



Cancer Care After Diagnosis



NORTH MISSISSIPPI
MEDICAL CENTER

CANCER CENTER

Cancer is a difficult diagnosis. Obtaining correct information about cancer and treatments should not be difficult. We have created this booklet to assist you with your journey through your cancer diagnosis.

This book contains information about the disease itself and the treatments available at North Mississippi Medical Center's Cancer Center. It is filled with information, suggestions, details of therapies, side effects and support programs that will guide you through this disease. We have provided a number of resources to help you with the challenges ahead. The glossary of terms in the back will help you understand some of the new words that you will hear along the way. We hope that this book addresses your questions and concerns about the disease.

Many health professionals worked together to create this book. These same professionals (doctors, nurses, pharmacists, social worker, dietitian, home care workers and other staff members) will be providing your care during your cancer diagnosis.

Although this book is filled with helpful information, we know that you will have other questions and needs along the way. Please feel free to ask your doctor or other health care professionals any questions that might arise.

We hope that this book is encouraging and realistic, and know that we are here to help you through your journey with cancer.



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Cancer Information

Cancer

Cancer is a common term for the abnormal growth of cells. These cells may be slow growing or very aggressive. The cells may be confined to the primary area or may have spread to other areas of the body. Normal cells are constantly dividing and replacing old cells with new ones to keep the body balanced. Cancer cells don't follow the normal pattern; they keep dividing in an uncontrolled way, making more and more cancer cells.

These rapid growing cells may form a clump of cells that are called tumors. Some tumors can grow quickly while others may grow slowly. They all increase in size because the new cancer cells are being created faster than old cells die. Tumors can be benign or malignant.

Benign tumors:

- Non-cancerous
- Can appear and function just like normal healthy tissue
- Can appear in any part of the body and remain tightly clustered
- Can be removed or left alone
- Do not invade or destroy surrounding tissues
- Include fatty tumors called lipomas

Malignant tumors:

- Made up of cancerous cells
- Have no wall or clear-cut border
- May put down roots and directly invade surrounding tissues
- Have the ability to spread to other parts of the body through the blood or lymph fluid systems.

Metastasis:

- When the cancer spreads from its original site to another site of the body
- Almost all cancers have the potential to spread
- Can interfere with normal organ function

Some of the most common cancers are:

Carcinomas:

- This type cancer is named for body parts
- They include the most common types of cancer such as lung, colon, breast and ovarian cancers

Sarcomas:

- These cells are found in the supporting tissues on the body.
- They include cancer of the bone, cartilage, fat and muscle.

Lymphomas:

- This type begins in the lymph nodes and tissues of the body's immune system.
- Hodgkin's and Non-Hodgkin's lymphomas are included in this group.

Leukemias:

- This cancer begins with immature blood cells that grow in the bone marrow.
- They grow rapidly and collect in large numbers in the bloodstream.

After the doctor has determined that you have cancer, the doctor may order other tests to determine the type of cancer, how fast it is growing, and if it has spread to nearby healthy tissue or other parts of the body. These tests may include scans, X-rays and blood tests. The doctor will decide what treatments will be the most helpful based on all of this information and the patient's overall health.

The most common cancer treatments are surgery, radiation therapy and chemotherapy. Some patients may have one, two or all three of these treatments. Remember that each person is different and that even though you have the same type cancer as someone that you know, you may have different treatments. The treatment chosen for you is the best option for your cancer and your health.

Questions to Ask Your Doctor About Cancer

Why do we always think of the questions we wanted to ask after we leave the doctor's office? Many of us get nervous about going to see the doctor and forget to ask about the one problem that has been bothering us. This is a normal experience regardless of what doctor you are seeing. Consider the following when you have an office visit:

- Make a list of any questions that you want to ask. (You may even want to keep a running list of questions as you think of them.)
- Take some paper and a pen with you so you (or someone with you) can write down the answers to the questions. This way you can look at them later and know how your question was answered.
- It is always a good idea to take someone with you because they might hear something that you didn't hear.

To understand the diagnosis of cancer, you may want to ask:

- What were the results of my biopsy?
- What type cancer do I have?
- What were the results of my tests (lab work or any scans)?
- Will I need more tests to see if the cancer has spread?

To understand the best treatment for your cancer, you may want to ask:

- What are my treatment options? Will I need chemotherapy, radiation therapy or hormonal therapy?
- Procedures – What are you recommending for me and why? What are the risk or benefits for each procedure?
- What side effects should I expect?
- How long do I have to make a treatment decision?

To help you prepare for the results of your surgery, you may want to ask:

- Where will the incision be, how long will it be and how long will it take to heal?
- What should I expect after the surgery? How should I feel?
- What side effects should I expect?
- Will I need help at home after surgery?

Treatments

Cancer Surgery

Surgery sometimes plays a key role in the diagnosis and treatment of cancer. Surgery may be used in the following ways:

Surgery may be used to diagnose cancer:

A surgical biopsy may be done to obtain tissue to allow a pathologist to make an accurate diagnosis. Types of biopsies include:

- Fine needle or core biopsies – a thin or large gauge needle is inserted through the skin into the tumor and a sample of tissue is removed.
- Endoscopic biopsies – a scope is passed into organs of the body such as the esophagus, stomach, intestines, colon or bladder and biopsies obtained.
- Laproscopic biopsies – a scope is passed through a small incision in the abdomen which allows the surgeon to view and biopsy organs such as the stomach or liver.
- Surgical incision – may be done to remove all or part of a tumor.

Surgery may be used to determine the extent of the tumor:

Surgery may be used to stage a tumor. This procedure helps determine how much the tumor has spread.

Occasionally the surgeon will take out the lymph nodes in and around the area of the tumor to see if the cancer has spread. Staging of the tumor is important for the physician to determine the best treatment for the cancer.

Surgery may be used to cure cancer:

The treatment for cancer is decided once the diagnosis of cancer has been determined. Treatment options might include surgery, radiation, chemotherapy, hormonal and/or antibody therapy. Surgery may be the best option of treatment for cure. This type of surgery might involve removing the entire tumor or removing part or all of the area where the cancer is located. Lymph nodes and surrounding tissues in most cases are removed at this time. This helps the pathologist to determine if the cancer has been fully removed.

Surgery may be done to decrease the size of the tumor and relieve cancer symptoms:

If a tumor cannot be removed completely, it may be helpful to remove as much as possible. This may allow other types of treatments to be used more effectively. Surgery may also be used to relieve cancer symptoms such as bowel obstructions.

Surgery may be done to give better access for chemotherapy administration:

Chemotherapy is irritating to veins. A surgically implanted device is often placed to allow chemotherapy to be given more safely. Many times these devices are placed near the collarbone into a large vein and can be left there for months or years. These devices may be used to draw blood, administer chemotherapy, IV fluids or antibiotics.

Surgery may be done to improve appearance:

All or a portion of an affected organ can be removed during most surgeries without much loss of function or appearance. Breast reconstructive surgery is the most common type of surgery done to improve appearance. Restorative surgery can be performed to re-establish function to the intestine or bladder in these types of cancer.

Surgery may be done to prevent cancer:

This type of surgery may involve the removal of both breasts in a woman who has breast cancer in one breast fearing it may return in the other breast. A person with a precancerous biopsy may elect to have surgery to prevent cancer from developing.

Chemotherapy

Chemotherapy is medication used to treat cancer. This medication can destroy cancer cells or keep them from growing. Depending on the type of cancer and the stage of development of your cancer, chemotherapy may be used to:

- Cure cancer
- Keep cancer from spreading
- Slow the growth of cancer
- Relieve cancer symptoms such as pain

Types of chemotherapy

- Combination therapy: the use of two or more chemotherapy drugs
- Neoadjuvant therapy: the use of chemotherapy and/or radiation before surgery to shrink a cancerous tumor
- Adjuvant therapy: the use of chemotherapy and/or radiation

Chemotherapy treatments may be given in the hospital, doctor's office or clinic. They are usually given in cycles (such as monthly or weekly) so that the body can rest and repair between cycles. Treatment schedules vary for each patient. A doctor called a medical oncologist will decide what type of chemotherapy you will receive and how often it should be given. For this reason it is very important to follow the treatment plan exactly and keep all appointments.

How chemotherapy is given

Chemotherapy is usually given through a vein (IV) into the blood stream. There are several ways this can be done:

- IV devices may be placed into the vein, usually in the hand or arm. The nurse will check for a blood flow to make sure the chemotherapy medication is given safely. The IV is removed after each treatment. If you notice pain or burning around the IV site, notify the nurse.
- IV devices that are surgically placed. The device stays in place throughout the time you are receiving chemotherapy. Chemotherapy medication may be given and blood samples may be drawn from the device.

Other ways chemotherapy may be given

- Tablets or capsules
- Injections
- Skin lotions or creams
- Needle or catheter directly to the site of the cancer

Side effects of chemotherapy

Most side effects of chemotherapy can be predicted and can be prevented with medications. Side effects occur because chemotherapy slows the growth of normal cells as well as cancer cells. Examples of normal cells affected by chemotherapy include those found in hair, the lining of the mouth and digestive system and the bloodstream. Side effects that may occur as a result of the effect of chemotherapy on normal cells include:

- Hair loss
- Mouth sores
- Nausea and/or vomiting
- Diarrhea
- Fever
- Infections
- Fatigue
- Bleeding problems
- Low blood counts
- Skin/nail problems
- Constipation

Eating a light meal before your chemotherapy is sometimes helpful.

Your doctor will watch you very closely for side effects. Let your doctor and nurse know if any of these side effects occur. Prescription medication, frequent exams and blood sampling will be used to prevent and/or treat side effects.

Radiation Therapy

Radiation therapy is used to treat certain types of cancers. Sometimes it is called radiotherapy or X-ray therapy. This type of treatment uses high-energy beams of X-rays that are aimed at the cancer through the outside of your body.

How Radiation Works

Radiation beams destroy or keep cells from growing and multiplying. It works best on fast growing cells. Cancer cells grow more quickly than normal cells, which is why radiation can be used to treat so many kinds of cancer. Normal cells can also be damaged by radiation but most of these are able to heal themselves. A doctor called a radiation oncologist plans radiation treatments. The doctor decides how much radiation to give and spreads the whole amount over days or weeks so that normal cells can recover more easily.

Like surgery, radiation is considered a local treatment. It affects only the part of the body where the beams are aimed. Radiation is used several different ways in the treatment of cancer:

- Alone, as the main way of treating cancer.
- Before surgery, to make the tumor (cancer) smaller.
- After surgery to kill any cancer that may have been left behind.
- Together with chemotherapy to kill all cancer cells.

Two Types of Radiation

- External Radiation: most often used for cancer treatment. A special machine is used to aim the beam of high energy X-rays at the cancer and a small area around the cancer inside the body. The machine that is used is called a linear accelerator.
- Internal Radiation: This is called brachytherapy. A small amount of solid radiation is placed into or close to the cancer inside the body. Sometimes called implants, these can be short term or permanent. A surgical procedure is usually required to place the internal radiation.

Radiation Therapy Team

- Radiation Oncologist: a doctor who specializes in treating cancer with radiation. This doctor will prescribe the amount and type of radiation to be used for your type of cancer. The radiation oncologist will work with your other doctors and caregivers.
- Radiation Nurse: coordinates your care, and teaches you about your treatment and how to take care of any problems that may come up while receiving radiation.
- Radiation Therapist: places you in the proper, prescribed position and gives the radiation treatments. He/she helps to watch for problems that may develop with your treatment.
- Dosimetrist: works with your radiation oncologist to determine the amount of radiation that is right for you.
- Medical Physicist: oversees and checks the amount of radiation prescribed for each person receiving treatment as well as the machinery that delivers the radiation.

Facts about Radiation Therapy

- Radiation treatments are painless.
- You will not be radioactive with external radiation.
- Daily treatments are necessary, Monday through Friday.
- Each treatment takes about 15 minutes, except the first treatment, which takes longer.
- The total amount of radiation will be given over two to eight weeks.
- Skin in the treatment field (area) may become sensitive, reddened and irritated (like a sunburn).
- Side effects that occur from radiation are usually temporary (only last while receiving treatment and a short while afterwards). Side effects vary, depending on the area being treated.
- Rest and good nutrition are important while receiving radiation therapy.
- It is okay to eat before taking your radiation.
- You can continue to be active and do anything you feel up to during your radiation therapy.

Clinical Trials

Clinical trials are research studies that look at new treatments or changes in existing treatments. All of the cancer treatments that we use today are the results of clinical trials. In a clinical trial, researchers assign patients randomly, to either a group taking a new, experimental treatment or to a group taking current or standard treatment. Information is gathered from both groups to help decide which will be the best treatment.

A local review board, called an Institutional Review Board (IRB), approves each clinical trial. This group is made up of doctors, nurses, pharmacists, social workers and people from the community. The IRB looks at each new trial and makes sure it is run safely and fairly. Anyone of any age or background may take part in clinical trials, but each trial has rules about who can or cannot join.

It is important that you talk with your doctor or research nurse about the risks and benefits of the clinical trial that you are considering.

Questions to Ask

- Why is the clinical trial being done?
- Will it help me?
- What kind of tests or treatments will be done?
- What will happen to my cancer with or without this trial?
- Are there potential short- or long-term side effects?
- How do the risks and side effects of the current treatments compare with those of the clinical trial?
- How long will the clinical trial last?
- Will checkups be required after the trial is finished?
- Will my insurance cover my being part of the trial?
- Will I have any extra costs because of being part of the trial?
- When do I need to decide about joining or not joining the clinical trial?

Before You Join a Clinical Trial

A doctor or nurse will explain the clinical trial and why it is being done. You will be given a consent form to read, or it will be read to you. This form will explain the exact plan for each step in the study, what side effects you may have and how the study will affect you every day. If you decide to join the clinical trial, you will be asked to sign the consent form. You will be given a copy of the consent form. Even if you sign the consent form, you may change your mind and stop participating at any time. This process is often referred to as informed consent.

Talk with your doctor if you are thinking about joining a clinical trial. Participation is entirely up to you. You will be given the best care possible, regardless of your decision.

IV Devices for People with Cancer

The most common way to administer chemotherapy is through the vein. Given in this way chemotherapy is carried by the blood, or intravenously (IV), to all parts of the body. Options for IV access are available to you before or during your treatment. These include:

- IV catheter
- Peripherally Inserted Central Catheter (PICC line)
- Implanted port/Venous Assess Device (VAD)
- Tunneled central line

IV Catheter

This is a hollow, flexible tube placed into your hand or forearm for administration of chemotherapy. This is usually placed the day of treatment by the nurse and is removed once the treatment has completed.

Peripherally Inserted Central Catheter (PICC)

A PICC is a long, thin flexible tube that is placed into the vein near the bend of the arm and extends into a large vein just above the heart. A specially trained doctor or nurse usually places this. An X-ray is taken to make sure the PICC is in the correct place. Medication may be given and blood samples collected from the PICC. A PICC may stay in place for months. Regular flushing of the PICC is necessary to keep it working. A dressing covers the catheter exit site. The dressing should be changed if it becomes wet, loose or soiled. A PICC does not interfere with normal daily activities. Avoid activities that require a lot of arm movement such as playing golf, swimming or gardening.

Implanted Port or VAD

This device contains a port with long flexible tubing attached. It is placed under the skin near the collarbone area. The long flexible tubing is attached to the port, then placed into the large vein just above the heart. It is usually placed while the patient is in the hospital or it can be done as an outpatient procedure. It will be uncomfortable for a few days after being placed. After it heals, you can feel the port under the skin and also see a bump on the chest where the port is placed.

A special needle called a Huber needle is used to access this device. This needle is inserted through the skin, into the port so blood can be collected and medication given. Once the needle has been removed, the VAD requires very little care. No bandage is needed and activities are not limited. This device can stay in place for months or years. Monthly flushing is necessary to keep the VAD working properly.

Tunneled Catheter

A tunneled catheter is a long, flexible tube that is surgically placed into a vein above the heart. One part of the tubing is under the skin and cannot be seen and the other part of the tubing extends out of the skin. This catheter

can be used to collect blood samples and give medications. You are not limited in doing normal activities. You may bathe and take a shower. A clean, dry dressing should always cover the tunneled catheter. It must be changed if it becomes wet, loosened or soiled. Flushing is necessary to keep the catheter working. This catheter may stay in place for months or years depending on your treatment plan.

Questions to Ask the Doctor About Treatments

Surgery:

- What precautions should I take?
- When can I return to my normal routine?
- What type problems should I report to you?
- Who do I see for my follow-up care?
- How often will I need to be seen?
- Will any of my tests need to be repeated?

Chemotherapy:

- Is there a clinical trial available for my cancer treatment?
- What is the name(s) of my chemotherapy medication? What is the dose?
- Will my treatment be given IV? Will I need to consider a surgically placed IV device?
- How often will I have my blood drawn?
- How often will I receive my chemotherapy, how long will each cycle last and how many treatments will I take?
- What are the side effects of my chemotherapy medications?
- What can I do to help these side effects?
- Are there any long-term or permanent side effects after receiving this medication?
- How will we know if the chemotherapy treatments are working?

Radiation Therapy:

- How long will each treatment take? How many treatments will I need?
- What side effects should I expect? Will the side effects be short-term or long-term?
- What precautions do I need to take while undergoing radiation therapy?
- How often will I see the doctor?
- How often will I need to see my doctor after my radiation treatments are completed?



Caring
For Yourself

Nutrition and Cancer Therapy

Nutrition plays an important role in your total care and treatment. This information is designed to help the cancer patient eat a well-balanced diet, high in calories and protein. Good nutrition is important for all of us, but during treatment it is especially important. A dietitian is available at the NMMC Cancer Center to assist you with nutritional needs.

Maintaining a high intake of calories and protein can prevent body tissue from breaking down and can help rebuild healthy tissue after treatment. Researchers have found that well nourished cancer patients respond better to treatment, whether the treatment is surgery, radiation, chemotherapy, hormone therapy or a combination of treatments. The treatments target fast-growing cells found in the lining of the mouth and the digestive system. Damage to these healthy, fast-growing cells may cause some side effects that lead to eating problems. Let your doctor or nurse know if you are taking vitamins, herbal supplements or are on a special diet. These can affect how your body responds to your cancer treatment.

With good nutrition you can:

- Prevent or reverse weight loss
- Tolerate your therapy with fewer side effects
- Keep your body in the best physical condition to fight infection
- Give your body a chance to repair normal tissues damaged by chemotherapy and radiation
- Have more energy for a quicker recovery
- Feel better

This all sounds easy; however, it can be difficult at times. Cancer patients often lose their appetite and experience other eating difficulties during treatment. Knowing the foods that are high in calories and protein, how much to eat and how to solve eating problems are crucial to maintaining a well-balanced diet during treatment.

This information is provided to assist you and your family when choosing the foods that are best tolerated and determining the right amounts. At times, your eating may be limited. As long as those times are brief, don't worry that your nutritional needs aren't being met. If this problem continues and you can only tolerate a few foods, you need to consult the registered dietitian at the NMMC Cancer Center. The dietitian can offer helpful suggestions.

All patients respond differently to cancer treatments. Some have no problems and others have more problems. Let's look at some of the side effects and their treatment.

Loss of Appetite

This is a common problem that occurs with cancer and cancer treatment.

You may want to try:

- Eating small, frequent meals throughout the day.
- Keeping snacks on hand and eating them whenever you feel like it. Remember to take a snack with you if you are going to be away from home for an extended length of time.
- If you don't feel like eating solid foods or food seems to grow the more you chew it, try liquids such as juice, soup or milkshakes with a straw. Liquid and powdered nutritional supplements may also benefit you such as Instant Breakfast®, or a 360 calorie supplement (Ensure Plus® or Boost Plus®)
- Eating a bedtime snack each day.
- Limiting most of your liquids to between meals so that you don't get too full to eat solid food.
- Making mealtimes relaxing and pleasant. Stress at mealtime will limit the appetite.

Weight Loss

Sometimes patients lose weight during cancer treatment. This may be caused by eating less or the effects that cancer has on the body. To slow this process, you need to increase calories and protein in your diet.

Ideas to control weight loss:

- Choose foods high in calories.
- Eat your largest meal when you are most hungry during the day.
- Add additional butter or margarine to soups, gravies or sauces. It can also be added to meats, rice, pasta, potatoes or other vegetables.
- Use whole milk or cream on cereals and in soups (instead of adding water to cream soups, add same amount of milk).
- Cheese can be added to casseroles, potatoes, vegetables, eggs or sandwiches to add calories and protein.
- Cream cheese and sour cream can be used as dips, spreads or as a topping to add calories.
- Think of your favorite foods and eat them often.

Weight gain during therapy

If you gain weight during therapy, don't go on a diet. Sometimes weight gain is the result of medications, hormone therapy or chemotherapy. Some medications may make you retain water. This condition is known as edema. Talk with your doctor or dietitian about the weight gain. They can help you make a plan.

Soreness in the mouth or throat

Some cancer treatments can lead to mouth sores, tender gums or a sore throat. Your doctor can give you medication that will help control your mouth and throat pain.

Certain foods may irritate an already tender mouth and make chewing and swallowing problems difficult. To reduce this irritation, carefully choose foods that you eat and take good care of your mouth, teeth and gums.

Try soft foods such as:

- Milkshakes
- Soft fruit such as bananas, applesauce or canned fruits
- Cottage cheese or yogurt
- Mashed potatoes, rice or noodles (macaroni/cheese)
- Custards, puddings or gelatin
- Scrambled eggs
- Oatmeal or cooked cereal
- Pureed or mashed vegetables

Avoid irritating foods and liquids such as:

- Oranges, grapefruits, lemons, and other citrus fruits and juices
- Tomato sauce or juice
- Spicy or salty foods
- Raw vegetables, granola, toast, crackers, or other tough, coarse foods.
- Mouthwashes containing alcohol
- Hot foods or liquids

Other ideas for a sore mouth or throat:

- Cook food until tender and soft
- Cut food into small bites
- Eat foods that are cold or at room temperature
- Drink warm bouillon or salty broth for a sore throat
- Use a straw to drink liquids
- Rinse your mouth often with water to remove food and bacteria and promote healing
- Use a small spoon

Change in Your Taste or Smell

The patient's sense of taste or smell may change during his/her illness or treatment. Sometimes high protein foods such as meat may have a bitter or metallic taste. Other foods may also be less tasteful. These changes in taste and smell improve after you complete your treatments.

Ideas to try:

- If red meat tastes unusual, substitute chicken, turkey, dairy products, ham, eggs and mild-tasting fish for your protein needs.
- Try cold foods like cheese, milkshakes, cold cuts, tuna fish or egg salad.
- Sugar added to foods can mask the flavor of salty foods.
- Adding salt to sugary foods can decrease the sweetness.

- Try stronger seasonings, such as those used in Italian, Mexican and curried dishes.
- Marinate food in wine, fruit juice, beer, soy sauce, butter or barbecue sauce.
- If food tastes metallic, use plastic utensils whenever possible.
- Drink your nutritional supplement cold, through a straw, if the aroma is bothersome.
- Tart foods may overcome a metallic taste. Try citrus juices, cranberry juice, pickles or relish.
- Freshen your mouth by using a mixture of 1 teaspoon of baking soda to 2 cups of warm water.
- If the odor of the food is bothering you, try the following: serve food at room temperature, turn on the kitchen fan to remove the smell from the kitchen, cover foods when cooking or cook outside.
- Check with your doctor if the condition continues.

Dry Mouth

Patients receiving chemotherapy and radiation therapy for head and neck cancer may experience dry mouth. The mouth is dry because of the reduction in the flow of saliva. Because of this, foods may be harder to chew or swallow and your taste may also change.

Ideas for dry mouth:

- Sip on water all day (may need to take a water bottle with you at all times)
- Try hard tart candies (lemon drops, Life savers®), Popsicles and soft foods
- Chew sugar-free gum
- Keep your lips moist with lip balm

Nausea and vomiting

Nausea and vomiting may result if you receive or experience the following:

- Chemotherapy
- Radiation Therapy
- Immunotherapy
- Medications (such as antibiotics or pain medicine)
- Pain
- Fatigue
- Mucous drainage from the mouth and sinuses
- Constipation
- Daily stress of dealing with your diagnosis
- Certain types of cancer

Ideas to try:

- Take your anti-nausea medications as prescribed. At the first signs of becoming nauseated, take your medicine. Don't wait until you are vomiting.

- Avoid soaps, cleaners, room fresheners and other items that have a strong odor.
- Identify the times that you become nauseated and what causes the nausea.
- Eat small frequent meals to prevent the stomach from becoming empty.
- Try to drink about eight cups of fluid each day.

If your nausea isn't controlled after trying these suggestions, please inform your doctor or nurse. Other options may be available.

Dealing with Distress Related to the Diagnosis of Cancer

A diagnosis of cancer can be very difficult for both the patient and his/her loved ones. Dealing with a new diagnosis often causes a great amount of distress for many people.

Distress is an unpleasant emotional experience that may interfere with the ability to cope well with a cancer diagnosis and its treatment. Distress is very common among cancer patients.

Common symptoms of distress:

- Feeling of sadness
- Depression
- Anxiety
- Panic
- Loneliness
- Struggles with spiritual beliefs

Distress can be treated and managed. Useful approaches include counseling, support groups, relaxation and stress management. Occasionally, medication may be needed to control the symptoms of distress.

Distress symptoms may become severe. If symptoms last longer than two weeks and include difficulty concentrating, sleeping, eating or extreme fatigue, you need to seek treatment. If you have thoughts of suicide, you need to seek treatment right away. The social worker, doctor, nurse or chaplain can assist you with treatment.

After your cancer diagnosis, you and your family members may be interested in talking to a counselor. If you would like information about counseling, please talk with the social worker at the NMMC Cancer Center.

Sexuality and Cancer

When you first learned that you had cancer, you were focused on surviving the treatment. Now that treatment has begun, other questions may come to mind. How normal can your life be, even if the cancer is controlled? What about sexuality?

Sexuality is an important part of everyday life. Feelings about sexuality affect our zest for living, our self-image and our relationships with others. Not only is it important for you to understand the effects that the cancer treatments will have on your sexuality, but that your partner also understands.

The first step is to discuss the topic of sexuality with your doctor or someone on the health care staff. You have a right to know how your cancer treatment affects your nutrition, pain or ability to return to work. You also have a right to know the facts about your sexual health.

Remember that the pleasure of touching between you and your partner is always possible, regardless of your physical problems or medical history. This may sound surprising, especially if you are depressed or have been sexually inactive for a while. Regardless of the kind of cancer treatment you have, the ability to feel pleasure for touching almost always remains.

Because the health care staff may not be able to answer all of your questions, below is a list of resources for more information. We hope this information helps you and your loved one fight cancer together, and that you remain close to each other.

Resources:

- Books on Sexuality
- Boston Women's Health Collective. *The New Our Bodies, Ourselves: A Book by and for Women*
- *Sexuality and Fertility After Cancer*, by Leslie R. Schover
- *The New Male Sexuality: A Guide to Sexual Fulfillment*, by Bernie Zilbergeld
- Pamphlets of special interest to cancer patients from the American Cancer Society (at no charge)
Call 1-800-ACS-2345
 - Breast Cancer Dictionary
 - Breast Cancer Questions & Answers
 - Cancer Facts for Women
 - Cancer Facts for Men
 - Sexuality & Cancer: For the Man who has Cancer and his Partner
 - Sexuality & Cancer: For the Woman who has Cancer and her Partner

Sexual Counseling

- The American Association of Sex Educators, Counselors, and Therapists, P. O. Box 238, Mt. Vernon, IA 52314.
- The Society for Sex Therapy and Research, Sexual Behaviors Consultation Unit, 550 North Broadway, Suite 114, Baltimore, MD 21205, 410-955-6318.



Treatment Side Effects

Cancer Treatment Side Effects

Treatments such as radiation and chemotherapy are used to treat cancer. Unfortunately, radiation and chemotherapy have side effects. Side effects occur because the growth of cancer cells as well as normal cells are affected.

Normal cells that may be damaged by cancer treatments are:

- White blood cells are made by the bone marrow and help fight infections. A decrease in the number of infection-fighting white blood cells is called neutropenia.
- Red blood cells are made by the bone marrow and carry oxygen throughout our body. A decrease in red blood cells is called anemia.
- Platelets help our blood to clot. A decrease in platelets is called thrombocytopenia.
- Cells that line the digestive tract include the mouth, throat, stomach and intestines. Side effects that may occur as a result of damage to these cells include sore mouth, difficulty or painful swallowing, nausea and diarrhea.
- Hair follicles are necessary for hair growth. Damage to these cells may cause hair thinning or complete hair loss. This may include chest, eyebrows, eyelashes and genital hair.

Side effects will depend on the type of treatments given and how your body reacts to the treatments. Each person reacts differently and may experience different side effects. Some of the most common side effects of cancer therapy include:

- Fatigue
- Diarrhea
- Constipation
- Mouth sores
- Nausea and vomiting
- Pain
- Hair loss
- Skin and nail problems
- Depression

While you are undergoing treatment, the doctors and nurses will monitor you closely to prevent and treat potential side effects. It is important for you and your family to be involved with your treatment. It might be helpful to keep a diary or journal to list side effects. As side effects occur, note what may have caused them, and what you were able to do to relieve them. It is important for you to report anything that is not normal to the doctor or nurse. This information will be helpful in managing your side effects. Many resources are available to help you deal with side effects of cancer treatments. Be sure to talk to your doctor or nurse about how you are feeling throughout your treatments and followup care.

Skin Care with Cancer Treatments

The skin plays a key role in our overall health. The skin is the largest organ of the body. It helps protect our organs and tissue inside the body from the outside world. It also is our first line of defense against infection and it helps keep our bodies at the correct temperature.

Cancer treatments such as chemotherapy and radiation therapy may cause changes to the skin and nails. When you aren't feeling well, you may be less active (lay around more or stay in the bed more) which may put you at risk to develop some skin damage or breakdown.

Changes that may occur to the skin and nails during chemotherapy:

- The vein that is used for injecting the medication (chemotherapy) into the bloodstream may become dark.
- Nail beds may become discolored.
- Fingernails or toenails may become brittle, begin to peel or you may completely lose the nail.
- The skin is more sensitive to the sun.
- Cuts or scrapes may more easily become infected.
- Soreness in the mouth may occur and should be reported to your doctor or nurse.
- Hair loss may occur from the scalp, face and body.

Some chemotherapy medications may cause numbness and tingling in the hands and feet. These may be referred to as “peripheral neuropathies.” Patients describe this as “pins and needles” in their fingers and toes. Notify your doctor or nurse if you experience this pain. Certain medications can help.

Changes that may occur to the skin during radiation therapy:

- Redness or darkening
- Dryness
- Itching
- Peeling of the skin (let the doctor or nurse know so this can be treated)
- Hair loss may occur at the treatment site

You need to check your skin often and report any changes right away to the doctor or nurse. Some skin changes may be prevented.

Hair Loss – A Side Effect of Cancer Treatment

Hair loss, also known as alopecia, is a temporary or permanent loss of hair that occurs as a side effect of chemotherapy or radiation treatments.

Chemotherapy may cause a temporary hair loss that varies from thinning to complete baldness. Chemotherapy medications cause damage to hair cells, which makes them weak and brittle. This causes the hair to break and fall out easily. Most hair loss occurs three to four weeks after chemotherapy treatment has begun. One person that receives chemotherapy medication may experience total hair loss, while another will not. Hair loss is an individual response. The type of medication and the length of chemotherapy treatment will determine the length of time you experience hair loss.

Ask your doctor or nurse if and when you should expect hair loss. Remember that with chemotherapy you may lose hair from other areas of the body such as eyebrows, eyelashes and genital area. Because hair grows slowly in these areas, you can expect less hair loss than on the scalp.

Hair loss from radiation treatments is usually permanent. The loss of hair occurs only where the radiation was directed, not all over the body.

Coping with hair loss can be very difficult. It may be the first sign to the outside world that you are having cancer treatments. If you are struggling with hair loss, share your feelings with people that you trust and with whom you feel comfortable. It is normal to have these feelings.

Hair care tips

Proper care of your hair may decrease loss and thinning. It will also protect new growth, which should appear shortly after your treatments are completed.

Things to do

- Shampoo less often, about every three to five days.
- Shampoo with protein-based shampoos.
- Use a conditioner.
- Gently dry hair by patting it towel-dry.
- Allow hair to air dry or use the lowest temperature setting on the hair dryer.
- Use hair spray sparingly.
- Purchase a satin pillowcase for sleeping to reduce hair matting and tangling at night.

Things to avoid

- Excessive brushing or combing.
- Electric curlers and curling irons.
- Hair clips, barrettes and ponytail holders with elastic bands.
- Hair bleach, which weakens the hair.

Wigs, scarves and hats

You may want to choose scarves, hats and especially wigs before you experience hair loss. Your natural hair color and style can be matched to a wig. You may even want to ask your hairdresser to meet you at a wig salon to assist you with a wig selection. No one knows your hair better than your hairdresser. If you do these things before you lose your hair, you can take your time, experiment with the different wigs, styles of hats and with scarf-tying techniques. You will be ready when you do lose your hair. The NMMC Cancer Center has a retail area on the first floor that sells turbans and supplies for your convenience.

Female cancer patients can ask the NMMC Cancer Center social worker about the Look Good, Feel Better program® (an American Cancer Society program) in your area. Trained cosmetologists will help you with your changing hair and with expert makeup application.

Pain Management While Undergoing Cancer Treatment

Pain is an uncomfortable feeling that tells you something may be wrong in your body. Cancer pain can be acute (sudden, sharp, comes and goes) or chronic (steady and persistent). Several things may cause cancer pain:

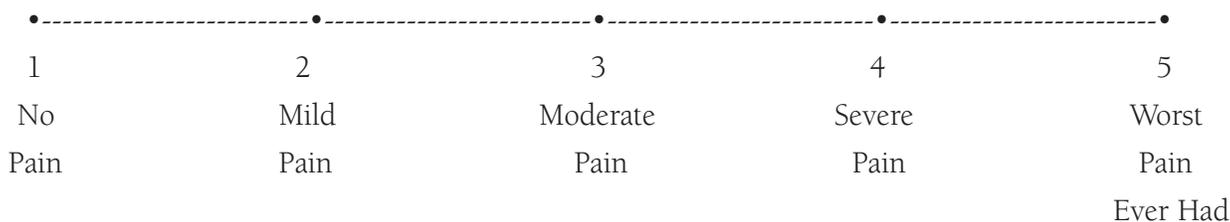
- a tumor pressing against nerves or bones
- a tumor pressing against an organ
- nerve and tissue damage caused by cancer treatments such as surgery, radiation or chemotherapy

All cancer pain is treatable. The first step toward having your pain treated effectively is talking to your doctor. When pain is controlled with proper treatment, you will feel better and have more energy. This will allow you to tolerate your treatments better and perform your normal daily activities. The goal of good pain control is to help you be comfortable throughout your treatment.

More than one type of medication is used to treat cancer related pain. The medication the doctor prescribes is determined by how you describe your pain. Some examples of medications that may be used to treat your pain include:

- Anti-inflammatory medication such as ibuprofen
- Opiate medication such as morphine, oxycodone or hydrocodone in tablet, liquid or injectable form. The injectable form may be administered through a pump which releases medication into the bloodstream or just beneath the skin at a controlled rate. Some of the medications may contain acetaminophen. Ask your doctor before taking acetaminophen to prevent an accidental overdose.
- Opiate medication such as fentanyl in a patch, which is placed on the skin like a Bandaid® and releases medication at a controlled rate.

Nurses or doctors will ask you questions about your pain to help them make decisions about which type of pain medication to use. They will also ask you to rate your pain on a scale of one (1) to five (5) to help make sure your pain medication is working as it should. One means you have no pain, five means you have the worst possible pain. Because it is not always possible to take all pain away, you will also be asked to tell the nurse or doctor what level of pain is acceptable to you.



How to describe your pain

- Rate your pain from 1-5.
- Tell where your pain is located.
- Describe how the pain feels. Use words such as sharp, burning, shooting, aching, throbbing, tingling or stabbing.
- Describe what makes your pain better and what seems to make it worse.

How to take your medication

- Taking pain medicine by mouth is the easiest method.
- If your pain is constant, you should take your pain medicine on a regular schedule around the clock. This provides a steady level of medicine in your bloodstream.
- Keep a record of your pain ratings and what medication you took that helped at the time.

Other methods of pain control

- Relax and take slow deep breaths.
- Support your back and the bony areas of your body by changing positions occasionally.
- Try light touch and application of scented lotions. Massage therapy is available. Ask your doctor if this would be an option for you. See page 40 for more information.
- Adjust temperature and lighting in the room to make a calmer, more soothing environment.
- Use the power of your mind and imagine being in a peaceful, relaxing place. Guided imagery sessions are available. See page 40 for more information.
- Avoid focusing on pain by doing other things such as listening to music, watching TV, reading or visiting with family and friends.

Addiction is very rarely a problem if you are taking medication for pain management. You may need to try several pain medications before finding the one that works best. Tell your doctor or nurse if you experience the following:

- Pain in a new area
- Changes in the type of pain, such as dull pain becoming sharp
- Numbness, tingling or a pins and needles feeling
- Increased pain on the current dose of medication
- Side effects of the pain medication such as constipation, nausea or drowsiness.

Cancer-related Fatigue

What is fatigue?

Another word for fatigue is tired. Some people describe fatigue as being tired or washed out. When experiencing fatigue you may not feel like doing your daily routine.

Causes of cancer-related fatigue:

- Over working
- Tumors
- Nausea and vomiting
- Over exercising
- Trouble sleeping
- Stress, anxiety, distress
- Problems with nutrition
- Surgery, chemotherapy or radiation
- Low blood count

Talk to your doctor about cancer-related fatigue. Knowing why you are fatigued can ease your concerns. Your doctor may be able to prescribe treatment that will help you manage your fatigue.

How to deal with cancer-related fatigue:

- Get enough rest and sleep. Take a short nap in the morning or afternoon if you feel tired. Avoid spending most of the day in bed as it can decrease your energy level. If you are having trouble sleeping at night, talk to your doctor or nurse.
- Stay active. Light, regular exercise such as walking can help your energy level.
- Eat healthy and nutritious foods. Vary your diet, and include plenty of water or other fluids each day, unless you have been told by your doctor to limit fluids.
- Eat smaller meals throughout the day to give you more energy. Eating one or two large meals a day can drain your energy.
- Allow time to do the activities that you enjoy. Take up a new hobby or project that you can work on for short periods of time.
- Talk about your feelings with friends and family members with whom you feel comfortable. You may want to talk to a counselor or a minister if you are struggling with emotional issues.

Although you may not feel like doing some of these things, they will help you to feel better and have more energy. Talk to your doctor or nurse if you have questions, feel that your fatigue is getting worse or are too tired to get out of bed all day.

Constipation – A Side Effect of Cancer Treatment

Constipation can be common in patients undergoing some cancer treatments. Constipation refers to the passage of small amounts of dry, hard stool, usually fewer than three times a week. Some people find it difficult and painful to have a bowel movement. Symptoms may include feeling bloated, being uncomfortable and feeling sluggish.

Factors that may contribute to constipation

- Decreased food and fluid intake
- Decreased physical activity
- Cancer treatment drugs
- Pain medication
- Low-fiber diet
- Ignoring the urge to have a bowel movement

Treatment for constipation

If you are taking pain medications, ask your doctor, nurse or pharmacist about taking a stool softener or laxative on a regular schedule. Remember to always check with your doctor first, before adding any over-the-counter medications.

Prevention of constipation

- Assess your normal bowel habits. Everyone's bowel habits are different. Some people have a bowel movement each day and others only every two days. What does your body tell you?
- You need fluid to keep your stools soft. Drink at least eight to 10 cups of fluid each day. This fluid can be water, warm juices, lemonade, Kool-Aid® or any decaffeinated beverage.
- Eat at regular times each day.
- Be active, take short walks to help your bowels move easily.
- Sometimes a high fiber diet will be recommended. This includes bran cereals, whole grain breads, raw vegetables, and dried or fresh fruits. You must make sure you are consuming enough fluids when you increase the fiber in your diet or this could lead to more constipation.

Inform your doctor or nurse if you have any of these problems:

- If you haven't had a bowel movement for three days or longer
- A change in color or consistency of your stools
- Vomiting or nausea
- Blood in your stool
- Inability to pass gas
- Severe abdominal pain

Diarrhea – A Side Effect of Cancer Treatment

Diarrhea is the occurrence of frequent loose, watery stools. Diarrhea can occur as a side effect of cancer treatments.

Other factors that may contribute to diarrhea

- Some antibiotics
- Some chemotherapies
- Radiation to the pelvic area
- Lactose intolerance (allergy to milk)
- Stool impaction
- Anxiety
- Stress

Management and prevention of diarrhea

- Talk with your doctor about medication to help control the diarrhea. Only take anti-diarrhea medication that has been prescribed or approved by your doctor.
- Drink plenty of clear liquids that are high in sodium such as Kool-aid®, any sports type drink, broths, soups and decaffeinated tea. Liquids at room temperature are better tolerated. You can also make Jell-O® as directed on the package and then add ½ cup more cold water before drinking the mixture.
- Eat small, frequent meals and snacks throughout the day. Eat high-sodium foods such as pretzels and crackers along with high potassium foods such as fruit juices, potatoes without the skin, ripe bananas and oranges (unless your doctor has told you to avoid sodium or potassium).
- Eat low-fiber foods such as white bread, plain bagels, crackers, white rice, cooked vegetables, cream of wheat, applesauce or low-fat cottage cheese.
- Avoid greasy, fried or very sweet foods.
- Avoid drinks and foods that cause gas, such as carbonated beverages, gas-forming vegetables (broccoli, cauliflower, beans and cabbage), and chewing gum. (You may drink carbonated beverages if you leave them open for at least 10 minutes before drinking.)
- Avoid alcohol and strong caffeine products such as coffee, tea or chocolate, which may irritate your bowels and worsen diarrhea.
- Limit milk and milk products to no more than two cups (16 ounces total) a day.

Inform your doctor or nurse if you have any of these problems:

- Vomiting
- Chills
- Fainting
- Very strong thirst
- Fever of 101° or greater

- Pain in your stomach that is not eased by passing of stool or gas
- Bloody stools
- Weakness or fatigue

Protect your skin

Protect the skin around the rectum by washing with a soft cloth, warm water and mild soap after bowel movement. Pat the area dry to avoid irritation. Ask your doctor or nurse to suggest a protective ointment or gel to keep your skin from getting sore. Warm soaks in the tub or a sitz bath are both good ways to ease the soreness from diarrhea. Always wash your hands well; this will help to avoid infection.

Neutropenia and Anemia – A Side Effect of Cancer Treatment

Cancer treatment can temporarily lower blood cells leading to anemia, infections or risk of bleeding. Those cells most commonly affected are red blood cells, white blood cells and platelets.

When red blood cells are damaged or become too low, you may feel tired and weak. Your treatments may be delayed or stopped for a short while until this can be corrected. Medication to increase red blood cells in your blood may be given or your doctor may recommend a blood transfusion. Once this level becomes more normal, treatment can be resumed.

White blood cells can also become damaged and too low. When these germ fighting cells are lowered, the risk of an infection increases. Signs of an infection may include fever, painful urination, chills or a sore throat that doesn't go away. If white blood cells become too low, your doctor may recommend that treatment be delayed, and you may receive medication to increase the number of white cells in your blood. To lower the risk of an infection, your health care provider may advise you to stay away from crowds and people with colds or other illnesses. Other things you can do include washing your hands well and often, and brushing and flossing your teeth daily.

If the platelets in your blood become low, your risk of bleeding is increased. If you notice unusual bleeding or bruising, have black tarry stools, see blood in your urine or develop pinpoint red spots on your skin, contact your doctor. Platelets that are too low may delay your treatments. Your doctor may recommend that you receive a platelet transfusion and/or that you take medication to help increase the number of platelets in your blood. To lower your chance of bleeding, do not use aspirin, aspirin-containing medication, or aspirin-like medication such as ibuprofen or naprosyn. Use sharp objects such as razors and nail scissors cautiously and avoid activities that can cause cuts, bumps or bruising.



Cancer Resources

North Mississippi Medical Center Cancer Center Resources

Breast Health Specialists

If you have questions about breast health or early detection, or have been diagnosed with breast cancer, our breast health specialists are eager to listen and offer support. They will also help you sort through your breast concerns, and provide education and advice so that you can make informed health care decisions. To schedule your private consultation, call (662) 377-4910. They are located at the NMMC Breast Care Center.

Dietitian

Good nutrition is very important during your cancer treatment. If your body is well nourished, you will tolerate treatment better, may have fewer side effects and may increase the tolerance of some medications. The dietitian can assist you with changes in your appetite or weight, help you deal with the side effects of treatment and discuss a good eating plan that is right for you. The dietitian is located on the first floor at the NMMC Cancer Center or can be reached at (662) 377-4047.

Help at Home

Home Care: North Mississippi Medical Center's Home Health Agency allows patients to remain in the home and familiar surroundings with family members participating in their care. The home health staff follows your physician's orders and communicates closely with your physician as needs arise.

Technology has now developed to the point where almost any service available in a hospital can be delivered in the home setting with some modification.

- *Specialized Nursing Care*
Cardiac, Diabetes, Enterostomal (Wound), Pediatric, Psychiatric, Pulmonary and Rehabilitation
- *Therapies Available*
Occupational Therapy, Physical Therapy and Speech Therapy
- *Other services available*
Certified Home Health Aides
Social Work services

For more information, call 1-888-231-9282.

Hospice: NMMC's Hospice provides help and support to people who are facing a life-limiting illness and to their families. Through careful attention to the relief of pain and discomfort, as well as the emotional and spiritual issues you and your family face, Hospice provides end of life care with an understanding, private and empathetic sense that is unique to each patient and family. For more information, call (662) 377-3612.

Insurance and Financial Issues

It's important for you to know your financial resources when you're beginning cancer treatments. If you have private insurance, you need to check your benefits to assure that your particular treatment is covered, and whether it pays on an inpatient or outpatient basis. The benefit telephone number is listed on the back of your insurance card.

Patients who do not have insurance should talk with the business office at the hospital or clinic where they will be receiving treatment. NMMC and the NMMC Cancer Center both have social workers that can discuss available financial resources.

If you are admitted to NMMC, a patient account representative will be assigned to you. Your representative will contact you by phone or visit your room to discuss your account during your stay. If you have any questions concerning your account during your stay, please contact the patient account department at any of the following telephone numbers: (662) 377-5487, (662) 377-5489, (662) 377-5141 or (662) 377-3803.

Outpatient Cancer Treatment

You don't have to go far for quality, caring cancer treatment. That's because the NMMC Cancer Center offers outpatient cancer treatment. The outpatient treatment areas provide a convenient and comfortable environment in which you can receive world-class cancer care.

Medical Oncology/Hematology services: Medical oncology and hematology are sub-specialties of internal medicine. Medical oncologists treat malignant diseases while hematologists treat blood malignancies as well as other blood disorders. Chemotherapy is administered in an outpatient area. The staff includes board-certified physicians, certified phlebotomists, registered medical technologists, certified oncology nurses, clinical research coordinators and nurse practitioners along with other office personnel.

North Mississippi Hematology and Oncology Associates Ltd. is a private physician office located on the second floor of the NMMC Cancer Center. Office hours are 8 a.m. to 4:30 p.m. Monday-Friday.

Radiation Oncology: Radiation oncologists use high-energy external beam radiation to destroy cancer cells. Radiation oncology services and the radiation oncologist offices are located on the first floor at the NMMC Cancer Center. The staff includes board-certified physicians, certified oncology nurses, certified dosimetrist, physicist, certified radiation oncology therapists, social worker, dietitian, cancer registry, clinical research coordinator and other office personnel.

Diagnostic Radiology: NMMC offers radiology services at the Outpatient Department on the main campus and at Longtown Imaging located at Longtown Medical Park, 4381 Eason Blvd., Tupelo.

NMMC Outpatient Home Infusion: NMMC's Outpatient Infusion Service provides IV and other injectable medications and infusions to outpatients. Staffed by registered nurses and pharmacists, the center accepts referrals from numerous physician specialties. One specialty service is providing chemotherapy and related treatments to oncology patients. Located at 812 Garfield St., the center is open 8 a.m. to 4:30 p.m. Monday-Friday with some extended hours. The center also provides services to home patients. For scheduling and additional information, the Outpatient Infusion Service can be contacted at (662) 377-4919.

Pastoral Care

Your experiences with cancer can be a challenging and emotional time for you and your family; you may find comfort and support in faith and spirituality.

The NMMC Pastoral Care Department believes that a person is more than a collection of parts. Each person is a whole being, which includes every facet of the person's life. The physical, emotional and spiritual needs of an individual are so intertwined and interconnected that one cannot be met successfully and completely without meeting the others. A religious ministry has a natural place within the structure of a healing institution. The church has always been involved in the health field. Jesus' ministry focused more on the sick and the distressed than on any other one area of the community. The first infirmaries were begun by Monastic orders of the church, ministers who devoted their lives to the care of the sick. In Biblical times the role of the priest was a health function and a religious function, with the recognition of the interrelationship of the body, mind and soul.

In this tradition of pastoral care of the sick and disturbed, the chaplains in the NMMC Pastoral Care Department attempt to minister to the patients under the care of the medical staff and hospital personnel. Religion can have either helping or hindering dimensions. It is the intent of this department to reduce the hindering aspects and reinforce the helping qualities offered by religious faith.

You can reach the NMMC pastoral staff at (662) 377-3439.

Palliative Care

You will find this information in the back pocket of this booklet.

Skin Care Team

Skin and tissue trauma can result from your cancer or the treatment you receive. The NMMC Wound Center is staffed with wound and ostomy nurses available to assist you with any skin care questions or issues you may have. The center also offers hyperbaric oxygen therapy for problematic non-healing wounds related to radiation therapy as well as other wound and skin diagnoses.

Please ask your doctor to refer you to the Wound Center for further assistance with any skin or ostomy problems you may have. For additional information, call (662) 377-2395.

Social Work

To help you cope with the stress of a cancer diagnosis and treatment, a social worker can provide you with counseling and emotional support, as well as information related to financial issues. The social worker is a resource that can help you with every aspect of your cancer care including:

- Helping you connect with support resources
- Connecting you and your family with support groups and other community resources

Guided Imagery is a mind-body intervention that uses the power of the imagination to access physical, emotional and spiritual dimensions to affect change. Imagery uses sight, sound, touch and smell to help patients reach a relaxed state. During the session, patients are lead through a visual story that helps them relax. Guided imagery is used to help with pain control, nausea, anxiety, depression and insomnia. The importance of imagery is in its meaning to the individual experiencing it.

Massage Therapy is the massaging of the muscles of the body. Research studies show that massage therapy reduces heart rate, lowers blood pressure, increase blood circulation and lymph flow, relaxes muscles and improves range of motion.

For more information, contact our social worker at:

NMMC Cancer Center (662) 377-4049

North Mississippi Medical Center (662) 377-3158

Support Groups

The diagnoses of cancer raise fears, anxieties and questions. To help ease some of your concerns, we offer a variety of support groups. Some of the groups are for you and your family and others are only for you. These groups can offer comfort from people who know what you are going through. You will find a list of the NMMC sponsored cancer support groups in the back pocket of the booklet. If you need more information, call (662) 377-4047.

Cancer Information Resources

Joyce Atwell Resource Center

Located on the first floor of the NMMC Cancer Center, this resource center offers books, tapes and informational pamphlets about general and specific types of cancer. Also available is a computer with Internet access.

General Cancer Information

- American Cancer Society www.cancer.org or 1-800-ACS-2345
- Cancer Care www.cancercare.org or 1-800-813-HOPE
(Web site also available in Spanish)
- National Cancer Institute
(for any type cancer) www.cancer.gov/cancer_information or
1-800-4cancer (Web site also available in Spanish)
- Cancer Clinical Trials www.clinicaltrials.gov
- Cancer Clinical Trials www.cancer.gov/clinical_trials

Cancer Specific Information

- American Brain Tumor Association www.abta.org or 1-800-886-2282
- Bladder Cancer www.thecancer.info/bladder (The National Cancer Institute's
site for bladder cancer patients and their families.)
- The Brain Tumor Society www.tbts.org or 1-800-770-8287
- Kidney Cancer Association www.nkca.org or 1-800-850-9132
- The Susan G. Komen
Breast Cancer Foundation www.breastcancerinfo.com or 1-800-462-9273
- The Leukemia & Lymphoma Society www.leukemialymphoma.org or 1-800-955-4572
- Lung Cancer Online www.lungcanceronline.org
- Multiple Myeloma Research Foundation www.multiplemyeloma.org or 203-972-1250
- National Alliance of Breast Cancer
Organizations www.nabco.org or 1-888-80-NABCO
- National Brain Tumor Foundation www.braintumor.org or 1-800-934-CURE
- National Marrow Donor Program www.marrow.org or 1-800-MARROW



Medical Terms

Common Cancer Terms

You can find terms that are not listed by visiting CancerNet, a service of the National Cancer Institute, at www.cancernet.gov/dictionary.html

- **Abdomen** - The area of the body that contains the pancreas, stomach, intestines, liver, gallbladder and other organs.
- **Abdominal** - Having to do with the abdomen, which is the part of the body between the chest and the hips that contains the pancreas, stomach, intestines, liver, gallbladder and other organs.
- **Acute** - Symptoms or signs that begin and worsen quickly; not chronic.
- **Acute leukemia** - A rapidly progressing cancer that starts in blood-forming tissue such as the bone marrow, and causes large numbers of white blood cells to be produced and enter the blood stream.
- **Acute pain** - Pain that comes on quickly, can be severe, but lasts a relatively short time.
- **Adenocarcinoma** - Cancer that begins in cells that line certain internal organs and that have glandular (secretory) properties.
- **Adenoma** - A noncancerous tumor.
- **Adjuvant therapy** - Treatment given after the primary treatment to increase the chances of a cure. Adjuvant therapy may include chemotherapy, radiation therapy, hormone therapy or biological therapy.
- **Analgesic** - A drug that reduces pain. Analgesics include aspirin, acetaminophen and ibuprofen.
- **Anemia** - A condition in which the number of red blood cells is below normal.
- **Anesthesia** - Drugs or substances that cause loss of feeling or awareness. Local anesthetics cause loss of feeling in a part of the body. General anesthetics put the person to sleep.
- **Angiogenesis** - Blood vessel formation. Tumor angiogenesis is the growth of blood vessels from surrounding tissue to a solid tumor. This is caused by the release of chemicals by the tumor.
- **Anorexia** - An abnormal loss of the appetite for food.
- **Antibody** - A type of protein made by certain white blood cells in response to a foreign substance (antigen). Each antibody can bind to only a specific antigen. The purpose of this binding is to help destroy the antigen. Antibodies can work in several ways, depending on the nature of the antigen. Some antibodies destroy antigens directly. Others make it easier for white blood cells to destroy the antigen.
- **Antidepressant** - A drug used to treat depression.
- **Antiemetic** - A drug that prevents or reduces nausea and vomiting.
- **Antifungal** - A drug that treats infections caused by fungi.
- **Arteriogram** - An X-ray of arteries; the person receives an injection of a dye that outlines the vessels on an X-ray.
- **Ascites** - Abnormal build-up of fluid in the abdomen that may cause swelling. In late-stage cancer, tumor cells may be found in the fluid in the abdomen. Ascites also occur in patients with liver disease.
- **Aspirate** - Fluid withdrawn from a lump (often a cyst) or a nipple.

- **Axillary lymph node dissection** - Surgery to remove lymph nodes found in the armpit region. Also called axillary dissection.
- **Barium enema** - A procedure in which a liquid with barium is put into the rectum and colon by way of the anus. Barium is a silver-white metallic compound that helps to show the image of the lower gastrointestinal tract on an X-ray.
- **Barium swallow** - A series of X-rays of the esophagus. The X-ray pictures are taken after the person drinks a solution that contains barium. The barium coats and outlines the esophagus on the X-ray.
- **Basal cell carcinoma** - A type of skin cancer that arises from the basal cells, small round cells found in the lower part (or base) of the epidermis, the outer layer of the skin.
- **Benign** - Not cancerous. Benign tumors do not spread to tissues around them or to other parts of the body.
- **Bilateral cancer** - Cancer that occurs in both paired organs, such as both breasts or ovaries.
- **Biopsy** - The removal of cells or tissues for examination under a microscope. When only a sample of tissue is removed, the procedure is called an incisional biopsy or core biopsy. When an entire lump or suspicious area is removed, the procedure is called an excisional biopsy. When a sample of tissue or fluid is removed with a needle, the procedure is called a needle biopsy or fine-needle aspiration.
- **Biotherapy** - Treatment to stimulate or restore the ability of the immune system to fight infections and other diseases. Also used to lessen side effects that may be caused by some cancer treatments. Also known as biological therapy, immunotherapy or biological response modifier (BRM) therapy.
- **Blood cell count** - A test to check the number of red blood cells, white blood cells and platelets in a sample of blood. Also called complete blood count (CBC).
- **Bone marrow biopsy** - The removal of a sample of tissue from the bone marrow with a needle for examination under a microscope.
- **Bone marrow suppression** - When bone marrow is not making blood cells because of disease or some type of treatment or toxin (example - chemotherapy).
- **Bone marrow transplantation** - A procedure to replace bone marrow that has been destroyed by treatment with high doses of anticancer drugs or radiation. Transplantation may be autologous (an individual's own marrow saved before treatment), allogeneic (marrow donated by someone else) or syngeneic (marrow donated by an identical twin).
- **Bone metastases** - Cancer that has spread from the original (primary) tumor to the bone.
- **Bone scan** - A technique to create images of bones on a computer screen or film. A small amount of radioactive material is injected into a blood vessel and travels through the bloodstream; it collects in the bones and is detected by a scanner.
- **Brachytherapy** - A procedure in which radioactive material sealed in needles, seeds, wires or catheters is placed directly into or near a tumor. Also called internal radiation, implant radiation or interstitial radiation therapy.
- **Brain metastasis** - Cancer that has spread from the original (primary) tumor to the brain.
- **Bronchogenic Carcinoma** - Cancer that starts in the bronchi, the large airways of the lungs.

- **Bronchoscopy** - A procedure in which a thin, lighted tube is inserted through the nose or mouth. This allows examination of the inside of the trachea and bronchi (air passages that lead to the lung), as well as the lung. Bronchoscopy may be used to detect cancer or to perform some treatment procedures.
- **Cancer of unknown primary origin** - A case in which cancer cells are found in the body, but the place where the cells first started growing (the origin or primary site) cannot be determined.
- **Candidiasis** - A condition in which *Candida albicans*, a type of yeast, grows out of control in moist skin areas of the body. It is usually a result of a weakened immune system, but can be a side effect of chemotherapy or treatment with antibiotics. Thrush usually affects the mouth (oral thrush); however, rarely it spreads throughout the entire body. Also called Candidosis or thrush.
- **Carcinoma** - Cancer that begins in the skin or in tissues that line or cover internal organs.
- **Carcinoma in situ** - Cancer that involves only the cells in which it began and that has not spread to nearby tissues.
- **Cardiomyopathy** - A disease of the heart muscle that causes the heart to pump poorly.
- **CAT scan** - A series of detailed pictures of areas inside the body taken from different angles; the pictures are created by a computer linked to an X-ray machine. Also called computerized axial tomography, computed tomography (CT scan) or computerized tomography.
- **Central venous access catheter** - A tube surgically placed into a blood vessel for the purpose of giving intravenous fluid and drugs. It also can be used to obtain blood samples. This device avoids the need for separate needle insertions for each infusion or blood test. Examples of these devices include Hickman catheters, which require clamps to make sure the valve is closed, and Groshong catheters, which have a valve that opens as fluid is withdrawn or infused and remains closed when not in use.
- **Chemotherapy** - Treatment with anticancer drugs.
- **Chronic** - A disease or condition that persists or progresses over a long period of time.
- **Colonoscopy** - An examination of the inside of the colon using a thin, lighted tube (called a colonoscope) inserted into the rectum. If abnormal areas are seen, tissue can be removed and examined under a microscope to determine whether disease is present.
- **Colostomy** - An opening into the colon from the outside of the body. A colostomy provides a new path for waste material to leave the body after part of the colon has been removed.
- **Combination chemotherapy** - Treatment using more than one anticancer drug.
- **Congestive heart failure** - Weakness of the heart muscle that leads to a buildup of fluid in body tissues.
- **Continuous infusion** - The administration of a fluid into a blood vessel, usually over a prolonged period of time.
- **Diagnosis** - The process of identifying a disease by the signs and symptoms.
- **Dietitian** - A health professional with special training in nutrition that can offer help with food and drink choices.
- **Drug Resistance** - When cancer cells adapt so that the drug being used stops working.
- **Edema** - Swelling caused by excess fluid in body tissues.

- **Electrocardiogram (EKG or ECG)** - A test that looks at how the heart is working by measuring the electrical impulses it produces.
- **Electrolytes** - Chemicals in the body, such as potassium and sodium, that keep fluids in balance and organs working properly.
- **Endometrial cancer** - Cancer that starts in the lining of the uterus.
- **Esophagitis** - Inflammation or irritation of the esophagus.
- **Excision** - The removal of something (tissue, organ) by cutting.
- **Fine-needle aspiration** - The removal of tissue or fluid with a needle for examination under a microscope. Also called needle biopsy.
- **Fistula** - a hole that forms between two areas of the body.
- **Frozen Section** - A procedure in which a sample of tissue is frozen after being removed from the body, placed under a microscope, and examined for cancer cells.
- **Gastric** - Relating to the stomach.
- **Genes** - The material that passes on traits and characteristics from parent to child.
- **Hematocrit** - The number of red blood cells in the blood. Low hematocrit can be a sign of anemia.
- **Hematuria** - Blood in the urine.
- **Hemoglobin** - The part of the red blood cells that carries the oxygen to the cells of the body.
- **Hepatic** - Relating to the liver.
- **Hormone** - A substance made in several organs of the body and which the body uses to control growth, reproduction and the way the body works.
- **Ileostomy** - Surgery in which an opening is created between the small intestine and the surface of the abdomen to allow waste from the small intestine to empty into a collection bag.
- **Immunity or Immune system** - The body's defense against disease and infection.
- **Immunosuppression** - When the immune system has been weakened or damaged and cannot fight infection or disease.
- **Infusion** - Putting medication or fluid into the bloodstream over a period of time.
- **Injection** - Putting medication into the body through a needle or syringe.
- **Intramuscular** - Into the muscle.
- **Intravenous** - Into the vein.
- **Lesion** - A damaged area in or on the body caused by an injury or a disease (such as cancer).
- **Leukemia** - Cancer of the blood in which the body makes large numbers of abnormal blood cells.
- **Leukopenia** - A low number of white blood cells.
- **Lumpectomy** - Surgery to remove a breast lump and some of the tissue around it.
- **Lymphatic system** - A network of lymph nodes and vessels by which infection-fighting cells move through the body. Cancer cells can also use this network to travel and spread around the body.
- **Lymphedema** - Swelling in the area drained by lymph nodes when lymph nodes have been removed or are blocked.

- **Lymph nodes** - Hundreds of small, bean-shaped organs (glands) located within specific areas of the body called lymphatic system. They act as filters to collect and destroy bacteria. Cancer cells that may be moving through the lymphatic system can become trapped in the lymph nodes.
- **Lymphocytes** - A type of white cells that responds when exposed to viruses or illness.
- **Lymphoma** - Cancer of the lymphatic system.
- **Malignant** - A growth that tends to invade and destroy nearby tissues and spread to other parts of the body.
- **Malignant tumor** - A tumor made up of cancer cells.
- **Mammogram** - An X-ray of the breast taken to detect abnormal growths.
- **Mastectomy** - Surgery to remove a breast.
- **Melanoma** - Cancer of the pigment cells in the skin. It usually starts with a mole that changes in size, shape or color.
- **Metastasize** - Spreading of the cancer from the place where it started to the lymph nodes and/or other organs in the body.
- **Metasis or mets** - Spreading of the cancer from the place where it started to the lymph nodes and/or other organs in the body.
- **MRI (magnetic resonance imaging)** - A scan that uses magnetic waves to create images of the body.
- **Mucosa** - Membranes that line a body part or organ such as the mouth or bowel.
- **Mucositis** - A condition in which mucous membranes swell and become inflamed.
- **Neoadjuvant chemotherapy** - Chemotherapy given before a planned surgery to shrink the tumor and make it easier to remove.
- **Neoplasm** - An abnormal growth of cells that forms a tumor.
- **Neutropenia** - A decrease in the number of infection-fighting white cells (called neutophils).
- **Neutropenic fever** - Body temperature over 101 degrees that occurs because the body does not have enough white cells to fight its own bacteria or an infection.
- **Oncologist** - A doctor with special training in the treatment of cancer.
- **Oncology-certified nurse (ONC)** - A registered nurse who has passed a national test that proves he or she understands the specialty of oncology (cancer treatment).
- **Oncology Pharmacist** - A pharmacist that specializes in cancer drugs.
- **Palliative treatment** - Treatment aimed at easing the pain or other physical problems caused by cancer. Its goal is to make a patient as comfortable as possible. It is not meant to cure the disease.
- **Paracentesis** - A needle is placed into the abdominal cavity to remove fluid that has built up in the area.
- **Pathological fracture** - A break in the bone that happens without trauma. Occurs at a place in the body where cancer or another disease is present.
- **Pathology** - A process of looking at the tissue samples and body fluids under a microscope to detect cancer cells, or to see how cancer cells have changed. A doctor that looks at these cells is called a pathologist.
- **PET scan (Positron emission tomography)** - A computerized scan used to look for cancer in the body by detecting highly active cells that are growing rapidly.
- **Phlebitis** - Pain or swelling in the vein.

- **Photosensitivity** - Sensitivity to light (including sunlight, filtered light and artificial light).
- **Placebo** - A substance that contains no active ingredients and is sometimes used in a clinical trial as a comparison to a substance doctors are studying. Also known as a sugar pill.
- **Plasma** - The fluid that blood cells float in.
- **Platelet count** - The number of platelets in a sample of blood. Platelets are the cells that help blood clot.
- **Pleural effusion** - Collection of fluid in the lining of the lung.
- **Polyp** - A bulge in the mucous membrane that has grown out of shape. Polyps can be found in the bowel, bladder, throat and nose.
- **Primary tumor** - The place where a cancer starts.
- **Prognosis** - A prediction of how a disease will progress over time.
- **Prophylactic** - A medicine used to prevent or guard against a side effect of cancer treatment or disease.
- **Prosthesis** - A man-made replacement for a missing body part, such as a breast, arm or leg.
- **Protocol** - Treatment plan.
- **Radiation oncologist** - A doctor who specializes in radiation therapy.
- **Radiation therapy** - A form of cancer treatment that uses strong X-rays to damage or kill cancer cells.
- **Radiologist** - A doctor who specializes in reading X-rays and scans.
- **Recurrence** - When cancer comes back.
- **Red blood cells** - Blood cells that carry oxygen to all the parts of the body.
- **Regression** - Shrinkage of a cancerous growth.
- **Relapse** - The return of the cancer that has been treated and becomes undetectable on follow-up scans and tests.
- **Remission** - There has been no sign of cancer on follow-up scans and tests.
- **Renal** - Relating to the kidney.
- **Sarcoma** - Cancer of the bone, cartilage or muscle.
- **Social worker** - A professional who helps patients by providing emotional support, finding needed agencies or equipment, and coordinating the patient's discharge from the hospital.
- **Sputum** - Liquid and phlegm made by the lungs.
- **Squamous cell carcinoma** - Cancer that starts in the squamous layer of the skin or in organs that are covered with squamous cells. The lungs, head, neck, prostate and uterus all have squamous cells.
- **Staging** - A system doctors use to determine how far in the body the cancer has spread.
- **Stoma** - An opening made from the body cavity to the outside of the body.
- **Stomatitis** - Soreness and swelling of the mouth caused by treatment.
- **Subcutaneous** - Under the skin.
- **Systemic disease** - Disease that affects the whole body, not just one organ.
- **Thrombocytopenia** - A platelet count that is below normal.
- **Tracheostomy** - Inserting a tube through the neck into the trachea (breathing pipe) to allow breathing.
- **Tumor** - A group of cells that grows uncontrolled. It can be benign or malignant.

- **Tumor markers** - Substances made by some cancer cells. They can build up in the blood or urine of people with cancer.
- **Virus** - An infectious agent that can cause disease, such as the common cold virus.
- **White blood count** - The total number of white blood cells in a blood sample. White blood cells fight infection.
- **Wide excision** - The process of cutting away a wide area around a tumor or diseased tissue and leaving healthy, disease-free tissue.
- **X-ray** - A way to look at bones and some internal organs using low levels of radiation.

Notes

