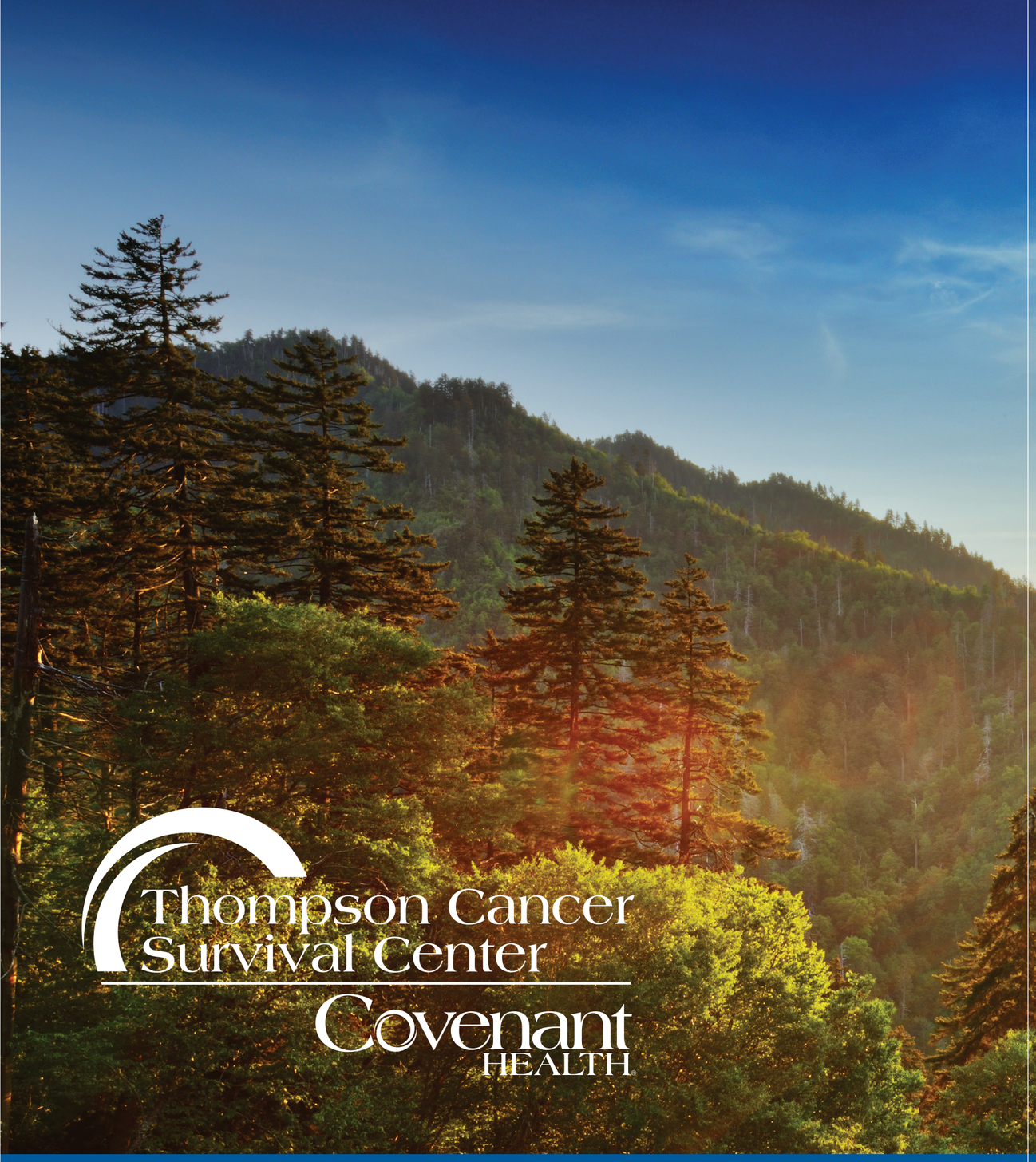


Cancer Resource Guide for our Patients

FOR EVERY MOMENT.

Thompson Cancer Survival Center
Covenant HEALTH

Thompson Cancer Survival Center
Covenant HEALTH

SLITS FOR BUSINESS CARD

Table of Contents

We want your experience with us to be excellent.

Thompson Cancer Survival Center is part of Covenant Health, the region's top performing healthcare network. Each of our more than 10,000 employees, physicians, and volunteers are unified by one covenant: to put our patients first every day, to strive for excellence in everything we do, and to make Covenant Health the first and best choice in our region.

Thank you for choosing Thompson Cancer Survival Center and Covenant Health.

Message from the CAO

On behalf of the entire Thompson Cancer Survival Center team, thank you for trusting us to care for you on this most important journey. We recognize that patients have a choice in where they receive their cancer care. Our goal is to put patients first in everything we do and be the first and best choice for cancer care in our region. Our staff is committed to achieving excellence in every aspect of our daily work – our vision translates into an active mission of service.

Within this resource guide you will find an introduction to the services and resources available to our patients. We describe the different team members who are likely to participate in your care and define some of the terms you may encounter that may be unfamiliar or confusing. You will also find contact information for your care teams as well as a place to take and keep notes throughout your journey. If you encounter anything missing from this guide that you think may help future patients, please let one of our team members know.

R. Scott Warwick

Scott Warwick
Chief Administrative Officer

Your Cancer Care Team

Meet the Team

At Thompson Cancer Survival Center, we provide a team approach when caring for you. You and your family are important members of the team. A group of excellent cancer specialists work together with you to develop a treatment care plan for you. Your treatment plan is individualized to specifically address your needs. Your team members may include a surgeon, medical oncologist, radiation oncologist, nurse navigator, genetic counselor, social worker, physical therapist, oncology nurses, dieticians, pharmacists, chaplains and many other professionals who will play an integral role in your care.

Medical Oncologists: Physicians who specialize in cancer and oversee your chemotherapy and/or other medical treatments.

Radiation Oncologists: Physicians who specialize in the treatment of cancer using radiation therapy.

Surgeons: Physicians who specialize in surgical procedures and will oversee the operative plan and any post-operative care you need.

Advanced Practice Providers: A Nurse Practitioner or Physician's Assistant with specialized education and training who is qualified and certified to address a multitude of patient care issues.

Chaplains: Offer spiritual support to patients and families of all faiths.

Clinical Dietitians: Help you understand your nutritional needs and assist you with choosing food and planning meals designed to aid your comfort, recovery and health.

Clincial Trials Staff: Work with national research groups to provide our patients access to new therapies and research studies specifically designed to treat certain types of cancer.

Genetic Counselors: Assess cancer risks and offer counseling and testing for high-risk individuals with certain types of cancer.

Oncology Nurses: Work with your doctor to develop and implement your plan of care and are an excellent educational resource should you have questions.

Nurse Navigators: Guide you with education, help with medical team communication, and ensure you understand your tests and procedures. Your navigator will also help you manage side effects of treatment and will be with you along the way to offer support and encouragement.

Pharmacists: Prepare and dispense your medications and chemotherapy.

Physical Therapists: Assist you with physical difficulties that may result from your illness and/or treatment.

Radiation Therapists: Specialize in the treatment of cancer using several different methods of radiation therapy. They work closely with your doctor and the dosimetrist (someone who is trained in radiotherapy physics) to determine the exact size and shape of the area to be treated and ascertain the set-up is correct for each treatment you receive.

Social Workers: Provide emotional support and help you access resources available to those diagnosed with cancer. They specialize in determining the emotional, financial and social impact of cancer treatment and will work with you and your family throughout the treatment process.

Radiologists: Physicians who specialize in using medical imaging technology to diagnose and treat conditions such as cancer.

Pathologists: Clinicians who perform tests and study body fluids and tissues to help physicians diagnose cancer.

Thompson Oncology Group

We are very grateful that you have chosen to receive your care from the physicians and staff of Thompson Oncology Group. We have a dedicated team of board certified oncologists and professionals who are here to care for you during the time that you will need treatment and follow-up. Please let us know if you have any questions or concerns about your treatment, or if we can assist you in any other way.

Appointments

Patients are seen by appointment only. To schedule an appointment, please call during regular office hours, which are Monday through Friday from 8:00 a.m. to 4:30 p.m. To reschedule or cancel an appointment, please notify us at least 48 hours in advance.

New patients should plan to arrive 30 minutes early to complete paperwork and registration. Return patients should arrive 10-15 minutes before their appointment times. Treatment appointments are scheduled by the length of time taken to give the treatment and the availability of treatment chairs.

Advanced Practice Nurses

As part of your care, you may be seen by one of our oncology advanced practice nurses. These providers are specialized nurses who are qualified to address a multitude of patient care issues.

Referrals from Physicians

Your insurance company may require you to obtain a written referral from your primary care physician before you can be seen in our office. If this is the case, please be certain you have this referral before your appointment with us.

Billing and Insurance

Insurance can be confusing and overwhelming. To make the process easier, please follow these simple guidelines:

1. Bring your insurance card(s) including prescription benefit cards and/or Medicare Part D cards to each visit.
2. We will gladly file your insurance claims for you; therefore, we ask that you notify us of any changes in your billing information to ensure proper claims submission.
3. If you change insurance companies or if there are any changes in your plan, please call the office before your next appointment to review your coverage. It may be necessary to obtain a referral before we schedule future visits.
4. Co-payments and deductibles are due at the time of service. We are required to collect the appropriate co-payment or deductible specified by your agreement with your insurance company or governmental agency.

You may receive bills from multiple providers and facilities. If the facility where you are treated is a department of an affiliated hospital, your bill will come from that facility.

Examples are:

- The facility where you received treatment(s)
- The physician or practice that oversees your treatment plan
- Other radiologists, pathologists, etc., who may have rendered services

If you have any billing questions, please contact the business office at **(865) 331-4399**.

Prescriptions and Refills

Except in emergencies, please direct calls for prescriptions to our office during regular business hours, which are Monday through Friday from 8:00 a.m. to 4:30 p.m. When you call, have the following information available:

1. Your name
2. Name and dosage of medication
3. Pharmacy name
4. Pharmacy telephone number

The need for prescription renewals should be anticipated so that you may obtain them during regular business hours. Please bring your prescription bottles (with labels) to your first visit with the doctor. Please try to give us 2-3 days notice on refills to allow for prior authorization to be obtained from your insurance company or prescription benefit program. Federal Law prohibits us from renewing prescriptions for narcotic pain medications over the telephone.

Outside Medical Records

When a consultation is scheduled, we request that all relevant records, such as office notes, laboratory studies, x-rays and pathology reports be faxed or mailed to our appropriate office at least 24 hours prior to the appointment. This enables us to better serve you and save you time during your visit.

Thompson Oncology Group *(continued)*

Insurance, Disability Forms and Medical Records Requests

Please allow five days for us to process your insurance and disability forms and any medical record requests. Due to federal requirements, we are not allowed to discuss medical information with anyone other than you or your chosen representative. Thank you for your understanding.

Immunotherapy and Chemotherapy Treatment

Outpatient immunotherapy and chemotherapy services are offered at each of our comprehensive clinic locations. Our pharmacists and nurses are highly trained to administer chemotherapy and other treatments, including complex intravenous fluids. They are available to answer your questions and provide patient education materials prior to your treatment.

In order to protect the health and wellness of our cancer patients, children are not allowed into chemotherapy infusion areas.

Patient and Family Services

Thompson is dedicated to providing a full array of assistance and support for patients and families with special needs. Therefore, we have full-time staff available for counseling and assistance. A nutritionist is also available to augment the cancer patient's medical treatment by specifically addressing their nutritional concerns. The Patient and Family Services department can also provide information about support groups throughout the community.

Clinical Research Programs

Thompson Cancer Survival Center is an active participant in adult oncology clinical trials supported by the National Cancer Institute, a division of the National Institution of Health, and the pharmaceutical industry. For more information call **(865) 331-1812**.

Telephone Calls

Questions regarding routine medical matters are generally handled by an oncology nurse. When you call, the receptionist will obtain enough information to ensure a helpful response. We will review your medical chart and return your call as soon as possible.

An answering service is available at the number below for after hours urgent needs. The answering service will take your message and notify the physician or advance practice nurse on call. In an emergency situation, please contact 911. Routine refills and business matters should be handled during regular business hours.

Important Thompson Oncology Group Phone Numbers

Blount	(865) 977-1065
Downtown Knoxville	(865) 331-1720
Harriman	(865) 835-5400
Lenoir City	(865) 271- 6095
Morristown	(423) 492-6100
Oak Ridge	(865) 835-5400
Sevier	(865) 446-9025
West Knoxville	(865) 373-5050

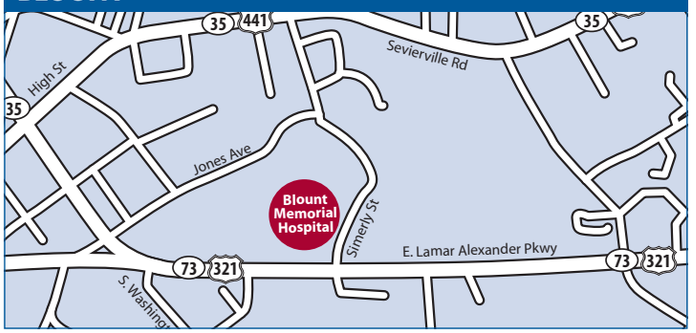
Answering service for after hours and weekends:

Oak Ridge	(865) 835-1000
All other TOG offices	(865) 970-1648

For billing and accounting questions ..... (865) 331-4399
(8:00 a.m. – Noon and 1:00 p.m. – 5:00 p.m. M-F)

Thompson Oncology Group Locations

BLOUNT



Blount Memorial Hospital
220 BMH Cancer Center
Maryville, TN 37804
(865) 977-1065
Fax: (865) 982-8538
Thompson Infusion Services - Maryville
a department of LeConte Medical Center

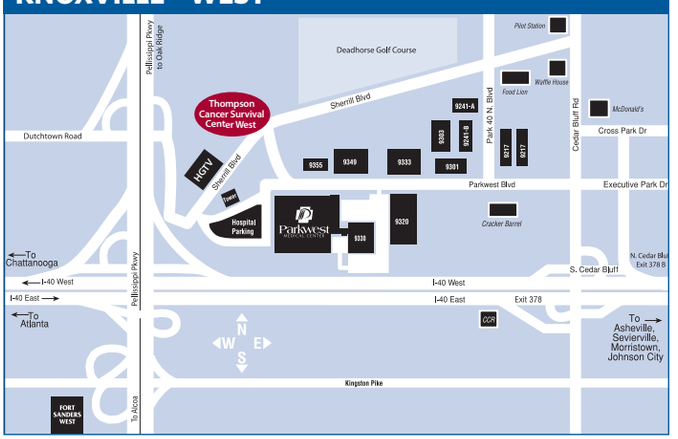
KNOXVILLE – DOWNTOWN

1915 White Avenue
Knoxville, TN 37916
(865) 331-1720
Thompson Infusion Services - Downtown
a department of LeConte Medical Center

HARRIMAN

8035 Roane Medical Center Drive
Harriman, TN 37748
(865) 835-5400

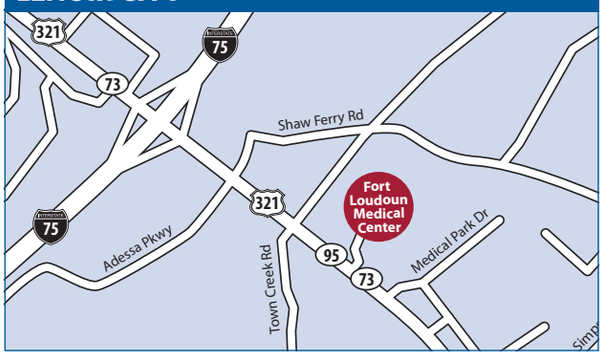
KNOXVILLE – WEST



9711 Sherrill Boulevard, Suite 201
Knoxville, TN 37932
(865) 373-5050
Thompson Infusion Services - West
a department of LeConte Medical Center

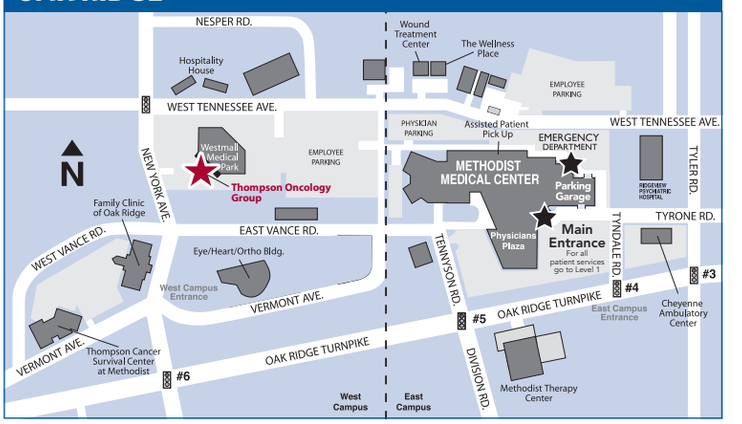
Thompson Oncology Group Locations *(continued)*

LENOIR CITY



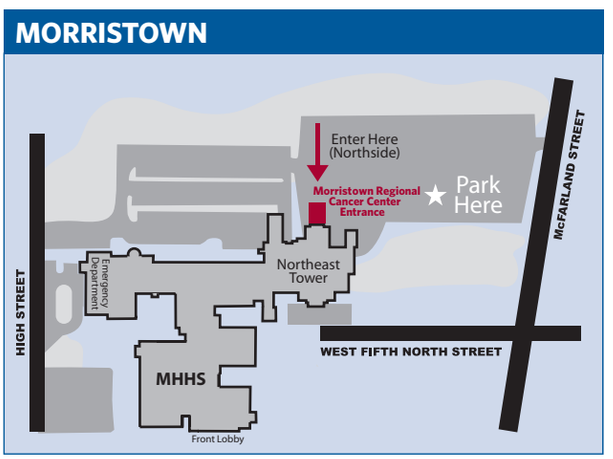
576 Fort Loudoun Medical Center Drive
Lenoir City, TN 37772
(865) 271-6095
Thompson Infusion Services Lenoir City
a department of Fort Sanders Regional Medical Center

OAK RIDGE



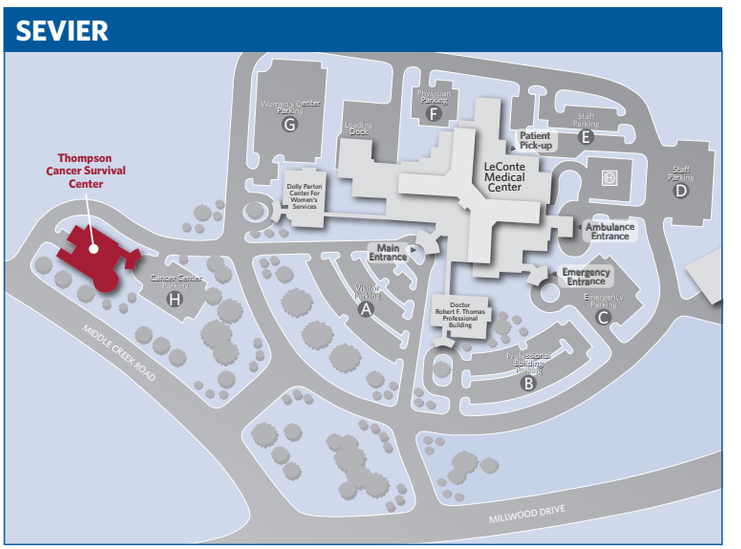
200 New York Avenue
Oak Ridge, TN 37830
(865) 835-5400
Thompson Infusion Services - Oak Ridge
a department of Fort Sanders Regional Medical Center

MORRISTOWN



908 West 4th North Street
Morristown, TN 37814
(423) 492-6100

SEVIER



710 Middle Creek Road
Sevierville, TN 37862
(865) 446-9025
Thompson Infusion Services Sevier
a department of LeConte Medical Center

Chemotherapy

What is Chemotherapy?

Chemotherapy refers to the use of medicines to treat cancer. It has been used for many years, and is one of the most common treatments for cancer. In most cases, chemotherapy works by interfering with the cancer cell's ability to grow and reproduce. Chemotherapy may be used alone or in combination with other treatments such as radiation or surgery.

Why is Chemotherapy Used?

Chemotherapy is used for a variety of purposes, including:

- To cure a specific cancer
- To control tumor growth when cure is not possible
- To shrink tumors before surgery or radiation therapy
- To relieve symptoms such as pain
- To destroy microscopic cancer cells that may be present after the known tumor is removed by surgery

Chemotherapy Terms:

Adjuvant chemotherapy: Chemotherapy given to destroy any left-over cells that are present after the tumor is removed by surgery. Adjuvant therapy is given to try and prevent recurrence of the cancer.

Neoadjuvant chemotherapy: Chemotherapy given prior to the surgical procedure. This may be given to attempt to shrink the cancer so the surgical procedure may not need to be as extensive.

Palliative chemotherapy: Palliative chemotherapy is given specifically to address symptom management without expecting to significantly reduce the cancer.

How Does Chemotherapy Work?

Normally, cells live, grow and die in a predictable way. Cancer occurs when certain cells in the body keep dividing and forming more cells without the ability to stop this process and return to dividing normally. The cancer cells no longer have the normal checks and balances in place that can control and limit cell division. Chemotherapy drugs are used to destroy cancer cells by keeping the cells from further multiplying or growing. Unfortunately, in the process of taking these drugs to destroy the cancer cells, healthy cells can be affected, especially those that naturally divide quickly. Normal cells that divide quickly and are most affected by chemotherapy include cells in the blood, stomach, mouth, bowel, and hair follicles.

This leads to common side effects such as low blood counts, mouth sores, nausea, diarrhea, and hair loss. Chemotherapy treatment plans strive to maximize the elimination of cancer cells while minimizing the damage to healthy cells.

How is Chemotherapy Given?

To reduce the damage to healthy cells and to give them a chance to recover, chemotherapy is usually given in cycles.

Chemotherapy drugs can be given in a variety of ways, including:

- As a pill to swallow
- As an injection into the muscle or fat tissue
- Directly into the bloodstream via an IV
- Topically applied to the skin
- Directly into a body cavity

Once you and your doctor have determined the best chemotherapy treatment plan, you will receive special information about the cancer you have and the drugs being used to treat it. Your chemotherapy nurses are also outstanding sources of information who are always willing to answer any questions you may have.

Immunotherapy

Immunotherapy is a type of treatment designed to bolster the body's own immune system and help it fight and destroy the cancerous cells. The body's immune system is like an internal defense mechanism that detects and destroys any cell that is not normal. The body uses the immune system to fight off infections, bacteria, viruses, recognize toxins and anything that appears foreign. This is likely how the body prevents or stops the growth of cancerous cells when it is fully functioning. Unfortunately, cancer cells can avoid being destroyed by our immune system. Immunotherapy cancer treatments elicit a response to either amplify or supress your body's natural immune system in order to destroy cancer cells.

Thompson Radiation Therapy

At Thompson Cancer Survival Center, we believe comprehensive cancer care should be available in the comfort of your own community.

Our team of radiation therapy experts uses a multidisciplinary approach with the latest technology and treatment methods to develop a customized treatment plan for each patient.

Thank you for allowing us to care for you.

Your Physician

You will be seen by your radiation oncologist at least once a week during the course of your treatment so that they can evaluate you for any problems or concerns. If you need to speak with your doctor outside of your scheduled appointment, please let your nurse or therapist know.

The Covenant Health Radiation Therapy Network is one of the largest and most advanced providers of radiotherapy in the region.

Each of Covenant's six radiation therapy departments has a team of experts that provide personalized and compassionate cancer care.

Each location is equipped with the most advanced technology that can precisely focus radiation on the tumor.

Treatment Information

Radiation therapy is used in the treatment of >60% of all cancer patients. It may be used alone or in combination with surgery and/or chemotherapy. There are three forms of radiation therapy, all of which are offered by the Covenant Health Radiation Therapy Network.

1. External Beam Radiation Therapy is when the radiation is delivered from outside of the body and focuses on the tumor.
2. Internal Radiation Therapy (called brachytherapy) is when the radiation is placed inside the body and the radiation is delivered from inside the body.
3. Systemic Radiation Therapy is when the radiation is given as an injection and goes through the whole body.

Our goal is to provide you with the most compassionate, high-quality, and innovative cancer care available while being close to your home and family.

Caring for Your Skin During Treatment

1. Keep your skin clean and dry.
2. Unless your doctor informs you otherwise, you may take a shower. Do not use soap directly on the areas outlined.
3. When you shower, quickly wet and rinse the skin within the marks.
4. If your scalp is in the treated area, use a mild shampoo, such as a baby shampoo.
5. Wear loose-fitting clothing made of soft fabric over the area of treatment.
6. Wear clothing to protect skin in the treatment area from sun exposure.
7. If bandages or dressings need to be applied to the area being treated, use only paper tape.
8. If the face, neck or underarm is being treated, use only an electric razor to shave.

What to Avoid During Treatment

During your treatment, it is best to avoid the following things:

- Using lotions, powders, ointments, perfumes, after-shave, deodorant, make-up, medications, and adhesive tape in treatment area
- Washing over your markings with a washcloth
- Rubbing or scratching the treatment area
- Exposing your skin to extreme temperatures, such as hot water, heating pads, or ice packs
- Sun exposure to the treatment area
- Swimming in salt water or chlorinated pools

After Your Treatment

- You may need to continue using a mild soap until the skin reaction has cleared.
- Your treatment marks can be removed by using rubbing alcohol or by rinsing them off in the shower. Remember to pat the marked areas dry.
- Avoid prolonged sun exposure. Use a sunscreen with SPF 15 or greater.
- Once or twice per day, cover your treatment area with the ointment or cream provided to you.

Summary

The more you know about your treatment, the easier it will be to undergo the procedures involved. If you have any questions or concerns regarding your treatment, please reach out to us. We are here to help you in any way we can.

Services

Thompson Radiation Oncology Services – Knoxville, a department of Fort Sanders Regional Medical Center **(865) 331-1155**
Thompson Radiation Oncology Services - West Knoxville, a department of Parkwest Medical Center . . **(865) 373-5000**
Thompson Radiation Oncology Services - Sevier, a department of LeConte Medical Center . . . . . **(865) 446-9125**
Thompson Cancer Survival Center at Methodist, a department of Methodist Medical Center . . . . . **(865) 835-4500**
Morristown Regional Cancer Center, a department of Morristown-Hamblen Healthcare System . . . . . **(423) 492- 6200**
Cumberland Regional Cancer Center, a department of Cumberland Medical Center . . . . . **(931) 456-8390**

Radiation Therapy Technology

Intensity Modulated Radiation Therapy (IMRT)

Thompson Cancer Survival Center was one of the first facilities in the world to treat patients with intensity modulated radiation therapy. Since 1998, thousands of patients have received IMRT treatment at Thompson. In IMRT, the multileaf collimator reshapes the treatment field between individual doses of radiation, so the beam is matched to the shape of the tumor from all angles.

Thompson Cancer Survival Center's West facility, a department of Parwest Medical Center, also recently expanded its radiation therapy capabilities.

We have installed an Elekta Infinity linear accelerator, the second in the entire country. This next-generation digital system provides previously unobtainable dose control precision using cone-beam CT imaging prior to each patient's treatment fraction.

The Infinity also has volume modulated arc therapy and image-guided stereotactic radiotherapy capabilities.

High-dose-rate Brachytherapy

Thompson downtown, a department of Fort Sanders Regional, TCSC West and Morristown Regional Cancer Center currently treat patients using high-dose-rate Brachytherapy. The patient's scan is made and all preparation for treatment is done right in the HDR brachytherapy suite. Since the patient doesn't have to be transported from a separate CT room to the treatment area, the placement of the radioactive pellets is more precise.

Thompson's downtown facility treats lung, breast, gynecological and esophageal cancers with high-dose-rate brachytherapy.

Thompson West treats gynecological and breast cancers with high-dose-rate brachytherapy. The Morristown facility treats breast, gynecological and skin cancers. Morristown is currently the only facility in East Tennessee utilizing the HDR Valencia skin applicators.

MammoSite®

Thompson's West and Fort Sanders Regional, along with Morristown Regional Cancer Center, also offer MammoSite® Radiation Therapy, a form of high-dose-rate (HDR) brachytherapy treatment for patients fighting early-stage breast cancer. It works by delivering radiation to the site of the breast where cancer is most likely to recur. MammoSite can be given in five days on an outpatient basis with no in-hospital stay required.

Image Guided Radiation Therapy

Image guided radiation therapy (IGRT) is a technique where CT images are taken on the treatment machine immediately before treatment, and sometimes even during the treatment itself. These images are used to help align the patient for treatment, and to make sure that the radiation beams are focused on the cancer.

Without CT imaging, the tumor could be missed and a larger portion of healthy tissue could be treated. Image guidance helps make sure that the cancer is on target for every treatment. Covenant's staff pioneered CT-based image guidance and were the first in the United States to use megavoltage CT image guidance.

Leksell Gamma Knife® Perfexion™

The Fort Sanders Regional Gamma Knife Center at Thompson Cancer Survival Center has an experienced team that has treated nearly 500 patients.

The Fort Sanders Regional Gamma Knife Center at Thompson Cancer Survival Center features the mostadvanced Leksell Gamma Knife Perfexion, a stereotactic radiosurgical procedure used to treat brain tumors and other disorders.

Radiation Therapy Technology *(continued)*

The Gamma Knife Center houses the first advanced system in Tennessee, one of only 30 in the United States and the newest tool to treat brain disease, including those conditions previously considered inoperable.

The Gamma Knife Perfexion offers patients an alternative to traditional surgeries which sometimes involves additional risks and complications from incision. Instead, the Gamma Knife Perfexion offers a non-invasive, two to four hour procedure that often allows the patient to leave the center the same day.

Advanced. The Gamma Knife Perfexion, a non-invasive radiosurgical tool, delivers sophisticated treatment plans in significantly less time, expands treatment capabilities to cover a wider range of indications, and provides automated functions requiring little involvement by the patient.

Efficient. Gamma Knife is an alternative or supplemental treatment to traditional brain surgery. The procedure typically is performed in a single outpatient treatment session with considerably reduced treatment times and minimized surgical complications.

Precise. Gamma Knife is used to precisely target brain tumors and disorders with finely-focused radiation beams that minimize damage of healthy brain tissue.

Thompson PET Imaging Centers

PET Imaging

Positron emission tomography combines computer technology with the expertise of medicine, chemistry, physics and physiology to study the functions of the body.

A PET scan reveals changes in the body's metabolism, so it can find cancer before it has grown enough to be detected by other types of scans. PET scans can determine if a tumor is malignant or benign, and can often eliminate the need for a biopsy or other diagnostic surgery. A whole-body PET scan can reveal the original site or sites of the cancer, as well as any places to which the cancer has spread.

When you have a PET scan, a small amount of radioactive material is injected into your bloodstream through an IV that is placed in a vein in your arm. The amount of radioactivity you receive as part of the PET scan is not harmful, and is comparable to other diagnostic radiologic procedures, such as computed tomography (CT) or nuclear medicine scans. The brain, heart, kidneys, bladder, and certain cancerous tumors absorb this material. The PET scanner measures the location of the radioactive substances in your body, and a computer translates the information into images. Your PET scan will be reviewed by board-certified physicians. .

Preparing for Your PET Scan

1. Beginning, 24 hours before your PET appointment, please follow a low-carb diet. (No pasta, bread, rice, potatoes, cereal, sugar, etc.) *Learn more about low-carb diets on our website: https://www.thompsoncancer.com/services/pet/
2. Four hours before your PET appointment, do not eat or drink ANYTHING BUT PLAIN WATER. (No sodas, teas, coffee, gum, candies, breath mints, cough drops, etc.)
3. If you are diabetic, take insulin and oral medications more than 4 hours before your appointment.
4. You may take your medications before the test, but only with plain, unflavored water. No regular or decaffeinated tea or coffee.
5. Please wear comfortable clothes, with an elastic waist and without metal if possible.

When you arrive, a staff member will ask you about your medical history, explain the procedure and answer any questions you might have.

***Following this preparation ensures that your blood sugar levels are within a range that the PET scan can be completed (50-200 mg/dL). If your blood sugar is outside this range we will have to reschedule your appointment.**

What To Expect

Before your scan, a Certified Nuclear Medicine Technologist (CNMT) will insert an IV into a vein in your arm. About one hour prior to your scan, a small amount of radioactive material will be injected through your IV. A PET technologist may also use your IV to check your blood sugar level. Your PET scan will last approximately 15 minutes. During your scan, it is extremely important that you lie still on the table.

After Your Scan

After your PET scan, it is important to remove the radioactive material from your body as quickly as possible. Most of the radioactive material will collect in your bladder. Make sure to drink extra fluids and empty your bladder frequently after your PET scan.

Your Test Results

After your scan is completed, your physician will have results to review with you at your next appointment.

Financial Responsibility

Most insurers cover PET scans. Let us know if you have any questions regarding your insurance coverage.

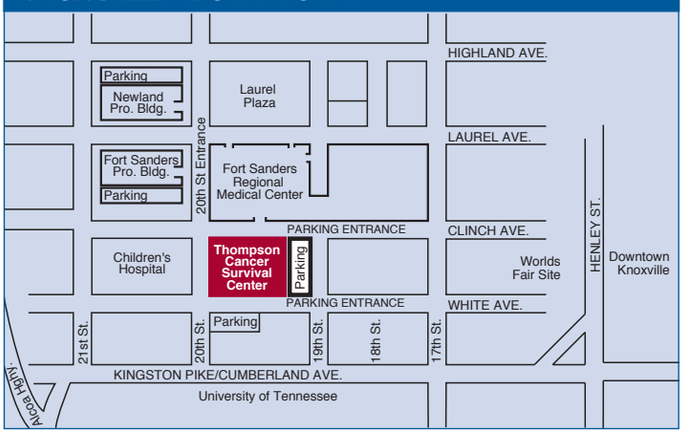
Additional Information

For more information about your PET scan, you may talk to your doctor or call our office at **(865) 373-5070.** Our office hours are Monday through Friday, from 8:00 a.m. to 4:30 p.m.

Thompson's PET Imaging Center is accredited by the American College of Radiology.

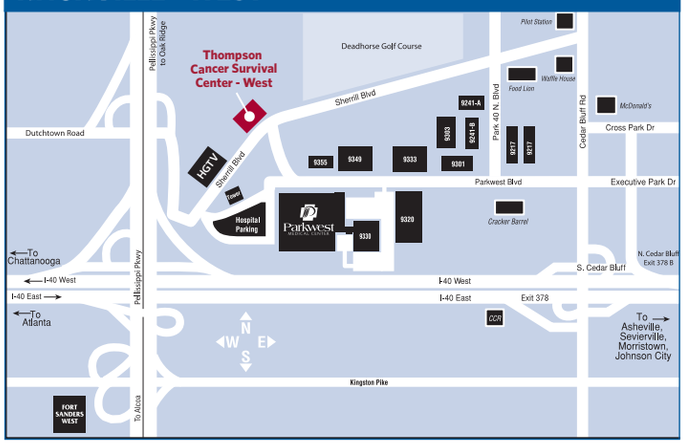
Thompson PET Services Locations

KNOXVILLE - DOWNTOWN



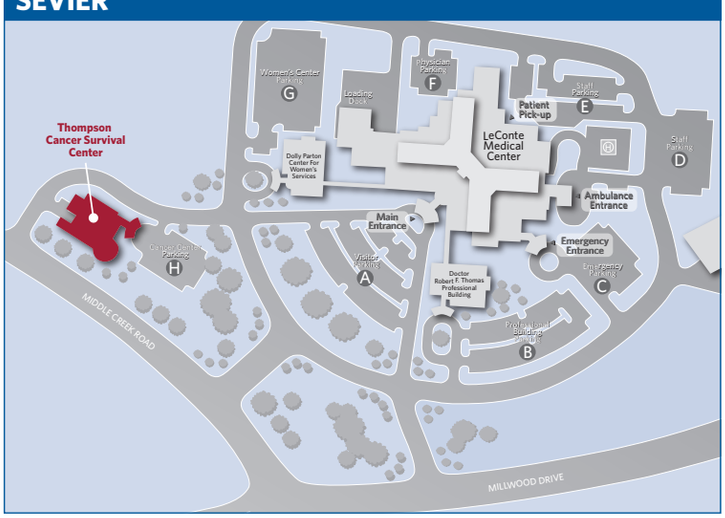
A department of Fort Sanders Regional Medical Center
1915 White Avenue
Knoxville, TN 37916

KNOXVILLE - WEST



A department of Parkwest Medical Center
9711 Sherrill Boulevard
Knoxville, TN 37932

SEVIER



A department of LeConte Medical Center
710 Middle Creek Road
Sevierville, TN 37862

Patient and Family Services

Social Workers

Dealing with a cancer diagnosis can be a stressful experience. Thompson's clinical social workers offer helpful information about support groups and community services, and provide you with general information about coping with cancer. Our social workers are here to help you better understand and deal with the social, emotional, and financial impact of cancer.

Additionally, our social workers can:

- Assist patients with applications for Social Security Disability, SSI, and Medicaid
- Help qualified patients apply for financial assistance through the Thompson Cares Fund
- Connect patients with transportation resources
- Refer patients to other community agencies

Counseling

Cancer is both a physical and emotional fight, which is why Thompson Cancer Survival Center offers free counseling services to patients from a licensed clinical social worker.

What does our counseling program offer?

- Learn new ways to cope with your cancer diagnosis and treatment
- Manage emotions such as anxiety and depression
- Gain expertise on how to talk with family and friends about cancer

How does the program work?

Together, you and your counselor will assess your emotional needs and set goals. Meetings typically occur once per week in one hour sessions. Thompson Cancer Survival Center's counseling program is considered a short-term service, but referrals can be made to outside providers if you feel you need additional counseling.

How do I get started?

- Ask for a referral from your doctor or nurse practitioner.
- Once a referral is made, the counseling office will contact you to set up an initial appointment and determine a location for each counseling session.

For more information, call **(865) 331-1757**.

Nutrition Services

Good nutrition helps the body withstand stress, recover from surgery more quickly, have more energy and stamina, and decrease the risk of infections and other illnesses. It is important for cancer patients to maintain adequate nutrition throughout the course of treatment for optimal performance.

TCSC has registered dietitians on staff to help patients with nutritional needs. They will collaborate with the medical team to optimize nutritional status throughout treatment and recovery. They help patients understand what to eat during treatment and how to cope with nutrition-related side effects.

Genetics Clinic

Genetic Counseling for Hereditary Cancer

Does cancer run in my family?

All cancers can be organized into three groups:

- **Sporadic cancer:** Caused by environmental factors, aging, and chance
- **Familial cancer:** Caused by a mixture of environmental factors and genetics
- **Inherited Cancer:** Caused by a genetic predisposition to cancer which can be passed down through generations in a family

Who might have a genetic predisposition to cancer?

There are several "red flags" which are concerning for inherited cancer, including: early age at diagnosis, multiple tumors, and multiple generations affected by cancer in the same family. You should consider genetic counseling if you have the following:

- Breast, colon, or uterine cancer diagnosed before age 50
- Ovarian cancer at any age
- Two separate primary breast cancers in one person
- Male breast cancer
- Two separate colon cancers, or both colon and uterine cancer, in the same person
- The same or related cancers (such as colon, uterine, breast, or prostate) affecting multiple people or generations in a family
- Pancreatic cancer at any age
- Greater than 10 colon polyps in a single person
- A genetic difference (mutation) previously identified in the family
- Metastatic or high grade prostate cancer at any age
- Colon or uterine/endometrial cancer with abnormal MMR

What to expect in a genetic counseling appointment

Genetic Counselors are healthcare professionals with specialized training in medical genetics and counseling. The goal of every genetic counseling appointment is to provide patients with the information and support they need to make decisions about genetic testing that are best for themselves and their families. During a genetic counseling appointment, you can expect to discuss:

- **Family history:** The genetic counselor will take a very detailed family history of cancer, including what type of cancer a relative had, how old they were when they were diagnosed, and what treatment they had. This information acts as clues as to what, if any, genetic predisposition to developing cancer might be running in the family.
- **Cancer genetics:** The genetic counselor will provide education about genetics to facilitate understanding of a personal or family history of cancer. While the subject of genetics and genetic testing can seem intimidating, genetic counselors strive to make complex information understandable. Many patients find that learning more about genetics is empowering and relieves anxiety.
- **Genetic testing:** For various reasons, not all people who have genetic counseling will have genetic testing. The possible risks, benefits, and limitations of genetic testing will be thoroughly discussed. Genetic testing may help guide surgical decisions, cancer screening, or other cancer prevention decisions. Many people also pursue genetic testing to provide valuable information for their family members.
- **Support:** Because of the unique challenges families with a high risk for developing cancer face, they have unique support resources available to them. A genetic counselor can help identify trusted resources online and in the community which can help families adapt to a genetic diagnosis.

Is genetic testing painful?

Genetic testing is usually performed on a blood sample, similar to other laboratory tests a patient may have ordered. In the event that a patient is not comfortable having their blood drawn, a saliva sample may be used.

Are genetic counseling and genetic testing covered by insurance?

At Thompson Cancer Survival Center, patients are not billed for a genetic counseling appointment. The patient is not charged to speak with a genetic counselor. If genetic testing is ordered, the patient's health insurance provider will be billed for the cost of the genetic testing. Most insurance companies will cover genetic testing if a patient's personal and/or family history of cancer meets certain criteria. However, every insurance plan is unique. To determine if your plan provides coverage, please contact your insurance provider. If there is substantial out-of-pocket expense, financial assistance programs exist to help patients who do not have health insurance or have extremely high deductibles.

Making an appointment

In order to schedule a genetic counseling appointment, a physician or other authorized healthcare provider must sign a referral form and provide certain medical records. For more information on appointments, or to make a general inquiry, please contact the Thompson Genetics Clinic:

To learn more, call: **(865) 331-2350**.

Oncology Pharmacy

Patients may not realize the team of Oncology Pharmacists and Pharmacy Technicians play an extraordinary role in keeping them safe and moving their treatments forward.

The Oncology Pharmacists' extensive education and training prepare them with an in-depth knowledge of treatment medicines as well as the ways these medicines and targeted therapies can affect patients. They understand treatments' impact in terms of interactions with other things, impact on patients' other diseases or health issues, as well as spotting and managing side effects, and suggestions for navigating the costs of therapies. Oncology pharmacists are also involved in developing practice processes and policies, managing investigational therapies and collaborating with the clinical research team. Not only do they provide patient education, but they deliver important training to the whole medical care team to ensure the team stays up to date with the latest developments.

Cancer medications are made, or compounded, of different ingredients at or close to the time of use. At Thompson Cancer Survival Center Infusion Clinics, the Oncology Pharmacists and Pharmacy Technicians use their expert knowledge to keep patients safe in many ways and go above and beyond normal safety requirements. The pharmacists make the patients' medications specifically for each individual. They monitor and account for the patient's weight and lab values on the actual day of treatment to make dose modifications as needed. Our Pharmacy Technicians have received special training learning how to mix chemotherapy or targeted treatments. While those drugs are being made, the overseeing pharmacist is making sure the correct medication is picked, the correct dose is removed from the vial, the correct fluid bag is selected, and the necessary pieces are all attached.

The extra steps and double or triple checks our team of Oncology Pharmacists and Oncology Pharmacy Technicians consistently take to ensure patient safety is another asset that sets Thompson apart as a leader in clinical care.

Nurse Navigation

Nurse Navigation

Thompson Cancer Survival Center offers our patients access to a personal nurse navigator, who walks with you every step of the way, from diagnosis and through treatment.

What is a nurse navigator?

Your nurse navigator is specially trained in cancer care and will guide you with education, help with medical team communication, and ensure you understand your tests and procedures. Your navigator will also help you manage side effects of treatment and offer support and encouragement along the way.

Your nurse navigator can:

- Help you understand your diagnosis and treatment options
- Provide education so that you can make informed choices
- Coordinate care with your medical team to relieve the emotional burden that often comes with a cancer diagnosis
- Enhance your communication with your physicians and other care providers
- Ensure your questions and concerns are successfully answered
- Advocate for you and stand by you through your cancer journey

Multidisciplinary Clinics

Multidisciplinary Clinics

To successfully treat cancers of the breast and chest, a variety of cancer specialists must collaborate effectively. We are proud to offer multidisciplinary clinics for our breast and chest cancer patients, which brings the entire team of specialists into a single office visit. That means a communication process that might otherwise take weeks is completed in a single day, allowing treatment to begin more quickly.

A nurse navigator organizes the meeting, during which a team of physicians discuss each case and determine the best treatment option. Following the meeting, each specialist meets individually with the patient to explain treatment choices and answer questions. In most instances, patients will meet with a medical oncologist, a radiation oncologist, a surgeon, and other specialists participating in the treatment plan. The nurse navigator helps patients understand the treatment plan, schedule subsequent care and services, and serves as the patient advocate throughout treatment.

Your Multidisciplinary Team Includes:

- Medical Oncologist
- Radiation Oncologist
- Surgical Oncologist/Surgeon
- Interventional Radiologist/Radiologist
- Pathologist
- Other physicians, depending on your cancer diagnosis
- Social Worker
- Nutritionist
- Genetic Counselor
- Clinical Trial Nurse
- Oncology Nurse Navigator

For more information about our multidisciplinary clinics, call **(865) 331-2559**.

Clinical Research

Clinical trials are research studies designed to discover new ways to treat different cancers, and directly impact the number of new therapies and treatments available to fight cancer. Today's trials are tomorrow's standard of cancer care.

Thompson was the first to bring cancer clinical trials to East Tennessee more than 25 years ago. Our oncologists are certified to participate in clinical trials and work with multiple cancer research groups to bring innovative treatments to East Tennessee. In addition, we partner with pharmaceutical companies to give our patients access to new treatments not otherwise available. We offer clinical trials because they often lead to better ways to diagnose, treat, and prevent cancer, allowing people to live healthier and longer lives. Ask your doctor if a clinical trial might be right for you.

To learn more about Clinical Trials, call **(865) 331-1812**.

For more information, visit www.ThompsonCancer.com/clinical-trials.

Resources

Thompson Cancer Survival Center Blog

Our team of oncology experts works diligently to educate our patients and their family members about cancer-related topics, including nutrition, genetic counseling, emotional well-being, pharmacy, clinical research, and more! You can access these valuable resources at www.ThompsonCancer.com/blog.

Financial Assistance

Thompson Cares Fund

The Thompson Cares Fund exists through donations made by caring TCSC employees and other generous individuals. This fund is specially designated to provide temporary financial assistance to TCSC patients for certain costs or expenses that occur as a result of their cancer , but may not be used to pay medical expenses. To qualify for assistance, the patient must be assessed by a TCSC social worker and be eligible for this aid. For more information, please contact our Patient and Family Services Department at **(865) 331-1757**.

Resources (continued)

Home Care

Covenant HomeCare offers a complete range of services for transitional or continued care. Our staff of highly trained healthcare professionals provides care on an intermittent basis under the guidance of your physician. Home health services may include skilled nursing care, certified nursing assistants, physical therapy, speech therapy, occupational therapy, medical social services and other specialized programs. For more information on Covenant HomeCare, please call **(865) 374-0600** or **(888) 719-8087**.

Hospice

Covenant Health also provides compassionate care for people facing life-limiting illnesses with a prognosis of six months or less to live. Hospice allows terminally ill patients and their families to remain together in the comfort of their home, where the focus is on relief of pain and other uncomfortable symptoms. Covenant Health hospice staff members are available 24 hours a day, seven days a week, to support the patient and the family during the end of life process.

For more information on Covenant Health hospice services, please call **(865) 374-0600** or **(888) 719-8087**.

Spiritual Resources

Websites

www.cancercare.org
www.caringbridge.org
www.cancerpatientadvocate.com
www.kidskonnected.org
www.ourjourneyofhope.com
www.thelydiaproject.org

Cancer Support Community of East Tennessee

The Cancer Support Community of East Tennessee provides a full range of support services for cancer patients and their families. They offer drop-in and on-going support groups, networking groups for specific types of cancer, educational workshops, stress management sessions, and lectures by experts in the field of oncology. The Cancer Support Community is located near the TCSC Downtown Knoxville location at 2230 Sutherland Avenue. Please call **(865) 546-4661** for more information, or visit their website at www.cancersupportet.org.

Oncology Rehabilitation Services

At Covenant Health Therapy Centers, physical therapy is available for all patients throughout the various phases of treatment and recovery. Cancer treatment may cause debilitating side effects. Fortunately, research has shown that physical therapy during and after treatment can help speed functional recovery, reduce pain and fatigue, as well as lower the risk of complications. It also helps patients and caregivers regain a sense of hope and independence.

Rehabilitation Benefits

- Build endurance and strength
- Reduce fatigue
- Reduce pain and nausea
- Increase flexibility and range of motion
- Improve balance to reduce falls and assist with walking
- Assistance with disability ratings
- Assistive device training
- Reduce anxiety and increase well-being
- Improve scar mobility

Services Provided

During the initial evaluation, the physical therapist will establish an individualized plan of care. Patient goals include improving range of motion, strength, and overall endurance. Other therapies that may also be recommended include:

- Lymphedema/Complex Decongestive therapy
- Occupational therapy for adaptive equipment and ADL management
- Driving evaluations
- Speech therapy for cognition, swallowing, and/or communication disorders
- Disability evaluations
- Cardiopulmonary rehabilitation
- Bowel and bladder retraining for both men and women
- Hyperbaric oxygen

Visit CovenantHealth.com/Therapy-Centers to learn more.

Your Current Medications

Please list every prescription and over-the-counter medication that you take, including vitamins and supplements.

Please update this regularly.

DAILY MEDICATIONS		
Medication	**Dosage**	**Reason**

MEDICATIONS TAKEN WHEN YOU NEED THEM (PRN)		
Medication	**Dosage**	**Reason**

Symptom Management

Introduction

Good nutrition, physical energy, adequate levels of blood cells, and appropriate care of your body will help you feel better during your treatment.

The side effects discussed in this section may be caused by chemotherapy treatments or radiation therapy. Side effects and their severity vary from patient to patient. Some people experience fewer side effects than others do. Others may have more severe side effects that last for a longer time. Good nutrition helps your body withstand stress, recover from surgery more quickly, maintain energy and stamina, and helps decrease the risk of infections and other illnesses. Cancer patients need to eat properly during their treatment, but side effects make this a challenge. Our registered dietitians can meet with you to discuss your specific nutritional needs and are available to answer any questions.

The staff at Thompson Cancer Survival Center is always here to answer your questions, and we want to know of any side effects that you are experiencing. Should you have any questions regarding specific nutrition or dietary questions, please do not hesitate to call our office at **(865) 331-1757**.

Your nurse or dietitian will check the box beside any side effect that you might experience with your particular treatment. This does not guarantee that you will have this side effect, it is only an indication of a possible side effect.

Nausea & Vomiting

Nausea means being sick to your stomach. Nausea can happen even if you are not thinking about food. Nausea can be caused by certain tumors, radiation, chemotherapy, medications, or by a virus or infection. Certain pain medicines taken on an empty stomach can cause nausea. Being dehydrated may cause feelings of nausea as well.

What TO do:

- Make sure your doctor and nurse are aware of your nausea.
- Take anti-nausea medicines as directed by your doctor or nurse (usually 1 hour or 30 minutes prior to a meal).
- Eat bland foods, such as crackers, toast, and potatoes.
- If nausea occurs only between meals, eat frequent small meals, and a snack at bedtime.
- Eat cold or room temperature food to decrease smell and taste. Avoid food aromas.
- Drink cold, clear liquids.
- Get fresh, cool air.
- Wear loose, comfortable clothing.
- Experiment with food flavorings and seasonings.

You will be receiving:

_____

_____

_____

_____

You may experience:

- ☐ **Constipation**
- ☐ **Diarrhea**
- ☐ **Dry mouth**
- ☐ **Fatigue**
- ☐ **Hair loss**
- ☐ **Loss of appetite**
- ☐ **Low blood counts**
- ☐ **Mouth sores**
- ☐ **Sore throat**
- ☐ **Nausea**
- ☐ **Vomiting**

The following side effects are not covered in this booklet, but you may experience them. If you have any of these, please discuss with your physician to see if anything can be done to lessen the side effect.

- ☐ **Eyes may tear excessively**
- ☐ **Discoloration of veins**
- ☐ **Headaches**
- ☐ **Nail discoloration or brittleness**
- ☐ **Numbness and tingling in hands and/or feet**
- ☐ **Sensitivity to sunlight**
- ☐ **Rash**
- ☐ **Urine discoloration**

- Ask family members and friends to avoid using perfumes, perfumed soaps, scented candles and room fresheners around you.
- Try to keep track of when your nausea occurs and what causes it (specific foods, events, and surroundings). If possible, make appropriate changes in your diet or schedule.
- Try to eat lightly and not come in with an empty stomach, but avoid eating right before treatment if nausea occurs during radiation therapy. Consider carrying crackers or dry cereal, along with a drink, to snack on right after radiation treatment.
- Try lying on your left side.

What NOT to do:
- Do not assume that nausea and vomiting always follow chemotherapy or radiation.
- Do not drink only clear liquids for more than two days in a row unless instructed to do so.
- Do not drink large amounts of liquid at meal time.
- Do not lie flat on your back for at least two hours after eating.

Good Food Ideas:
- Saltines
- Potatoes
- Dry cereal
- Cottage cheese
- Oatmeal without fat
- Canned fruit
- Ginger snaps
- Apple slices
- Non-fat yogurt
- Tea
- Llemonade
- Grape juice
- Gingerale
- Sprite™
- Sorbet (italian ice)
- Plain rice
- Toast
- Bagels
- Grits
- Eggs cooked
- Bread sticks
- Watermelon
- Angel food cake
- Sports drinks
- Ginger tea*
- Apple juice
- Buttermilk
- Cranberry juice
- Popsicles

Foods that may cause problems:
- Greasy or fried foods
- Spicy foods
- Foods with strong odors (cooked onions, broccoli, greens, bacon, and coffee)
- Hot foods

If the smell of food makes you feel nauseated:
- Let someone else do the cooking.
- Sit in another room or take a walk while food is being prepared.
- Avoid the smell of brewing coffee.
- Use prepared foods from the freezer that can be warmed at low temperatures.
- Use the microwave when cooking to decrease cooking smells.
- Use foods that can be served cold.

***Ginger may help reduce nausea.**
To make ginger tea: grate fresh ginger root and mix 1 teaspoon to 1 tablespoon in 1 cup hot water, steep 10-15 minutes and strain.

• • •

You can also try nibbling a piece of Japanese pickled ginger or a piece of crystallized ginger candy (available at oriental markets or health food stores).

Vomiting

What TO do:
- Avoid food aromas.
- Request that nausea medications be given in a form that doesn't have to be swallowed.
- Continue trying to drink fluids. Aim for a half cup every hour.
- Try eating ice chips, frozen juice chips, or popsicles.
- When you feel better, advance to dry toast, saltines, or rice.
- If you are vomiting, continue to try to sip clear liquids. As you are able, try to get something on the stomach but avoid dairy products. Eat small amounts and eat lightly.

What NOT to do:
- Do not lie flat on your back.
- Do not eat your favorite foods during times that you are nauseated/vomiting. You may later find yourself "turned off" by these foods.

When to call the doctor:
- If you worry that some of the vomited material has been inhaled (into your lungs).
- If you vomit more than three times an hour for three hours or more.
- If any blood or material that looks like coffee grounds appears in your vomit.
- If you drink less than six cups of liquid in a day for two days in a row.
- If you cannot eat solids after two days.
- If you cannot take your medications.

What to eat if you are vomiting:

Vomiting: only clear liquids.

After the vomiting has stopped and you can keep down liquids, try advancing to the following:
- Crackers
- Toast
- Mashed potatoes
- Rice
- Full liquids

If you can keep down liquids and bland solids, give your system a chance to recover (12-24 hours) before eating a high-fat or rich meal.

Good transition foods are:

- Macaroni and cheese
- Cottage cheese
- Canned fruit
- Lean meats
- Bread
- Cooked vegetables
- Tuna fish
- Soups

Clear Liquids

- Soft drinks
- Sport drinks
- Tea
- Coffee
- Popsicle
- Jell-O
- Sorbet
- Broth
- Bouillon
- Apple juice
- Lemonade
- Consommé
- Kool-Aid

Full Liquids

- Milk
- Milk shakes
- Creamed soups
- Sherbet
- Pudding or custard
- Cheese soup
- Orange juice
- Tomato juice
- Vegetable juice
- Pasteurized eggnog
- Ice cream
- Ice milk
- Strained orange juice
- All fruit juices and nectars
- Liquid supplements (Ensure, Boost, etc)
- Grape juice

Dry Mouth or Thick Saliva

Dry mouth may be caused by chemotherapy or certain medications. Radiation therapy to the head and neck often causes dry mouth and/or thick, ropey saliva. Decreased flow of saliva can make chewing and swallowing difficult. A dry mouth cannot taste foods normally.

What TO Do:

- Sip water frequently.
- Keep your lips moistened with lip balm or Vaseline™.
- Try sweet or tart beverages or foods.
- Keep your mouth clean by using a rinse of 1 teaspoon of baking soda and 1 teaspoon salt in 1 quart of warm water.
- Floss regularly.
- Use alcohol free mouthwashes (Biotene or Oasis).
- Use a humidifier at night to moisten room air.
- Use a straw when drinking.
- Cut food into small pieces.
- Gargle with club soda or ginger ale if mucous is thick or if saliva sticks to your throat.
- Use oral moisturizers if your saliva is low:
  - Mouth Kote
  - Oasis
  - Biotene Oral Balance
- If you have had salivary glands removed, you may need a saliva substitute:
  - NeutraSal
  - Salivart
- Chew sugar-free gum or candy to stimulate saliva production.

Dry Mouth

What NOT to do:

- Do not drink alcoholic beverages or use tobacco.
- Do not use alcohol-containing mouthwashes (Listerine, Scope, etc.).

Good Food Ideas For Dry Mouth:

- Any kind of moist food or food with a gravy or a sauce
- Soak or dunk foods in milk, soup, broth, or coffee
- Add mayonnaise, sour cream, or butter to help foods "slide" down
- Casseroles
- Cooked vegetables
- Milkshakes or liquid supplements
- Lemonade
- Soups
- Stews
- Macaroni and cheese
- Baby foods
- Puddings
- Jell-O salads
- Thinned hot cereals
- Pancakes with extra syrup
- Soup beans
- Lemon juice, vinegar, or sour salad dressings

Poor Appetite/Weight Loss

Weight loss during treatment is common. There are a number of reasons for weight loss.

What TO do:

- Determine the main cause of eating less – nausea, pain, depression, etc., and make changes to alleviate these problems
- Make an appointment with your doctor, nurse, dietitian, social worker or chaplain
- Drink extra fluids
- Substitute fluids that contain calories for water
- Eat high calorie foods
- Drink high-calorie and high-protein liquid supplements
- Eat on a schedule throughout the day
- Eat your favorite foods
- Take advantage of times when you are hungry
- Eat a big breakfast
- Eat several small meals each day

What NOT to do:

- Do not rely on vitamins. Vitamin pills or herbs alone will not make you gain weight.
- Do not diet. Even if you are overweight, you do not need to lose weight during your cancer treatment. Weight lost during treatment is usually muscle, not fat! Losing muscle can make you feel weak.

When to call the doctor:

- If you lose more than five pounds in one week
- If you feel dizzy

Quick & Easy Snacks

- Applesauce
- Bread, muffins and crackers
- Popcorn
- Cakes and cookies
- Granola
- Cereal
- Cheese
- Cheesecake
- Chocolate milk
- Cream soups
- Cheese dip
- Bean dip
- Fruit
- Gelatin salad
- Hard boiled eggs
- Deviled eggs
- Ice cream
- Yogurt and frozen yogurt
- Juices
- Sandwiches
- Milk shakes
- Instant breakfast
- Nuts
- Peanut butter
- Chips
- Pita bread with hummus
- Pizza
- Puddings and custards

How to Increase Calories:

Add the following items:

- Butter and margarine
- Whipped cream
- Cream cheese
- Heavy cream
- Mayonnaise
- Salad dressing
- Sour cream
- Honey
- Jam
- Sugar
- Granola
- Peanut butter
- Eggs
- Dried fruits
- Nuts
- Avocado
- Ice cream

How to Increase Protein:

Add the following foods:

- Hard or semisoft cheeses
- Cottage cheese or ricotta cheese
- Milk or soy milk
- Powdered milk added to milkshakes, casseroles, soups, mashed potatoes
- Puddings
- Custards
- Yogurt or frozen yogurt
- Nuts, seeds, and wheat germ
- Eggs
- Beans and legumes
- Meat and fish
- Peanut butter
- Liquid supplements (Ensure, Boost, etc.)
- Protein powder

Symptom Management *(continued)*

300 – 400 Calorie Snacks and Mini Meals:

- 1 liquid supplement + ½ cup ice cream
- 2 deviled eggs
- 1/3 cup raisins + ½ cup juice
- 1 cup whole milk and ½ peanut butter and jelly sandwich
- 1 cup buttermilk + 3 inch square of cornbread
- 1 cup ice cream
- ½ large bagel with 2 tablespoons of cream cheese and ½ cup juice
- 2 ounces of cheese + 4 Ritz crackers
- 1 cup cottage cheese + ½ cup peaches in heavy syrup
- Large blueberry muffin with 1 tablespoon of butter + ½ cup juice
- 2 ounces of roast beef + 1 slice of bread
- 1 ½ cup cold cereal + 1 cup whole milk
- ¼ cup nuts + 1 cup ginger ale
- ¾ cup prepared pasta salad
- 1 slice pepperoni pizza
- 1 cup of spaghetti + 1 piece of garlic bread
- 1 cup oatmeal + 2 teaspoons sugar and 1 teaspoon of butter
- 1 hotdog and bun
- ½ small hamburger and ½ cup soda
- ¾ cup beans + 1 slice of bread
- ¾ pot pie
- Little Debbie oatmeal pie + ½ cup milk
- McDonald's milkshake
- Medium Wendy's frosty

Liquid Supplements

Lactose Free (Milk-free):

- Boost® & Boost Plus®
- Ensure® & Ensure Plus®
- Ensure Clear and Boost Breeze
- Premier Protein
- Store brand equivalents

Milk-Based Liquid Supplements:

- Carnation Instant Breakfast®
- Slim-Fast®

Special Formulas for the Diabetic:

- Glucerna™ shake
- Boost Glucose Control
- Carnation Essentials® (no sugar added)

Other Ideas:

- Milkshakes (fast-food or homemade)
- Any type of "weight-gain" powder mixed with whole milk
- Ask for high calorie shake recipes

Ways to make liquid supplements taste better:

- Mix with ice cream and milk to make a shake.
- Pour into a cup with a lid and drink through a straw if the smell of the supplement bothers you.
- Add fruit to make a fruit shake or smoothie. Fresh, frozen, or canned fruits will work. Try bananas, peaches, blueberries, raspberries, strawberries, or pineapple.
- Add flavorings or extracts such as vanilla, almond, cocoa, or peppermint.
- Peanut butter mixed in chocolate or vanilla shakes adds flavor, calories, and protein.
- Add a tablespoon of prepared coffee or 1 teaspoon of instant coffee granules to a chocolate shake to make a mocha shake.
- Add honey or pancake syrup to fruit and yogurt smoothies.
- A package of Instant Breakfast, a small package of instant pudding, or 1/4 cup whipped cream can add extra calories and flavor.
- NEVER add a raw egg to a milkshake!

Sore Mouth & Sore Gums

Some chemotherapy treatments and radiation to the mouth or cheeks can cause your mouth to become sore. Sometimes you may see open sores, other times your mouth, gums or tongue may feel very tender.

What TO Do:

- Eat soft, moist foods.
- Puree foods in the blender.
- Use a straw when drinking.
- Wear dentures only while eating. Leave them out the rest of the day to take pressure off your gums.
- Brush teeth, partials, and dentures after each meal.
- Ask your doctor or nurse about special medications to decrease mouth pain.
- Keep your lips moist with lip balm.
- Rinse your mouth with 1 teaspoon salt and 1 teaspoon baking soda mixed with 1 qt. warm water. Omit salt if painful.
- Keep your mouth clean. If regular toothpaste is too strong, you can try Toms of Maine toothpaste, Natural Dentist Toothpaste, or baking soda.
- Drink liquid supplements or milkshakes if your mouth is too sore to eat.
- Drink soft, liquefied foods from a cup. Avoid using a spoon.
- Serve warm or room temperaure foods.
- Avoid hot or very cold foods.

When to call the doctor:
- If you are running a fever.
- If white patches appear on your tongue, gums or inside the mouth.
- If your gums bleed.
- If you have a visible sore on your gums, tongue or sides of your mouth.
- If you have pain in your mouth.

What to AVOID:
- Salt
- Cinnamon.
- Hot spices: pepper, curry powder, chili powder, horseradish, cloves, and salsa.
- Acidic foods: pickles, orange juice, grapefruit, tomato juice and pineapple.
- Hard toothbrushes.
- Hard flossing in sensitive areas.
- Salty foods: pretzels, pickles, chips.
- All alcoholic beverages, including beer and wine.
- Foods with small seeds: blackberries, figs, strawberries and grapes.
- Mouthwashes with alcohol: Listerine, Scope, etc.
- Crunchy, scratchy foods: chips and pretzels and popcorn.

Sore Throat, Sore Esophagus and Problems Swallowing

Radiation treatment to the lung area or the throat may cause a sore throat or a sore esophagus. Many patients state it feels as if their food "sticks" in their lower throat. Prolonged vomiting may also cause a sore throat. Some patients also experience problems swallowing. Difficulty swallowing can be scary and frustrating.

What TO Do:
- Eat slowly. Take frequent sips of a beverage between bites.
- Chew food thoroughly or cut food into small pieces.
- Eat in a relaxed environment.
- Try tilting your head from side to side, and front to back while swallowing, or try tucking in your chin.
- Eat six small meals each day.
- Talk to your doctor about liquid medicines that you can swallow to decrease pain.
- Talk to your doctor to be sure the sore throat is from treatments and not an unrelated problem like an infection or a virus.
- Eat soft, moist foods that will "slide" down your throat.
- Try a spoonful of honey to soothe your throat.
- Alter the texture (thickness or thinness) of your foods. Many people have problems swallowing thin liquids like water. Others have problems with crumbly foods like cornbread, or stringy foods like beef.
- Use a liquid multivitamin if you are unable to eat a wide variety of foods.
- Aloe vera juice may help soothe throat pain

What NOT to do:
- Eat in a hurry.
- Try to get all of your calories in one or two meals.
- Eat hard, crumbly foods (dry cornbread, kernel corn).
- Eat while lying down.

When to call the doctor:
- If you are running a fever.
- If you are unable to swallow.
- If you have episodes of choking.
- If you vomit any bloody material
- If swallowing problems worsen suddenly.
- If swallowing problems appear suddenly with a change in behavior or weakness.

A NOTE TO FRIENDS AND FAMILY MEMBERS:
Some patients are embarrassed by their struggles to eat. Ask that visitors leave at mealtime.

Soft Foods

Meat:
- Meat casseroles
- Potted meats
- Eggs
- Soft, chopped meats with gravy
- Thin sliced deli meats
- Processed meats (hot dogs)
- Fish

Vegetables & Fruit:
- Mashed potatoes
- Dumplings
- Soft noodles
- Banana
- Canned fruits
- Soft "soup beans"
- Refried beans without added spices
- Winter squash
- Pureed foods
- Fruit nectars
- Fruit and yogurt "smoothies" made from pureed fruit and cottage cheese
- Cooked soup blended in a blender and thickened with vegetables or meats
- Creamed, chopped vegetables
- Soft cooked fruit (apples or pears)

Starches:
- Grits with cheese or butter
- Cold cereals softened with milk
- Pancakes with extra syrup
- Soft bread or biscuits with gravy, jelly or butter
- Soft noodles or pasta with butter
- Rice

Dairy:
- Cottage cheese
- Yogurt
- Ice cream
- Ricotta cheese
- Milk
- Pudding
- Custard
- Buttermilk

Other:
- Baby food
- Casseroles
- Tofu
- Creamed soup

If liquids are too thin:
- Add Thick-It™ thickener (available through retail pharmacies)
- Add Carnation Instant Breakfast to milk
- Try nectars instead of juices
- Blend 1/2 banana with juice to thicken
- Add small amount of yogurt to juices
- Drink liquid gelatin or Jell-O®

Altered Taste

Some chemotherapy drugs and radiation to the head, neck or chest can cause changes in your sense of taste. A dry mouth can cause a decrease in taste. Some patients experience a bad taste in their mouth. This bad taste may be salty, bitter, metallic, "like old sweat socks" or "like Clorox." Others have "mouth blindness" where no food has any taste at all.

Good Food Ideas:

As long as you do not have sores in your mouth, you can eat a wide variety of spices. Try stronger flavored foods such as:

- Spaghetti
- Lasagna
- Pizza
- Barbecue
- Tacos
- Chinese, Indian , Italian or Thai foods
- Sour foods: Lemonade, lemon pie, sauerkraut and pickles.

Hints for bad tastes:	
Beef tastes bad/ funny	Try chicken, turkey or fish.
All meat tastes funny/bad	Try cold cuts or marinate your meat in salad
Everything tastes metallic	Avoid using metal forks and spoons; use plastic utensils. Mint helps cover up themetallic taste. Try mint tea, mint ice cream, mint jelly, or gum.
Everything tastes salty	Sprinkle sugar or honey on tomatoes, milk, soup, etc.
Everything is too sweet	Sprinkle salt. Try it on fruit, ice cream, in your Boost, etc.

Some ideas to increase food flavors:	
Potato	Garlic, ranch dressing, vinegar, barbecue sauce, hot sauce, or relish.
Meat	Dip in teriyaki sauce or barbeque sauce. Marinate meats in wine, fruit juice, or salad dressings.
Vegetables	Garlic, vinegar, onion, jalapeno, basil or any other spice you enjoy.

Diarrhea

Diarrhea is the passage of loose or watery stools three or more times each day with or without cramping or pain. The water in the intestine is not being absorbed back into the body. Diarrhea may be caused by viral or bacterial infection, chemotherapy, radiation therapy to the abdomen, medication, surgery, anxiety, some herbal or vitamin supplements, and tumor growth. Diarrhea caused by chemotherapy or radiation may continue for up to three weeks after treatment.

What TO do:
- Eat foods high in protein, calories, and potassium, but low in fiber.
- Try to drink 3 quarts of fluid daily, and sip all fluids slowly.
- Make sure you drink a variety of beverages, not just water.
- Eat 6 small meals instead of 3 large meals.
- Monitor amount and frequency of bowel movements.
- Get plenty of rest.
- Eat soft foods that contain pectin (applesauce, bananas, and tapioca pudding.)
- Take medication for diarrhea as ordered by your doctor or nurse.

- Relax and be still after eating.
- Always report diarrhea to the doctor's office.
- Ask if a probiotic would be helpful.

What NOT to do:

- Do not eat foods that will stimulate or irritate the digestive system, including:
  - High fiber foods (whole grain or bran)
  - Fried or greasy foods
  - Rich pastries, candy, or jelly
  - Strong spices and herbs
- Avoid strong vitamins
- Avoid herbal pills
- Do not drink caffeinated beverages
- Avoid tobacco products
- Do not eat very hot or cold foods
- Avoid excessive intake of dairy products. You may try acidophilus milk, yogurt, and buttermilk.
- Do not take only clear liquids for more than 2 days in a row unless instructed to do so.

When to call the doctor:

- If you have six watery bowel movements per day.
- If you lose 5 pounds after the diarrhea starts.
- If you do not urinate for more than 12 hours.
- If you have a fever.
- If your abdomen suddenly becomes puffy, bloated, or hurts.
- If your stool is white or appears greasy.

Constipation

Constipation may be caused from chemotherapy, radiation therapy, inactivity, medication, the disease process, or changes in your diet.

Signs of constipation:

- Small, hard bowel movements
- Leakage of soft stool resembling diarrhea
- Stomach ache or cramps
- Passing excessive amounts of gas or belching frequently
- Feeling of fullness or discomfort
- Belly appears bloated or puffy

What TO do:

- Increase the amount of fiber in your diet (unless you are receiving radiation treatments to your abdomen or pelvic area where you may experience diarrhea).
- Have a warm drink in the morning (hot tea, cocoa or coffee).
- Use a stool softener or laxative as recommended by your doctor or nurse.
- Go to the bathroom whenever you have the urge.
- Eat at regular times each day.
- Get regular exercise.
- Ask dietitian for stewed fruit recipe.

What NOT to do:

- Do not strain to move your bowels.
- Do not use over-the-counter laxatives or enemas unless discussed with your doctor or nurse.
- Limit intake of foods that may cause constipation (chocolate candies, cheese, and eggs).
- If gas is a problem, avoid carbonated beverages, chewing gum, and drinking through a straw.
- Do not use mineral oil for a laxative as it can bind with medications and vitamins.
- Do not use herbal tea laxatives.

When to call the doctor:

- If you have not had a bowel movement in more than three days.
- If you notice blood or green mucous in your stool.
- If you have cramps or vomiting for more than 24 hours.
- If you cannot move your bowels within one or two days after taking a laxative.

A SPECIAL NOTE:
If you are eating very little, your bowels will not move regularly. Less in means less out!

NATURE'S LAXATIVE
• 1 cup applesauce
• 1/2 cup bran cereal
• 1 cup prune juice
Mix above ingredients well. Eat 1/4 cup each day. This is a good spread on toast or bagels.

(Try to drink a cup of fluid with each 1 tbsp. serving of this laxative. Keep laxative refrigerated).

Symptom Management *(continued)*

DIARRHEA	
GOOD Food Ideas:	**Foods to AVOID**
Meats and High Protein Foods	**Meats**
• Baked or boiled chicken • Cottage cheese • Fish • Smooth peanut butter • Cream cheese • Eggs	• Fried meats • Barbeque • Bacon • Country ham • Sausage • Pepperoni • Smoked or cured meats
Starches	**Starches**
• White bread • Noodles • Rice • Potatoes • Tapioca pudding • Bananas • Bagels • Oatmeal • Cream of wheat • Biscuits • Rolls • Crackers (no whole wheat)	• Wild or brown rice • Whole grain or whole wheat bread • Rich pastries
Liquids	**Liquids**
• Decaffeinated tea • Decaffeinated coffee or soda • Jell-O • Warm soup or broth • Sports drinks	• Prune juice • Grapefruit juice
Vegetables	**Vegetables**
• Soft cooked vegetables • Green beans • Peas • Asparagus • Tomato juice • Beets • Cooked tomatoes • Tomato sauce • Mushrooms	• French fries • Raw vegetables • Onion rings • Hominy • Sweet potato • Dried beans • Cauliflower • Broccoli • Cabbage • Corn • Salads
Fruit	**Fruit**
• Applesauce • Orange juice without pulp • Canned fruits without skins • Bananas	• Coconut • Fruit with skin • Raisins and other dried fruits
	Other:
	• Popcorn • Seeds • Nuts

High fiber, good food ideas:

Vegetables

- Kidney beans*
- Black-eyed peas*
- Navy beans*
- Broccoli*
- Brussel sprouts*
- Carrots
- Corn
- Green peas
- Potato with skin
- Cabbage*
- Cole slaw*
- Sweet potato
- Turnip greens

Fruit

- Apple with peel*
- Banana
- Blueberries
- Pear with skin*
- Orange
- Dates
- Raisins
- Strawberries

Bread, Cereal and Snacks

- Whole grain bread
- Whole wheat pasta
- Bran muffins
- Fig newtons
- Granola bars
- Popcorn
- Bran cereals (Fiber One, Raisin Bran, Bran Flakes and Uncle Sam cereal)

**These foods may cause gas.*

Ways to increase fluids – try to drink 8-10 cups of fluid a day:

- Water
- Milk
- Juice
- Coffee
- Tea
- Kool-Aid
- Lemonade
- Soups/broth
- Popsicles/juice bars
- Sports drinks
- Sodas
- Liquid supplements
- Jell-O
- Ice cream
- Sherbet or sorbet
- Juicy fruits (watermelon, cantaloupe, orange, peaches, pineapple, grapefruit, and tomatoes:

What if I can't eat at all?

People undergoing treatments for cancers of the mouth, throat, neck or esophagus may find that eating or drinking anything is very hard and painful. When a person cannot take in enough food to keep his or her weight up, the doctor may suggest a feeding tube. Most often a G-tube (gastrostomy) is suggested. A G-tube is a small tube that is placed through the abdominal wall and into the stomach.

Important facts about feeding tubes:

- **You can eat with a feeding tube if it is safe to swallow.**
- A feeding tube is sometimes used in addition to eating by mouth to help make sure that enough calories are consumed.
- No one will know that you have a feeding tube. The tube is small and can easily be hidden beneath a shirt.
- A feeding tube is not always permanent. As a person's swallowing improves and they eat more, a feeding tube is used less and less until it is no longer used at all – then it is removed.
- Administering feedings is not hard. A nurse will show you or a family member how to feed yourself .
- A feeding tube is not a punishment for not eating well. It is to help you feel stronger and get better quicker!

Hair Loss

Hair loss is a side effect of some chemotherapy. Chemotherapy results in atrophy (shrinking) of the hair follicle. The hair produced is weak and brittle and either breaks off at the surface of the scalp or is spontaneously released from the follicle. Loss of scalp hair varies from slight thinning to complete baldness.

What TO do:

- Use a mild protein-based shampoo and hair conditioner every 3-5 days, rinse well and pat dry.
- Use a satin pillow to decrease hair tangles.
- It is a good idea to purchase a wig before hair loss occurs so your natural hair color and style can be matched easily.
- Some insurance plans will help pay for a portion of your wig with a written prescription. Check with your nurse regarding this.
- Use a hairnet to minimize shedding of hair in bed or on clothes.
- Keep head covered in summer to prevent a severe sunburn and in winter to prevent heat loss.
- You may desire to wear a hat, scarf or turban to conceal hair loss. Such accessories are attractive as well as stylish.
- Always remember your hair will grow back after chemotherapy is completed. This is temporary hair loss.

What to Avoid:

- Avoid using an electric hair dryer, or use it only at a low setting.
- Avoid electric curlers and curling irons, hair clips, rubber bands, barrettes and bobby pins.
- Avoid hair sprays, hair dye and permanent solutions as they may increase the fragility of hair.
- Avoid excess combing and brushing of the hair. Use a wide toothed comb for combing.
- Avoid excessive shampooing.

Fatigue

Fatigue is a common problem for people with cancer. It can have many causes such as anemia, accumulation of waste products from the cell destruction caused by chemotherapy treatments, protein calorie malnutrition, disruption of sleep patterns, chronic pain, anxiety, depression, and the stress of coping with the disease.

What TO do:

- Going to bed earlier or getting up later is beneficial. Take a short (less than 30 minutes) afternoon nap if necessary. Maintain as closely as possible your activities according to your energy level. Gradually increase activity as tolerated.
- Drink 8-10 glasses of fluid a day, especially water, to decrease the accumulation of cellular waste products.
- Plan consistent periods of exercise if able, realizing your limitations.
- Talk with your doctor regarding your desire to work full or part-time. You may need to limit your work schedule during chemotherapy.
- Try to be active every two hours for short periods of time.

Bone Marrow Suppression and Low Blood Counts

The bone marrow is the place in the body where white blood cells, red blood cells, and platelets are made. White blood cells fight infection, red blood cells carry oxygen, and platelets help to clot blood and promote healing.

Chemotherapy and radiation therapy can affect the bone marrow and cause a decrease in the number of blood cells. These effects are usually temporary and manageable. Your doctor will take frequent blood tests to detect early signs of bone marrow suppression. It is not unusual for your blood cell count to decrease after a treatment session. It will usually return to normal before your next session. If not, treatment may be postponed.

Low White Blood Cell Count

A decreased number of white blood cells will make you more vulnerable to infections. Here are some things you can do to help:

- Avoid crowds and people with colds, infections, or contagious diseases such as chicken pox or flu.
- Watch for signs and symptoms of infection: redness, swelling, soreness, cough, loose bowels, a burning feeling when urinating, and fever.
- Do not take Tylenol to prevent fever.
- If you suspect an infection, take your temperature daily. Report a temperature of 100.5° F or above.
- Shower or bathe daily and pay special attention to cleansing your genital area.
- Wash your hands before meals and after using the bathroom.
- Protect your skin. Avoid cuts, scratches, and prolonged exposure to the sun. If your skin becomes dry or cracked, use lotion or oil to soften and heal it.
- Keep your mouth clean and moist. Good oral hygiene can help prevent mouth sores or infections. To prevent damage to your mouth avoid using a hard toothbrush. Inspect your mouth daily using a good light.
- Do not tear or cut your nail cuticles. Use cuticle cream and remover instead.
- Do not scratch or squeeze pimples.

Low Red Blood Cell Count

A decreased number of red blood cells (anemia) can make you feel tired, weak, chilly, dizzy, or short of breath. Here are some things you can do to help yourself feel better:

- Alternate rest periods with periods of activity.
- Elevate your head with several pillows if you find you are short of breath.
- Move slowly to avoid getting dizzy. When you get up in the morning, sit on the side of the bed for awhile before standing. If you find yourself continuing to get dizzy, let your doctor or nurse know.
- Add more green, leafy vegetables, liver, and red meats to your diet.
- Keep warm. Wear an extra sweater or jacket if you feel chilly.

Low Platelet Count

A decreased number of platelets may cause you to bruise or bleed easily. Here are some ways to avoid problems when your platelet count is low:

- Avoid cuts, scratches, burns, and bruising of the skin. Protect yourself by wearing gloves when gardening or reaching into the oven. Wear shoes or slippers to protect your feet. Be extra careful when using knives or tools. Use an electric razor to shave.
- Avoid constipation, straining, or blowing your nose too hard.
- When blood is drawn or injections given, apply gentle pressure over the needle site for three to five minutes to make sure the site will not bleed or bruise.
- Do not take any medication (aspirin or pain medication other than Tylenol/acetaminophen) without first checking with your doctor or nurse.
- Do not have any alcoholic drinks without first checking with your doctor or nurse.
- Avoid contact sports and other activities that might result in injury.

Signs and Symptoms to Report to Your Physician

- Temperature of 100.4 or greater
- Shaking chills with or without fever
- An abrupt change in mental function, confusion, difficulty remaining awake, or sudden unexplained increased irritability
- Sudden onset of severe headache or stiff neck not relieved by Tylenol
- Sudden onset of shortness of breath accompanied by chest pain and coughing
- Severe nausea and vomiting not relieved by prescribed medication
- Pain not relieved by prescribed medication or new pain that starts without warning or persists
- Sudden change in eyesight or blurred vision
- Loss of body coordination
- Loss of control of bowel or bladder
- Red pin point dots under the skin or bleeding from the gums, bowel or bladder
- Any condition that frightens or concerns you

Report to the Office As Soon As Possible...

- Sore throat, sore mouth, or pain with eating
- Swelling of feet and legs, unexpected weight gain
- Change in urination-frequency, burning, loss of control
- Head or chest congestion
- Difficulty swallowing, lack of ability to eat, weight loss
- Constipation or diarrhea
- Skin changes- itching, yellowing, redness, swelling, breakdown, rash and dryness
- Unusual drainage with an odor from any part of the body
- Need for increasing frequency of pain medication to control discomfort
- Other conditions that concern you

Report on Your Next Visit...

- Progressive weakness and changes in energy
- Progressive changes in hearing
- Numbness or tingling of fingers or toes
- Any condition that concerns you

Basic Cancer Terms to Know

Cancer terms may sometimes be difficult to understand. You may hear your doctor use certain medical terms, and you may not know what they mean. It is important to understand these terms, so you can make the best informed decision about your cancer treatment. If a member of your cancer care team uses a term you are unfamiliar with, please ask for clarification.

Acute: Symptoms that start and worsen quickly but do not last over a long period of time.

Adenocarcinoma: A form of malignant abnormality that develops in the cells lining glandular tissue.

Adjuvant therapy: Treatment given after the main treatment. It usually refers to chemotherapy, radiation therapy, hormone therapy or immunotherapy given after surgery to reduce the chance of cancer coming back.

Adrenal glands: Two small organs near the kidneys that release several different hormones including sex hormones.

Advance directive: Legal document that addresses the use of life support measures if required.

AFP (alpha-fetoprotein): An elevated level of AFP may indicate liver cancer or cancer of the ovary or testicle. Non-cancerous conditions may also cause elevated AFP levels. It is normally elevated in women who are pregnant.

Alopecia: Partial or complete loss of hair resulting from radiation or chemotherapy.

Analgesic: Any medication or treatment that relieves pain.

Anemia: A condition in which the decreased number of red blood cells may cause symptoms, including tiredness, shortness of breath and weakness, and pale colored skin.

Anorexia: Loss of appetite.

Antibody: A substance produced by the body to defend the body against infection.

Antiemetics: Drugs given to minimize or prevent nausea sensation and vomiting.

Antifungal: Drugs used to treat fungal infections.

Antineoplastic agents/chemotherapy drugs: Drugs that prevent, kill or block the growth and spread of cancer cells.

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

Biologic therapy: Treatment to stimulate or restore the ability of the immune system (the body's defense) to stop or slow the growth of cancer cells or help control side effects. (Also called biologic therapy, immunotherapy, or biologic response modifier [BRM] therapy.)

Biopsy: Removal of a tissue sample that is then examined under a microscope to check for cancer cells.

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 of the 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.

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.

Brachytherapy: Radiation treatment that uses radioactive pellets inserted into a flexible tube placed inside the tumor, tightly focused within the site of the cancer. This technique ensures the maximum radiation dose is given where one needs it most, while allowing little radiation to reach the healthy surrounding tissue.

Bronchoscopy: A type of endoscopy procedure used to visualize the inside of the airways for diagnostic and therapeutic reasons.

CA 125: A blood protein that can be measured and is an important tumor marker in ovarian cancer. Cancers of the uterus, cervix, pancreas, liver, colon, breast, lung and digestive tract can also raise levels of CA 125.

CA 15-3: This tumor marker is most useful in evaluating the effect of treatment for women with advanced breast cancer. Elevated levels are also associated with cancers of other parts of the body, such as ovary, lung and prostate, as well as non-cancerous conditions.

CA 19-9: This tumor marker is associated with cancers in the colon, stomach and bile duct. It can also be associated with non-cancerous conditions.

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

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

Carcinoma: Cancer that starts in skin or tissues that line the inside or cover the outside of internal organs.

CAT (computerized axial tomography) scan: An X-ray test that produces cross-sectional images of the body that are more detailed than standard X-rays.

Basic Cancer Terms to Know *(continued)*

CBC (complete blood count): A test to check the number of red blood cells, white blood cells and platelets in a sample of blood.

CEA (Carcinoembryonic antigen): Blood tumor marker. Colorectal cancer is the most common cancer that raises this tumor marker and other cancers can also raise the level.

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, Porta Cath, etc.)

Cervical nodes: Lymph nodes in the neck.

Chemoprevention: The use of drugs, vitamins or other agents to reduce the chance of developing cancer or having cancer come back.

Chemotherapy: Drugs used to destroy cancer cells by interfering with their growth and/or preventing their reproduction.

Chest tube: A flexible tube inserted between the ribs and into the space surrounding the lungs in order to drain air or fluid.

Chest X-ray: A picture of the chest taken with X-rays

Chromosome: A microscopic structure in the nucleus of a cell that contains genes.

Chronic: A disease or condition that persists or progresses over a long period of time.

Clinical trial: Also called "clinical study." Each trial tries to answer specific scientific questions and to find better ways to prevent, detect or treat cancer or to improve care.

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

Combination chemotherapy: More than one (generally between two and four) different anticancer drugs used together to treat cancer.

Complementary and alternative medicine (CAM): CAM is a term used to describe a diverse group of treatments, techniques and products that are not considered to be conventional or standard medicine. Specifically, complementary medicine is used in addition to conventional treatments (an approach that is also called integrative medicine). Alternative therapies are unproven treatments used instead of standard treatments.

Conformal radiation therapy (3D-CRT): Radiation treatment that uses sophisticated computer software to conform to the shape of the diseased area, sparing damage to normal tissue in the vicinity of treatment.

Curative treatment: A treatment intended to eradicate disease.

Cure: To fully restore health. This term is sometimes used when a person's cancer has not returned for at least five years after treatment.

Disease-free survival (DFS): The length of time after treatment during which no cancer is found (complete remission). This term can be used for an individual or for a group of people within a study.

Drug resistance: The result of cancer cells' ability to resist the effects of a specific drug.

Durable power of attorney: A legal document that gives a person or persons the authority to make decisions for another person.

Dysphagia: Difficulty swallowing either solids or liquids.

Dysplasia: An increase in both the number of cells in a tissue and in the size of those cells (a precancerous change).

Dyspnea: Difficulty or painful breathing; shortness of breath.

Dysuria: Difficult or painful urination.

Edema: The accumulation of fluid within the tissues in a part of the body.

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.

Erythrocytes: Red blood cells (RBC)are mature blood cells that contains hemoglobin to carry oxygen to tissues

Esophagitis: Inflammation of the esophagus (food pipe).

Estrogen receptor assay (ER assay): A test that determines if breast cancer is stimulated by the hormone estrogen.

Excisional biopsy: Surgical removal of an entire mass in order to determine what it is.

External beam radiation therapy (EBRT): Radiation therapy that is given by directing a beam of radiation at the cancer from a source located outside of the body.

Fatigue: A feeling of tiredness and lack of energy, related to cancer or cancer treatment or both.

Fine needle aspiration: A procedure in which a needle is inserted under local anesthesia to obtain a sample for the evaluation of suspicious tissue.

Frozen section: A technique in which tissue is removed, then quick-frozen and examined under a microscope by a pathologist.

Gene: The biologic unit of heredity that determines the traits a person gets from past generations.

Genetic testing: The analysis of a person's DNA to check for genetic mutations (changes) that carry an increased risk of or predisposition to cancer.

Granulocyte: A type of white blood cell that kills bacteria.

Hematocrit (Hct): The percentage of red blood cells in the blood.

Hematologist: A doctor who specializes in the problems of blood and bone marrow.

Hematuria: Blood in the urine.
Hemoccult (Guaiac test): A test that checks for hidden blood in the stool.

Hemoglobin: a protein in red blood cells that carries oxygen. A blood test can tell how much hemoglobin you have in your blood.

Hemoptysis: Coughing up any amount of blood.

Hormone: A substance that regulates growth, metabolism and reproduction and is secreted by various organs in the body.

Hormone therapy: Treatment that removes, blocks or adds hormones to kill or slow the growth of cancer cells. (Also called hormonal therapy or endocrine therapy.)

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.

Immunity (immune system): The body's ability to fight infections and disease.

Immunosuppression: Weakening of the immune systems causing a lowered ability to fight infection and disease.

Immunotherapy: The artificial stimulation of the body's immune system to treat or fight disease.

Infection: Inflammation in body tissue caused by microorganisms.

Infiltration: The leaking of fluid or medicines into tissues, which can cause swelling.

Infusion: The delivery of fluids or medications into the blood stream 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.

Integrative Medicine: is a system of comprehensive care that emphasizes wellness and healing of the whole person, with special emphasis on patient participation, and attention to mental and spiritual health. The knowledge and use of Complementary and Alternative Medicine (CAM) is an important aspect of integrative medicine.

Inoperable: Surgery is not the recommended treatment.

In-Situ: Being in the original position; not having been moved; not invasive.

Invasive cancer: Cancer that has spread outside the layer of tissue in which it started and is growing in other tissues or parts of the body. Also called infiltrating cancer.

Late effects: Side effects of cancer treatment that appear months or years after treatment has ended. This may include physical and mental problems, as well as development of a secondary cancer.

Leukocyte: See "white blood cell."

Leukopenia: A low number of white blood cells.

Living will: A document indicating the treatments a person will accept or not accept for use in the event that he or she is unable to communicate those wishes.

Localized cancer: Cancer that is confined to the area where it started and has not spread to other parts of the body.

Lymph node: Small glands located throughout the body that filter out and destroy bacteria, and that can collect cancer cells.

Lymphatic system: A network that includes lymph nodes 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. Commonly associated with breast cancer.

Lymphocytes: White blood cells that kill viruses and defend against the invasion of foreign material.

Malignant: Cancerous tumor/cells that have the ability to invade (grow into) surrounding tissue and metastasize (spread) to lymph nodes, and distant sites and organs.

Basic Cancer Terms to Know *(continued)*

Metastasis: The spread of cancer from where the cancer began to another part of the body. Cancer cells can break away from the primary tumor and travel through the blood or the lymphatic system to the lymph nodes, brain, lungs, bones, liver or other organs.

Monoclonal antibodies: Artificially manufactured antibodies specifically designed to find targets on cancer cells for diagnostic or treatment purposes.

MRI (Magnetic resonance imaging): A sophisticated technique to examine the body using powerful electromagnets, radio-frequency waves and a computer to produce internal pictures of the body.

Mucositis: Inflammation of the lining of the mouth and gastrointestinal tract.

Myelosuppression: A decrease in the production of red blood cells, platelets and some white blood cells by the bone marrow.

Needle biopsy: A procedure in which a needle is advanced into a tumor mass in order to obtain a small piece of the tumor.

Neoadjuvant therapy: Treatment given before the main treatment. It may include chemotherapy, radiation therapy or hormone therapy given prior to surgery to shrink a tumor so it is easier to remove.

Neoplasm: A new growth of tissue or cells; a tumor that is generally malignant.

Neutropenia: An abnormal decrease in the number of neutrophils in the blood. Neutrophils are a type of white blood cell that fights infection.

Oncogene: A normal gene that when mutated plays a significant role in causing cancer.

Oncology: The study of tumors.

Oncologist: A physician who specializes in treating cancer.

Palliative Care: Treatment of the physical, spiritual, psychological and social needs of a person with cancer. Relieving or soothing the symptoms of a disease of disorder. Its purpose is to improve quality of life.

Palliative treatment: Treatment aimed at the relief of pain and symptoms of disease, but not intended to cure the disease.

Peripheral neuropathy: Functional disturbances of the peripheral nerves sometimes caused by chemotherapy, accounting for symptoms such as numbness and tingling sensations in the hands and toes.

(PET) Positron emission tomography: A test that produces an image based on the uptake of glucose by a tumor and is used to determine if a tumor is a cancer and if a cancer has spread.

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.

Platelet count: The number of platelets in the blood sample.

Platelets: Cells in the blood that are important for blood clotting. Also called thrombocytes.

Pleural effusion: An accumulation of fluid within the pleural cavity (the space between the lungs and the interior walls of the chest).

Pneumonia: An infection within the lung.

Polycythemia: A condition in which there is an increase in the proportion of blood volume that is occupied by red blood cells (RBC).

Polyp: A growth of tissue protruding into a body cavity, such as a nasal or rectal polyp. It may be benign or malignant.

Port: A device usually implanted under the skin that is used for the infusion of drugs or fluid into the blood stream or for drawing blood for blood tests.

Precancerous: Changes in cells that may, but do not always, become cancer. Also called pre-malignant.

Predisposition: A tendency to develop a disease that can be triggered under certain conditions. Although a predisposition to cancer increases a person's risk of developing cancer, it is not certain that the person will develop it.

Primary tumor: The original cancer site. For example, breast cancer that has spread to the bone is still called breast cancer.

Progesterone-receptor assay (PR assay): A test that determines if breast cancer is stimulated by female hormones

Prognosis: The likely outcome of a disease, often given in terms of the expected chance of surviving for a certain number of years.

Protocol: An action plan for how a clinical trial will be carried out. It states the goals and timeline of the study, who is eligible to participate, what treatments and tests will be given and how often, and what information will be gathered.

P.S.A. (Prostate Specific Antigen):
A marker used to determine prostate disease – an increase can identify a benign or malignant process.

Radiation therapy: The use of high-energy rays (such as X-rays) to kill or shrink cancer cells. The radiation may come from a machine outside the body (external radiation) or from radioactive materials placed in the body near cancer cells (brachytherapy or internal radiation). It is also called radiotherapy.

Radioactive: Emitting energy in the form of waves or particles.

Radioactive seeds: Small pellets of radioactive material that can be placed down a catheter positioned in an organ of the body.

Recurrence: Cancer that has returned after a period of time when the cancer could not be detected. means that the cancer has come back to the same place as the original cancer. refers to cancer that has come back after treatment in the lymph nodes near the original cancer site. is when cancer spreads after treatment to other parts of the body.

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 the blood sample.

Regimen: A treatment plan that includes which treatments and procedures will be done, medications and their doses, the schedule of treatments and how long the treatment will last.

Regression: The shrinkage of cancer growth.

Relapse: The reappearance of cancer.

Remission: The disappearance of the signs and symptoms of cancer but not necessarily the entire disease. The disappearance can be temporary or permanent. Complete remission means all known tumors have disappeared. Partial remission refers to a greater than 50% reduction of tumor mass.

Resectable: The finding that a cancer does not grow into any vital structures and can therefore be removed by a surgical procedure.cancer cells. Because high-dose chemotherapy also destroys normal blood-producing stem cells in the bone marrow, these cells must be replaced in order to restore blood cell production.

Stage: A measurement given or a diagnosis that describes the size of the original tumor and identifies whether the tumor has spread to lymph nodes or other parts of the body.

Standard of care: A set of common guidelines that is followed for the diagnosis and treatment of a certain type of disease.

Stomatitis: Temporary inflammation and soreness of the mouth.

Subcutaneous: Into the fatty tissue under the skin.

Targeted Therapy: A form of cancer therapy that takes advantage of the biological differences between cancer cells and healthy cells by "targeting" faulty genes or proteins that contribute to cancer growth. The treatment blocks the spread of cancer cells without damaging the normal cells, thus leading to fewer side effects.

Thoracentsis (Pleural tap): A procedure to remove fluids from the area between the two layers (pleural) covering the lung.

Three-dimensional conformal radiation: A special method of treating someone with external beam radiation therapy that minimizes exposure of normal tissue to radiation.

Thrombocytopenia: An abnormally low number of platelets (thrombocytes). If the platelets are too few, bleeding could occur.

Transfusion: The procedure of giving blood or blood products (such as platelets and plasma) to a person.

Tomosynthesis: A digital mammogram that creates a three-dimensional visual of the breast. This imaging process allows the radiologist to see around and between breast tissue – including dense breast tissue – to better detect smaller cancers.

Treatable cancer: A cancer may not be curable, but there are treatments available to hopefully control its progression or reduce its symptoms.

Tumor Markers: Substances either released by cancer cells into the blood or urine or substances created by the body in response to cancer cells. Tumor markers are used to evaluate how well a patient has responded to treatment and to check for tumor recurrence.

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. The actual number of white blood cells seen in a blood sample. White blood cells are also called leukocytes.

Diagnostic and Laboratory Tests

Diagnostic testing is used to confirm or rule out the presence of disease, monitor the disease process, and plan for and evaluate the effectiveness of treatment. Doctors use many tests to diagnose cancer and determine if it has spread. Some tests may also determine which treatments may be most effective. Diagnostic tests include a biopsy, imaging tests, endoscopic tests, and blood and urine tests. When choosing a diagnostic test, your doctor will consider your age, medical condition, the type of cancer you have, the severity of the symptoms and previous test results. You can place copies of any laboratory and diagnostic reports in the back of this section.

Biopsies

Biopsy: A biopsy is the removal of a small amount of tissue for examination under a microscope. For most types of cancer, a biopsy is the only way to make a definitive diagnosis of cancer. The sample removed is analyzed by a pathologist (a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues and organs to diagnose disease). There are many different types of biopsies.

Fine needle aspiration biopsy: This test uses a thin, hollow needle in a syringe to collect a small amount of fluid and cells from the suspicious area.

Core needle biopsy: A core biopsy uses a slightly larger needle to obtain a cylinder of tissue. It is often done instead of a fine needle aspiration biopsy because it provides more tissue for the pathologist to review.

Vacuum-assisted biopsy: This type of biopsy uses vacuum pressure (suction) to collect the sample tissue through a specially designed hollow needle. This technique allows the doctor to collect multiple or larger samples from the same biopsy site without having to insert the needle more than once.

Image-guided biopsy. An image-guided biopsy is a procedure in which the doctor uses imaging technology, such as ultrasound, fluoroscopy, a computed tomography (CT or CAT) scan, X-ray, or a magnetic resonance imaging (MRI) test to determine the exact location where the tissue sample will be removed for analysis.

Surgical biopsy: In a surgical biopsy, a surgeon makes an incision in the skin and removes some or all of the suspicious tissue. An incisional biopsy removes a piece of the suspicious area for examination. An excisional biopsy removes the entire lump.

Endoscopic biopsy: An endoscope is a tube with a camera that doctors use to view the inside of body, including the bladder, abdomen, joints or gastrointestinal (GI) tract. Using an endoscope, the doctor can see any abnormal areas and remove tiny samples of the tissue using forceps that are part of the endoscope.

Bone marrow aspiration and biopsy: A bone marrow aspiration and biopsy is a diagnostic examination of the bone marrow (the spongy tissue inside of bone that has both fluid and solid parts). The sample is usually collected from the back of the hip bone.

Imaging tests

Doctors use imaging tests to determine whether the cancer has spread to other areas in the body, and to evaluate the size and location of the tumor and to measure response to your treatment.

X-ray: An x-ray is a picture of the inside of the body.

Bone scan: A bone scan uses a radioactive tracer to look at the inside of the bones. The tracer is injected into a patient's vein. It collects in areas of the bone and is detected by a special camera.

CT or CAT scan: A CT scan creates a three-dimensional picture of the inside of the body with an X-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. Sometimes, a contrast medium (a special dye) is injected into a patient's vein to provide better detail.

Positron emission tomography (PET) scan: A PET scan is a way to create pictures of organs and tissues inside the body. A small amount of a radioactive substance is injected into a patient's body and absorbed by the organs or tissues being studied. This substance gives off energy that is detected by a scanner, which produces the images.

Magnetic resonance imaging (MRI): An MRI uses magnetic fields, not X-rays, to produce detailed images of the body. A contrast medium (a special dye) may be injected into a patient's vein to create a clearer picture.

Ultrasound: An ultrasound uses sound waves to create a picture of the internal organs.

Endoscopic tests

Any medical procedure performed with an endoscope is called an endoscopy. An endoscope is a thin, flexible tube with a camera used to examine the inside of the body.

- A **bronchoscopy** uses a bronchoscope to examine the lungs.
- A **colonoscopy** uses a colonoscope to examine the colon and rectum.
- A **laparoscopy** uses a laparoscope to examine the abdominal area.

Laboratory tests

Laboratory tests involve testing a sample of blood, urine, and/or other body fluids to learn or confirm what is happening in the body. One of the most common tests is a complete blood count (CBC). A CBC measures the components of the blood, including white blood cells, red blood cells, and platelets. Blood tests are also used to monitor potential side effects of cancer treatment, such as anemia (low red blood cell count) infection, or electrolyte imbalances.

Some tests help with diagnosing a specific type of cancer, such as the test for prostate specific antigen (PSA) for prostate cancer, or the PAP test or PAP smear for the detection of cervical cancer. Other tests help doctors make treatment decisions.

Tumor Tissue and Blood Tests

Sometimes additional tests are performed on the cancerous tissue. For example, the breast cells of women with breast cancer may be tested to determine whether the cells have the estrogen receptor, which lets doctors know whether hormone therapy can be used to treat the cancer. The breast cells are also tested for the human epidermal growth factor receptor 2 (HER2) to help the doctor know whether the cancer can be treated with drugs that target HER2.

Other tests using tumor markers help the doctor figure out if cancer treatment is working. A tumor marker is a substance found in higher amounts in a person's blood, urine, or the tumor itself if the person has a specific type of cancer. It is produced by the tumor or the body in response to cancer. Examples are carcinoembryonic antigen (CEA) for colorectal cancer or prostatic specific antigen (PSA), which is tested in men with prostate cancer. Several tumor markers are available for several different types of cancer. However, these tests are only meaningful in specific situations.

For more information on tests and procedures, visit www.cancer.net.

MyCovenantHealth

MyCovenantHealth is your online patient portal that provides secure, instant access to your electronic health record. Covenant Health uses a HIPAA-compliant electronic health record system that allows only you, your physicians, and immediate care team members to access your information as part of your treatment plan. Our system also provides seamless communication between physicians and clinical staff at Covenant Health hospitals, medical practices, and outpatient facilities.

What are the benefits of an electronic health record? How is it better than a paper chart?

With paper charts, only one medical provider can view your record at a time. With an electronic health record, information entered into your chart is viewable immediately by your care team members, which creates more efficient care and communications between hospital departments.

Entering medical data into an electronic health record also helps us provide safer care with less risk of errors. For example, the system eliminates handwriting that is difficult to read. It also alerts your care team about your current medications and allergies so that the medicines we prescribe are safe for you.*

(*Always carry a list of your allergies and current medications with you so we can update your electronic health record if you are taking new medications since your last hospital visit or in case of an unexpected emergency room visit. Be sure to include herbal supplements and over-the-counter drugs.)

How is my medical information entered into my electronic health record?

You will see your medical care team with different types of mobile devices: smart phones, tablets, and computers-on-wheels. These are dedicated Covenant Health devices that securely and instantly access and update your medical record with information about your diagnosis, treatment, medications given while in the hospital, and results from lab tests and imaging.

How do I access my electronic medical record?

Once you've successfully registered for the MyCovenantHealth online portal, you may instantly and securely access your medical records, including your most recent lab and test results. Outside the hospital setting, if you see a Covenant Medical Group physician for your care, you also can use the portal to request a doctor's appointment and prescription refills.

Is there an app I can use to access my electronic medical record?

Yes. Once you sign up for the MyCovenantHealth online portal, you can download the MyCovenantHealth app from the Apple or Google Play store.

My Covenant HEALTH®

Can I connect my portal information with other health management apps?

Covenant Health also offers the ability to securely connect your MyCovenantHealth patient portal information with some of the health management apps you may use (i.e. fitness trackers, dietary trackers, etc.). Please visit CovenantHealth. com/health-apps to learn more about this opportunity.

How do I sign up for the MyCovenantHealth patient portal?

If you've provided your email address to us, you may receive an email invitation to join the MyCovenantHealth patient portal. The email will come from Covenant Health <noreply@iqhealth.com>. Follow the instructions in the email to access your patient record.

You may also self-enroll in the patient portal by going to CovenantHealth.com/portal-enrollment and providing your name and birthdate. Next, you will choose how you want to verify your account:

- **Verify by email:** enter the email address that you provided to Covenant Health and you will receive a verification code by email you must enter when self-enrolling.
- **Verify by personal identifiers:** you will be asked to enter your Medical Record Number (MRN) and the last four digits of your Social Security Number. Your MRN can be found on your inpatient discharge instructions you receive when you leave the hospital. When entering the MRN, please do not enter any letters or leading zeroes. For example, if your Medical Record Number is listed as "MREC– 000000123" or "MRN: ABCD000000123," then only enter "123."

Then, follow the instructions provided to complete the self-enrollment process. If you have any questions about registering for the MyCovenantHealth patient portal, please contact us at **(865) 374-5260**.

To access the patient portal after you have enrolled, visit CovenantHealth.com/portal.

For more information about the MyCovenantHealth patient portal, visit CovenantHealth.com/MyCovenantHealth.

Still have questions about MyCovenantHealth?

While in the hospital, please talk with a member of your medical care team about any questions or concerns you have about your online patient portal.

When at home, if you have questions about registering for the MyCovenantHealth patient portal, please contact us at **(865) 374-5260**.

My Covenant HEALTH

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