargement of the heart.

**Catheter:** A flexible tube through which fluids enter or leave the body.

**CT/CAT scan:** A test using computers and X-rays to create images of various parts of the body.

**CEA (Carcinoembryonic antigen):** A blood tumor marker.

**Cellulitis:** The inflammation of an area of the skin (epithelial layer).

**Central venous catheter:** A special intravenous tubing that is surgically inserted into a large vein near the heart and exits from the chest or abdomen. The catheter allows medications, fluids, or blood products to be given and blood samples to be taken. *(Examples: Broviac, Groshong, Hickman, etc.)*

**Cervical nodes:** Lymph nodes in the neck.

**Chemotherapy:** The treatment of cancer with drugs.

**Adjuvant chemotherapy:** *Chemotherapy given to kill any remaining cancer cells, usually after all detectable tumor is removed by surgery or radiotherapy.*

**Combination chemotherapy:** *The use of more than one drug during cancer treatment.*

**Chronic:** Persisting over a long period of time.

**Colonoscopy:** A procedure for looking at the colon or large bowel through a lighted, flexible tube.

**Colostomy:** A surgical procedure by which an opening is created between the colon and the outside of the abdomen to allow stool to be emptied into a collection bag.

**Colposcopy:** Examination of the vagina and cervix with an instrument called a colposcope.

## Terms cont.

**Congestive heart failure:** a build-up of fluid in the lungs and/or extremities (especially the legs). This occurs because the heart cannot pump the blood adequately.

**Constipation:** When bowel movements become less frequent and stools are hard, dry and difficult to pass.

**C.S.F. (Colony Stimulating Factor):** An injectable substance used to stimulate the bone marrow to produce more cells.

**Cyst:** An accumulation of fluid or semisolid material within a sac.

**Cystitis:** An inflammation of the bladder.

### D

**Diarrhea:** Frequent bowel movements that may be soft, loose, or watery.

**Drug resistance:** The result of cancer cells' ability to resist the effects of a specific drug.

**Dry heaves:** When your body tries to vomit even though your stomach is empty.

**Dysphagia:** Difficult swallowing.

**Dyspnea:** Difficult or painful breathing; shortness of breath.

**Dysuria:** Difficult or painful urination.

### E

**Edema:** The accumulation of fluid in part of the body.

**Effusion:** A collection of fluid in a body cavity, usually between two adjoining tissues. *For example, a pleural effusion is the collection of fluid between two layers of the pleura (the lung's covering).*

**Electrocardiogram (EKG or ECG):** A test that makes recordings of the electrical activity of the heart.

**Endoscopy:** A procedure looking at the inside of body cavities, such as the esophagus (food pipe) or stomach.

**Erythema:** Redness of the skin.

**Erythrocyte:** The red blood cell that carries oxygen to the body cells and carbon dioxide away from body cells.

**Esophagitis:** Inflammation of the esophagus (food pipe).

**Estrogen:** A female hormone produced primarily by the ovaries.

**Estrogen receptor assay (ER assay):** A test that determines if breast cancer is stimulated by the hormone estrogen.

**Excision:** Surgical removal.

**Extravasation:** The leaking of intravenous fluids or medications into tissue surrounding the infusion site. Extravasation may cause tissue damage.

## Terms cont.

### F

**Fatigue:** A problem of extreme tiredness and inability to function due to lack of energy.

**Fine needle aspirate:** A procedure in which a needle is inserted under local anesthesia to obtain a sample for the evaluation of suspicious tissue.

**Fistula:** An abnormal opening between two areas of the body.

**Frozen section:** A technique in which tissue is removed, then quick-frozen and examined under a microscope by a pathologist.

### G

**Genetic testing:** tests that can be done to see if a person has certain gene changes known to increase cancer risk. Such testing is not recommended for everyone, but for people with certain types of family history. Genetic counseling should be part of the genetic testing process.

**Granulocyte:** A type of white blood cell that kills bacteria.

**Guaiaac test:** A test that checks for hidden blood in the stool.

### H

**Healthy cells:** Noncancerous cells that function the way they should.

**Hematocrit (Hct):** The percentage of red blood cells in the blood. A low hematocrit indicates anemia.

**Hematologist:** A doctor who specializes in the problems of blood and bone marrow.

**Hematology:** The science that studies the blood. Hematuria: Blood in the urine.

**Hemoccult (Guaiaac test):** A test that checks for hidden blood in the stool.

**Herpes simplex:** The most common virus that causes sores often seen around the mouth. *Commonly called a cold sore.*

**Herpes zoster:** A virus that settles around certain nerves causing blisters, swelling, and pain. This condition is also called shingles.

**Hickman catheter:** See *Central Venous Catheter*.

**Hodgkin's disease:** A cancer that affects the lymph nodes. See *Lymphoma*.

**Hormone:** A substance that regulates growth, metabolism, and reproduction and is secreted by various organs in the body.

**Hospice:** A concept of supportive care to meet the special needs of patients and family during the terminal stages of illness. The care may be delivered in the home or hospital by a specially trained team of professionals.

## Terms cont.

**Human Immunodeficiency Virus (HIV):** The virus that causes AIDS.

**Human Leukocyte Antigen test (HLA):** A special blood test used to match a blood or bone marrow donor to a recipient for transfusion or transplant.

### I

**Ileostomy:** A surgical opening in the abdomen where the small intestine comes out to allow stool to be emptied into a collection bag.

**Immunity (Immune system):** The body's ability to fight infections and disease.

**Immunosuppression:** Weakening of the immune system causing a lowered ability to fight infection and disease.

**Immunotherapy:** The artificial stimulation of the body's immune system to treat or fight disease.

**Impotence:** Not being able to get or keep an erection.

**Incontinence:** Not able to control the flow of urine from the bladder.

**Infertility:** For women, it means that you may not be able to get pregnant. For men, it means that you may not be able to get a woman pregnant.

**Infiltration:** The leaking of fluid or medicines into tissues, which can cause swelling.

**Infusion:** The delivery of fluids or medications into the bloodstream over a period of time.

**Infusion pump:** A device that delivers measured amounts of fluids or medications into the bloodstream over a period of time.

**Injection:** Pushing a medication into the body with the use of a syringe and needle.

***Intramuscular (IM):*** Into the muscle.

***Intravenous (IV):*** Into the vein.

***Subcutaneous:*** Into the fatty tissue under the skin.

**Interferon:** A natural chemical released by the body in response to viral infections. Interferon can be artificially produced and used as a form of immunotherapy.

**Interleukin:** A natural or artificially produced chemical released by the body.

**Intra-arterial:** Within an artery. *Also called IA.*

**Intraperitoneal:** Within the peritoneal cavity. *Also called IP.*

**Intravenous:** Within a blood vessel. *Also called IV.*

## Terms cont.

### L

**Laryngectomy:** The surgical removal of the larynx.

**Lesion:** A lump or abscess that may be caused by injury or disease, such as cancer.

**Leukemia:** Cancer of the blood. White blood cells may be produced in excessive amounts and are unable to work properly.

**Leukocyte:** See *White Blood Cell*.

**Leukopenia:** A low number of white blood cells. **Lumpectomy:** See *Mastectomy – Segmental*.

**Long term side effects:** Problems from chemotherapy that do not go away.

**Lumpectomy:** See *Mastectomy- Segmental*

**Lymphangiogram:** A test to look at the lymph nodes.

**Lymphatic system:** A network that includes lymph nodes, lymph, and lymph vessels that serves as a filtering system for the blood.

**Lymphedema:** Swelling either from obstructed cancerous lymph nodes or from surgically removed lymph nodes.

**Lymph nodes:** Hundreds of small oval bodies that contain lymph. Lymph nodes act as our first line of defense against infections and cancer.

**Lymphocytes:** White blood cells that kill viruses and defend against the invasion of foreign material.

**Lymphoma:** A cancer of the lymphatic system. Doctors determine the different lymphomas by the type of cell that is involved in making up the tumor. Treatments depend on the type of cell that is seen.

### M

**Malignant tumor:** A tumor made up of cancer cells of the type that would spread to other parts of the body. This type of tumor needs treatment.

**Mammogram (Mammography):** A low-dose X-ray of the breasts to determine whether abnormal growths or cysts are present.

**Mastectomy:** the surgical removal of the breast.

**Segmental mastectomy (lumpectomy):** *Removal of the lump and a small amount of surrounding breast tissue.*

**Simple mastectomy (modified mastectomy):** *Removal of the entire breast.*

**Radical mastectomy:** *Removal of the entire breast along with underlying muscle and lymph nodes of the armpit.*

**Melanoma:** A cancer of the pigment-forming cells of the skin or the retina of the eye.

## Terms cont.

**Metastasize:** To spread from the first cancer site, such as breast cancer spreading to the bone.

**Monoclonal antibodies:** Artificially manufactured antibodies specifically designed to find targets on cancer cells for diagnostic or treatment purposes.

**MRI (Magnetic Resonance Imaging):** A sophisticated test that provides in-depth images of organs and structures in the body.

**Mucosa (Mucous membrane):** The lining of the mouth and gastrointestinal tract.

**Mucositis:** Inflammation of the lining of the mouth or gastrointestinal tract.

**Myelogram:** An x-ray procedure by which a dye is injected into the spinal column to show any pathology of the spinal cord.

**Myeloma:** A malignant tumor of the bone marrow associated with the production of abnormal proteins.

**Myelosuppression:** A decrease in the production of red blood cells, platelets, and some white blood cells by the bone marrow.

## N

**Nausea:** When you have an upset stomach or queasy feeling and feel like you are going to throw up.

**Neo-adjuvant chemotherapy:** When chemotherapy is used to shrink a tumor before surgery or radiation therapy.

**Neoplasm:** A new growth of tissue or cells; a tumor that is generally malignant.

**Neutropenia:** Fewer neutrophils, a type of white blood cell.

**Neutrophil:** A type of white blood cell.

**Non-Hodgkin's lymphoma:** A cancer of the lymphatic system. Non-Hodgkin's lymphoma is related to Hodgkin's disease, but is made up of different cell types. See *Lymphoma*.

## O

**OCN (Oncology Certified Nurse):** A registered nurse who has met requirements and successfully completed a certification exam.

**Oncologist:** A doctor who specializes in oncology.

**Oncology:** The study and treatment of cancer. Doctors who specialize in oncology are called oncologists.

**Oncology Clinical Care Nurse Specialist:** A registered nurse with a master's degree who specializes in the education and treatment of cancer patients.

**Outpatient:** A patient who visits a health care facility for diagnosis or treatment without spending the night.

## Terms cont.

### P

**Palliative care:** specialized medical care for people with serious illnesses. It is focused on providing you with relief from the symptoms, pain and stress of a serious illness - whatever the diagnosis.

**Palliative treatment:** Treatment aimed at the relief of pain and symptoms of the disease but not intended to cure the disease.

**Pap (Papanicolaou) smear:** A test to detect cancer of the cervix.

**Paracentesis:** Removing fluid from the abdomen using local anesthesia, a needle, and syringe.

**Pathological fracture:** A break in a bone usually caused by cancer or some disease condition.

**Pathology:** The study of disease by the examination of tissues and body fluids under the microscope. A doctor who specializes in pathology is called a pathologist.

**Peritoneal cavity:** The space within the abdomen that contains the intestines, stomach, liver, ovaries and other organs.

**PET (Positron Emission Tomography) scan:** A nuclear medicine medical imaging technique which produces a three-dimensional image or map of functional processes in the body.

**Petechiae:** Tiny areas of bleeding under the skin, usually due to a low platelet count.

**Phlebitis:** A painful inflammation of the vein.

**Photosensitivity:** Extreme sensitivity to the sun, leaving the patient prone to sunburns. Some cancer drugs and radiation have this side effect.

**Placebo:** An inert substance often used in clinical trials for comparison.

**Platelet (Plt):** Cells in the blood that are responsible for clotting.

**Platelet count:** The number of platelets in a blood sample.

**Polyp:** A growth of tissue protruding into a body cavity, such as a nasal or rectal polyp. It may be benign or malignant.

**Port - Implanted:** A catheter connected to a quarter-sized disc that is surgically placed just below the skin in the chest or abdomen. The tube is inserted into a large vein or artery directly into the bloodstream. Fluids, drugs, or blood products can be infused, or blood drawn through a needle that is inserted into the disc. *Examples: Port-o-cath, Infusaport, Mediport.*

**Port - Peritoneal:** A catheter connected to a quarter-sized disc that is surgically placed in the abdomen. The catheter is inserted to deliver chemotherapy to the peritoneal (abdominal) cavity.



## Terms cont.

**Precision medicine/genomic medicine:** an approach to patient care that allows doctors to select treatments that are most likely to help patients based on a genetic understanding of their disease.

**Primary tumor:** The original cancer site. For example, breast cancer that has spread to the bone is still called breast cancer.

**Progesterone:** One of the female hormones produced by the ovaries.

**Progesterone-receptor assay:** A test that determines if breast cancer is stimulated by female hormones.

**Prognosis:** The outcome of a disease; the life expectancy.

**Prosthesis:** Artificial replacement of a missing body part.

**Protocol:** The cancer treatment plan.

**P.S.A. (Prostate Specific Antigen):** A marker used to determine prostate disease – may be benign or malignant.

**Pump:** A device that is used to deliver a precise amount of a drug at a specific rate.

## R

**Radiation therapy:** treatment with high-energy rays to kill cancer cells and shrink tumors. The radiation may come from outside the body (*external radiation*) or from radioactive materials placed in the tumor (*brachytherapy* or *internal radiation*). Radiation therapy may be used to shrink the cancer before surgery, to kill any remaining cancer cells after surgery, or as the main treatment. It may also be used as palliative (non-curative) treatment for advanced cancer.

**Radiologist:** A doctor who specializes in the use of x-rays to diagnose and treat disease.

**Recurrence:** The reappearance of cancer after a period of remission.

**Red blood cells (Erythrocyte):** Cells in the blood that bring oxygen to tissues and take carbon dioxide from them.

**Red blood count (RBC):** The number of red blood cells seen in a blood sample.

**Regression:** The shrinkage of cancer growth.

**Relapse:** The reappearance of cancer.

**Remission:** Complete or partial disappearance of the signs and symptoms of disease.

**Risk factor:** Anything that increases a person's chance of developing cancer, e.g., *smoking*.

## Terms cont.

### S

**Sarcoma:** A malignant tumor of muscles or connective tissues such as bone and cartilage.

***Chondrosarcoma:** A malignant tumor of cartilage usually occurring near the ends of the long bones.*

***Ewing sarcoma:** A malignant tumor starting in bone, affecting the bones of extremities. It often appears before the age of 20.*

**Shingles:** See Herpes Zoster.

**Side effects:** Secondary effects of cancer treatment.

**Sigmoidoscopy:** The visual examination of the rectum and lower colon using a tubular instrument called a *sigmoidoscope*.

**Sputum:** Secretions produced by the lungs.

**Staging:** Determination of extent of the cancer in the body.

**Standard treatment:** Treatment that experts agree is appropriate, accepted and widely used.

**Steroid:** A type of hormone.

**Stoma:** An artificial opening between two cavities or between a cavity and the surface of the body.

**Stomatitis:** Temporary inflammation and soreness of the mouth.

**Survivorship Care Plan:** A detailed, written record of your cancer care that typically includes records of your medical history; specific information about your cancer diagnosis and treatment; information about possible late effects and signs of a recurrence or new cancer; a schedule for follow-up health care including screening tests; tips on cancer prevention and suggestions for maintaining a healthy lifestyle; and how to find quality health care and other support services.

**Systemic disease:** A disease that affects the whole body instead of a special organ.

### T

**Taste alteration:** A temporary change in taste perception.

**Testicular self-examination (TSE):** A simple manual exam of testes.

**Thoracentesis (Pleural tap):** A procedure to remove fluids from the area between the two layers (pleura) covering the lung.

**Thrombocytopenia:** An abnormally low number of platelets (thrombocytes). If the platelets are too few, bleeding could occur.

**Tracheostomy:** A surgical opening through the trachea in the neck to provide an artificial airway.

**Tumor:** An abnormal overgrowth of cells. Tumors can be either benign or malignant.

## Terms cont.

### U

**Ultrasound examination:** The use of high-frequency sound waves for the purpose of diagnosis.

**Ureterostomy:** A surgical procedure consisting of cutting the ureters from the bladder and connecting them to an opening (*see Stoma*) on the abdomen allowing urine to flow into a collection bag.

### V

**Venipuncture:** Puncturing the vein in order to obtain blood samples, to start an intravenous drip, or to give a medication.

**Vesicant:** An intravenous medication that, if leaked into tissues, could cause pain, swelling, tissue damage, and destruction.

**Virus:** A tiny infectious agent that is smaller than bacteria. The common cold is caused by a virus. *For example, herpes simplex (cold sore).*

**Vomiting:** When you throw up.

### W

**White blood cells (WBC):** General term for a variety of cells responsible for fighting invading germs, infections, and allergy-causing agents. Specific white blood cells include granulocytes and lymphocytes.

**White blood count (WBC):** The actual number of white blood cells seen in a blood sample.

### X

**X-ray:** High-energy electromagnetic radiation used to diagnose and treat disease. Diagnostic test using high energy to visualize internal body organs.



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