

Together

WINTER 2005

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The Spiritually Distressing Part of Cancer

By Chaplain Mary E. Johnson

“Ann” hadn’t slept all night. She was a day or two from being dismissed from the hospital. Physically, she was recovering. But emotionally, she was troubled, and spiritually, she felt confused and overwhelmed.

Until a few weeks ago, Ann had been consumed by her busy medical practice. She was the doctor in a small town in a rural area. Her days were filled with office appointments and house calls. She liked to visit the homes of her patients. She was a much loved, old-fashioned country doctor. But she had been experiencing what felt like vague stomach upset, was feeling bloated and having trouble in the bathroom. Then she noticed that she couldn’t button her slacks. Looking at herself sideways in the mirror she looked pregnant, but she wasn’t. Her belly was filling up with fluid. So she called a doctor colleague in a neighboring town, and after hearing her story and examining her, Ann’s friend referred her to a gynecologic surgeon.

I met Ann at her bedside in the hospital a few days after her surgery. She looked drawn and exhausted after a long, sleepless night. When I introduced myself to her, she began to quake, tears rolling down her cheeks. “I know I should feel strong because of my faith. But I don’t—I’m terrified,” she confided. She was experiencing spiritual distress.

Spiritual distress is *a disruption in the life principle that pervades a person’s entire being and that integrates and transcends one’s biological and psychological nature (*)*. In plain words, spiritual distress is that void that sets in when everything you’ve always believed in isn’t comforting you in your present situation. Some people experience spiritual distress as fear or confusion. Concentration is difficult. Spiritual distress feels unsettling. Others describe spiritual distress as a deeply troubling feeling that makes physical and emotional pain seem worse.

*Spiritual distress is
that void that sets in
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Together...

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Mayo Clinic Cancer Center is part of Mayo Clinic. The mission of the cancer center is to provide compassionate state-of-the-art care for the patient with cancer today and continued advancements in the prevention, diagnosis, treatment and cure of cancer in the future. The programs and services of the Cancer Center span the three Mayo Clinic campuses in Rochester, Minn., Jacksonville, Fla., and Scottsdale, Ariz.

Together provides educational information for cancer patients treated at Mayo Clinic, their family members, caregivers and friends. Physicians, staff and patients of the cancer center write the articles.

You can access current and archived issues of the *Together* newsletter online at <http://www.mayoclinic.org/cancer-education-rst/>

Continued from page 1 **The Spiritually Distressing Part of Cancer**

Individuals experiencing spiritual distress sometimes have questions about the meaning of life – questions that many of us do not spend much time thinking about. Spiritual distress can also result from having to make difficult decisions about complicated treatment options, such as wondering what the “right” decision is. Spiritual distress can make sleeping difficult as nights become filled with rumination, the experience of turning multiple problems over and over in one’s mind.

Spiritual distress may result from feeling conflicted about what you believe, even if you have been the most religious and religiously involved person throughout your entire life. Some people look to their spiritual beliefs for strength and comfort, and it may be spiritually distressing when they are unable to find strength and comfort. Spiritual distress may also result from having concerns about your relationship with your God. Praying may be difficult. Attending religious services may feel painful, sad or lonely.

Often, when sudden, major change occurs in life, such as a health crisis or a life-threatening diagnosis, there is a sense of loss of control. Sometimes this experience of loss of control feels terrifying because you are being asked to make changes you hadn’t anticipated and for which you are unprepared. There is also grief because you have lost, at least temporarily, that “dream” you had about your future. We all have those dreams about our futures and when something happens that threatens those dreams we suffer a loss.

When I met Ann she felt sad and terrified by what was happening to her. Not only was she experiencing a major health crisis and the possibility of death, she also was distressed spiritually as she tried to make some sense out of what was happening to her. Ann was being forced to make many unanticipated changes for which she felt unprepared. She was supposed to be the caregiver, not the person

requiring care. She had always been the healer, not the person needing healing. She tended to the vulnerable, and was not supposed to feel vulnerable. Ann expected to be the person of faith feeling peaceful, not the person troubled by a lack of peace in an effort to cope with all of this. She looked to her spiritual beliefs, but

they did not provide the strength and comfort she had come to expect from them. She didn’t have access to her life-lines – her spiritual beliefs and practices upon which she had always been able to rely on for strength and comfort.

Talking to someone about what you believe and what troubles you can reduce spiritual distress. It is helpful to choose someone who can handle your spiritual questions about the meaning of life and death as well as questions about your relationship with your God. It is also helpful to choose someone who doesn’t have to solve your problems or give advice, but someone who can simply listen. Being able to trust another person and to place yourself in his or her spiritual care can be healing and can help restore your own serenity – that sense of inner peace, tranquility and freedom that may have been disrupted by the news of cancer.



* *Nursing Diagnosis Handbook: A Guide to Planning Care, 5th Edition.*

Talking to another person about what troubles you spiritually may seem simple. But this is difficult for some because we think our spiritual distress results from weak faith or a loss of faith. We might find it embarrassing or humiliating to reveal our spiritual struggles to someone else. Actually, spiritual distress, even though it can be painful, can be a sign of a vibrant faith that is alive and searching for new life or new understanding. It is

this searching part that troubles most people. Most of us are not used to having to search for meaning in our lives until something deeply troubling happens.

Spiritual distress is a very personal and universal part of the human experience. It is a central part of the deep and simple human impulse to live, and to understand what is happening to us.



*Mary E. Johnson
Chaplain*

Cancer: Weaving a Tapestry of Care Through Education, Practice and Research

Saturday, April 1, 2006

Phillips Hall, Siebens Building • Mayo Clinic, Rochester, Minnesota

Sponsored by Mayo Clinic Cancer Education Program

The mission of the Mayo Clinic Cancer Education Program is to educate all audiences on cancer-related issues, including prevention, risks, treatment, end-of-life care and survivorship.

Purpose

Cancer touches the life of almost everyone today. Whether cancer has impacted your life or the life of a friend or family member, there is encouraging news on the horizon. This education event will focus on current topics in cancer care, including updates on nutrition, herbs and supplements, genomics, survivorship, caregiving, quality of life and the latest on cancer research and treatments.

The goals of this program are to:

- Provide up-to-date information on cancer treatment and research
- Highlight the importance of survivorship issues
- Provide a forum to talk with others about cancer issues and caregiving

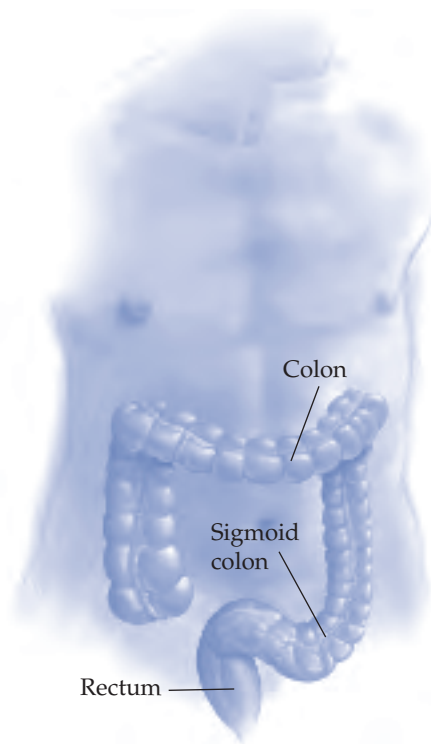
Location

Phillips Hall, First Floor
Siebens Medical Education Building
200 Second Avenue Southwest
Mayo Clinic
Rochester, Minnesota

Call 507-288-5620 for more information about this program.

Understanding Colorectal Cancer - It can be Prevented

By Paul Limburg, M.D.



Colorectal cancer is the third most common cancer among men and women in the United States, with more than 145,000 new cases expected in 2005. It is also the second deadliest cancer in the United States, with more than 55,000 deaths expected in 2005. According to the American Cancer Society, the number of colorectal cancer deaths could be cut in half if Americans followed recommended colorectal cancer screening guidelines.

Colorectal cancer develops in the lower

part of the digestive system, also referred to as the gastrointestinal or GI system. The digestive tract processes the food you eat and rids the body of solid waste. Colorectal cancer usually develops from precancerous changes or growths (polyps) in the lining of the colorectum.

Because colorectal cancer often does not cause any symptoms in its early stages, screening is very important. When rectal bleeding, blood in the stool, a change in bowel habits, or cramping in the lower abdomen occur, evaluation by a physician is critical to determine whether these symptoms might be associated with colorectal cancer.

Risk factors

The number one risk factor for colorectal cancer is age. Men and women 50 years old and over have an increased risk for colorectal cancer, even with no family history of the disease. Colorectal cancer is a leading cause of death in both men and women, but many Americans think of colorectal cancer as only a "man's disease." Women account for half of all new colorectal cancer cases and half of the deaths. In fact, colorectal cancer kills more women than ovarian, uterine and cervical cancer combined.

A personal or family history of colorectal cancer, polyps, or chronic inflammatory bowel disease increases the likelihood of developing colorectal cancer. Certain genetic

factors also increase that likelihood. Other risk factors include smoking, alcohol consumption, obesity, physical inactivity, a diet high in fat and/or red meat, and a diet low in fruits and vegetables.

Another important risk factor for colorectal cancer is race. African-Americans have the highest colorectal cancer risk and are more likely to die from the disease than most other racial or ethnic populations. One reason for this difference is that African-Americans are more likely to be diagnosed when the disease is at an advanced stage and more difficult to treat. However, for unknown reasons, colorectal cancer death rates remain higher among African-Americans even after matching for stage of disease.

Among African-American and Hispanic populations, colorectal cancer is the second leading cause of cancer death for men and women combined. Research also shows Hispanics are much less likely to get screened for colorectal cancer than Caucasians.

Screening

Unlike most types of cancer, colorectal cancer can actually be prevented by screening with appropriate follow-up, since polyps can be removed before they become cancerous.

There are several different colorectal cancer screening tests. The American Cancer Society guidelines for the early detection of colorectal cancer recommend that men and women 50 years old and older should discuss testing options with their physician or health care professional and choose one of the following options:

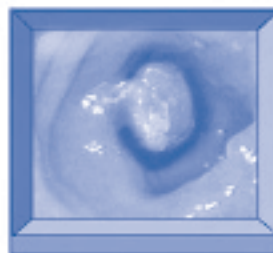
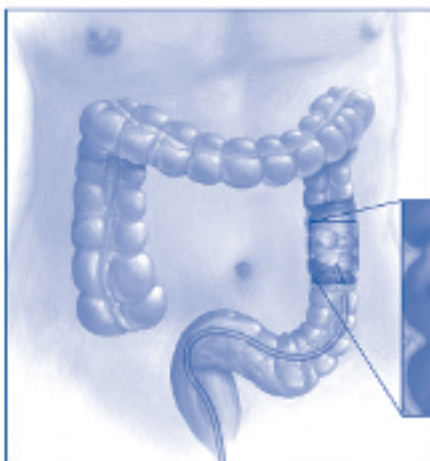
Yearly fecal occult blood test (FOBT). This test checks for microscopic amounts of blood in the stool, which can indicate the presence of polyps or other abnormalities in the colon.

Flexible sigmoidoscopy every five years. Sigmoidoscopy is an examination of the rectum and *lower* colon using a lighted instrument called a sigmoidoscope. Sigmoidoscopy can find precancerous or cancerous growths in the rectum and lower colon.

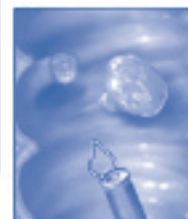
Double-contrast barium enema (DCBE) every five years. DCBE is an X-ray examination of the entire colon and rectum. The X-ray is taken after the patient is given an enema with a barium solution and air is introduced into the rectum and then into the colon. The barium and air help to outline any changes in the surface lining of the colon and rectum.

Screening with colonoscopy

Colonoscopy allows doctors to examine the entire length of your colon using a long, flexible, lighted tube that's inserted through the rectum into the colon. The colonoscope is connected to a video camera.



A view of a cancerous polyp as might be seen during colonoscopy. Polyps are often removed right away during colonoscopy.



One way to remove a polyp is with a snare.

Colonoscopy every 10 years. Colonoscopy is an examination of the rectum and *entire* colon using a lighted instrument called a colonoscope. Colonoscopy can find precancerous or cancerous growths throughout the colon, including the upper part of the colon, where they would be missed by sigmoidoscopy.

All positive screening tests, tests that find an abnormality, should be followed up with a colonoscopy. People with a personal history of colorectal cancer, colorectal polyps, or chronic inflammatory bowel disease should be tested earlier than age 50 and may need to undergo testing more often. Family history is also an important determinant of colorectal cancer risk and may signal a need for screening at a younger age.

Many misconceptions about colorectal cancer testing contribute to low screening rates. One common misconception is that only those with a family history should be tested. While individuals with a family history of the disease are at increased risk, the majority of cases occur in people whose only risk factor is their age. Others think screening is necessary only after symptoms appear, yet symptoms are often a sign that the disease has progressed into more advanced stages when treatment options are more limited. Colorectal cancer screening is most effective when a patient has no signs of illness.

Treatment for colorectal cancer is most successful when it is detected early, before it has spread to other parts of the body. When colorectal cancer is detected at an early stage, the five-year survival rate exceeds 90 percent. However, because screening rates are relatively low, only 39 percent of colorectal cancers are detected early.

Colorectal cancer tests are as important as other forms of screening such as annual Pap tests, mammograms, or

prostate exams. Colorectal cancer screening needs to become an accepted and routine part of everyone's health care.

Making progress

According to the American Cancer Society's *Cancer Facts and Figures 2005*, colorectal cancer incidence rates decreased by 2.9 percent per year between 1998 and 2001. This decrease may be a result of increased colorectal cancer screening and polyp removal, which prevents the polyps from becoming cancerous. In addition, colorectal cancer death rates have continued to decline in both men and women at an average of 1.8 percent annually for the past 15 years.

While fewer Americans are being diagnosed with and dying from colorectal cancer today, those numbers could be even lower if more men and women were getting screened for the disease. Colorectal cancer is one of very few cancers that can be prevented entirely with regular screening and appropriate follow-up.

Paul Limburg, M.D., is an Assistant Professor of Medicine at the Mayo Clinic College of Medicine, Rochester, Minn.

For more information on colon cancer and screening recommendations, visit:

Mayo Clinic
<http://www.mayoclinic.com>

American Cancer Society
<http://www.cancer.org>
800-ACS-2345

National Cancer Institute
<http://cancer.gov>
800-4-CANCER (800-422-6237)



Paul Limburg, M.D.

Survivor

MARY LOU KURTZ



Mary Lou and Gene Kurtz support multiple myeloma research and other initiatives at Mayo Clinic.

There is life after a cancer diagnosis

The call came at 10:30 p.m. and lasted almost an hour. Mary Lou Kurtz didn't know the person at the other end of the line, but she recognized confusion and fear in the stranger's voice — she had experienced those feelings herself.

Recently diagnosed with cancer, the caller found Mrs. Kurtz's name on a list of cancer survivors to contact for understanding and support. When their conversation ended, each felt a sense of peace.

As Mrs. Kurtz explains: "I can't offer medical advice, but I can offer hope. I encourage people to take control of their illnesses. You can find blessings in this experience."

She speaks to groups as well as to individuals. Her positive outlook comes from her own battle with multiple myeloma. This form of cancer develops in the blood and attacks the plasma cells — an important part of the immune system. She was diagnosed with multiple myeloma in 1985.

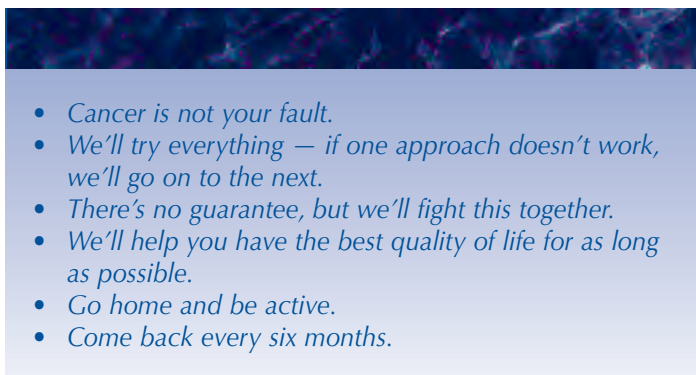
To fight the disease, Mrs. Kurtz and her husband, Gene, find strength in their faith and family. They are close to their daughter, Lynn, and her husband, David; their son, Bobby, and his wife, Lisa, ... and, as Mrs. Kurtz emphasizes, "our six beautiful grandchildren!"

Both Mr. and Mrs. Kurtz describe philanthropy as an important way to make a difference. Active with their church and many other organizations, they support multiple myeloma research at Mayo Clinic. They also provide financial support for Mayo's programs and facilities in patient care, research and education.

Six statements to live by

Mrs. Kurtz's diagnosis came during the busy years when she and Mr. Kurtz were rearing their children and growing their business. Describing their close relationship, Mr. Kurtz says: "We meet every problem head-on, together."

The turning point came when her local doctors said Mrs. Kurtz's case was untreatable. "The finality of the diagnosis made me determined to explore all options, which opened the door to a long and successful relationship with Mayo Clinic." She went to Rochester in February 1991 and met Robert Kyle, M.D., an internationally recognized hematologist. "He gave me six statements, which I've always cherished," she recalls:

- 
- *Cancer is not your fault.*
 - *We'll try everything — if one approach doesn't work, we'll go on to the next.*
 - *There's no guarantee, but we'll fight this together.*
 - *We'll help you have the best quality of life for as long as possible.*
 - *Go home and be active.*
 - *Come back every six months.*

Those statements became a creed for Mrs. Kurtz. She takes control of multiple myeloma by following a healthy lifestyle, enjoying family and friends, and relaxing with her husband at their vacation home outside San Antonio. Riding horses and tending Longhorn cattle are among her favorite pursuits. As Mrs. Kurtz says: "There is life after a cancer diagnosis."

Having seen Mayo Clinic through his wife's experience, Mr. Kurtz became a Mayo patient in 1996. Their friendships with Dr. Kyle, Angela Dispenzieri, M.D., and many others inspire Mr. and Mrs. Kurtz to support Mayo.

Years later, the Kurtzs still tell their friends about their Mayo experience. "It's a huge, efficient operation, but they always respect your dignity," says Gene.

Calendar of Events 2006

January

Cervical Health Awareness Month

National Cervical Cancer Coalition
800-685-5531 — www.nccc-online.org

March

20-26 Daffodil Days

American Cancer Society
800-ACS-2345 — www.cancer.org

National Colorectal Cancer Awareness Month

Cancer Research and Prevention Foundation
800-227-273 — www.preventcancer.org/colorectal

April

1 "Cancer: Weaving a Tapestry of Care through Education, Practice and Research"

Mayo Clinic Cancer Center
Rochester, Minn.
507-288-5620

7-8 Hilltop Retreat

Rochester, Minn.
507-288-8354 — e-mail:
thehilltopretreat@yahoo.com

17-23 National Oral, Head and Neck Cancer Awareness Week

Yul Brynner Head and Neck Cancer Foundation, Inc.
843-792-6624 — www.yulbrynnnerfoundation.org

16-22 National Minority Cancer Awareness Week

American Cancer Society
404-329-5788 — www.cancer.org

May

Melanoma/Skin Cancer Detection and Prevention Month

1 Melanoma Monday

American Academy of Dermatology
888-462-DERM — www.aad.org

7-13 Brain Tumor Action Week

North American Brain Tumor Coalition
630-325-261 — www.nabraintumor.org

Oncology Nurses Month

Oncology Nursing Society
866-257-4667 — www.ons.org

June

4 National Cancer Survivors Day

National Cancer Survivors Day Foundation
615-794-3006 — www.ncsdf.org

Cancer Terms

3-Dimensional (3-D) conformal radiation therapy: A procedure that uses a computer to create a 3-dimensional picture of the tumor. This allows doctors to give the highest possible dose of radiation to the tumor, while sparing the normal tissue as much as possible.

Cervix: The lower, narrow end of the uterus that forms a canal between the uterus and vagina.

Colorectal: Having to do with the colon or the rectum.

Depression: A mental condition marked by ongoing feelings of sadness, despair, loss of energy, and difficulty dealing with normal daily life. Other symptoms of depression include feelings of worthlessness and hopelessness, loss of pleasure in activities, changes in eating or sleeping habits, and thoughts of death or suicide.

Dosimetrist: A person who determines the proper radiation dose for treatment.

Hematologist: A doctor who specializes in treating blood disorders.

Intensity Modulated Radiation Therapy (IMRT): A type of 3-dimensional radiation therapy that uses computer-generated images to show the size and shape of the tumor. Thin beams of radiation of different intensities are aimed at the tumor from many angles. This type of radiation therapy reduces the damage to healthy tissue near the tumor.

Pap test: A procedure in which cells are scraped from the cervix for examination under a microscope. It is used to detect cancer and changes that may lead to cancer. A Pap test can also show noncancerous conditions, such as infection or inflammation. Also called a Pap smear.

Polyp: A growth that protrudes from a mucous membrane such as the lining of the intestines.

Medical oncologist: A doctor who specializes in diagnosing and treating cancer using chemotherapy, hormonal therapy, and biological therapy. A medical oncologist often is the main health care provider for someone who has cancer. A medical oncologist also gives supportive care and may coordinate treatment given by other specialists.

Radiation oncologist: A doctor who specializes in using radiation to treat cancer.

Simulation: In cancer treatment, a process used to plan radiation therapy so that the target area is precisely located and marked.

Stereotactic radiation therapy: A radiation therapy procedure that uses special equipment to position the patient and precisely deliver a large radiation dose to a tumor and not to normal tissue. This procedure does not use surgery. It is used to treat brain tumors and other brain disorders. It is also being studied in the treatment of other types of cancer, such as lung cancer. Also called radiation surgery, radiosurgery, stereotactic external-beam radiation, stereotactic radiosurgery, and stereotaxic radiosurgery.

Therapeutic: Having to do with treating disease and helping healing take place.

**Definitions from the National Cancer Institute (NCI) website, <http://www.cancer.gov>.*

Notes from your American Cancer Society Navigators

Finding Reliable Cancer Information on the Internet



Jeri Lensing, Kelly McGuire, Angela Young
Mayo Clinic Rochester



Shayna Diamond
Mayo Clinic
Arizona

Patients and caregivers often turn to the Internet for cancer information. Many sites offer high quality information: news reports, reprints from medical journals, clinical trials information and patient education materials. Using web technology empowers patients with knowledge and enables them to take a more active role in their own care.

However, it is important to be a good detective to be able to sort through the many options available online. Anyone with the right software can publish on the Internet, regardless of the accuracy of the information. To a large extent, Internet information is unregulated, so users should be aware that inaccurate information can be presented on a professional-looking Web site.

It is important for health information seekers to always check the source of information. The Health On The Net Foundation (HON) (<http://www.hon.ch>) and Quackwatch (<http://www.quackwatch.org>) are reputable sites that monitor health information materials and work to combat misinformation.

Another way to check the accuracy of Internet information is to research the topic through multiple sources. When sources report similar information on a topic, it is more likely to be accurate. Be suspicious of those that seek to discredit other sources or promise a cure-all.

Here are some questions to ask in order to evaluate Web site credibility:

- Who wrote the information? What are the author's qualifications? The author should be clearly identified.
- How reliable is the evidence that the findings are based on? Credible Web sites will provide links or references to their source of information.
- Is the information current? Check the dates on the references; there may be more current research on the subject. Check the date the Web site was last updated.
- Is there a conflict of interest? Some for-profit companies provide reliable health information, but others may bias their content toward the product or procedure they sell.

In addition to medical information, many patients and caregivers look to the Internet for support and a connection to others with a similar cancer story. Shared personal experiences are helpful to others, but patients should remember that opinions are not facts, and one person's experience may not be an accurate predictor of someone else's.

There is a wealth of helpful information on the Internet, but it is important to make good choices on which sites to visit. Talk to your physician before following advice you find on the Internet.

For general cancer information, visit:

- The American Cancer Society at <http://www.cancer.org>
- National Cancer Institute at <http://www.cancer.gov>
- People Living With Cancer at <http://www.plwc.org>
- Mayo Clinic at <http://www.mayoclinic.com>



Clinical Depression and Cancer

By Teresa Rummans, M.D., PhD

Clinical depression is very common in cancer patients. Approximately 58 percent of cancer patients exhibit at least some symptoms of depression and fifteen percent experience significant depression.* Individuals who have experienced depression in the past, who have certain types of cancer, and who have fewer social supports or feel isolated are at greater risk for developing a depressive illness. Left untreated, depression can contribute to higher complication and death rates in patients with cancer.

What is clinical depression? The actual cause of clinical depression remains unclear, however, much progress has been made over the last couple of decades in identifying underlying factors contributing to its development. These include specific biological and/or genetic variables, psychological stresses, and environmental and/or social elements.

How can you recognize clinical depression in someone with cancer? Some symptoms that seem like depression can be experienced by cancer patients. However, most of the symptoms of clinical depression are not generally experienced by someone with cancer. Several depression-like symptoms can be a result of cancer or the side effects of cancer treatment. These include loss of appetite, weight loss, and sleep disturbances. The hallmark of clinical depression is the development of a sad or irritable mood with loss of interest or pleasure in daily activities that lasts more than two weeks. Additional symptoms that

accompany this change in mood may include agitation or withdrawal, fatigue or sluggishness, difficulty concentrating and remembering, feelings of guilt, helplessness or hopelessness. Severe depressive episodes left untreated can lead to thoughts of death and even suicide.

Once clinical depression has been recognized, what can be done to treat it? Various methods have been shown to be successful in treating depression. These fall primarily into two categories—psychotherapy or counseling, and biological interventions including antidepressant drug therapy, light therapy, or electroconvulsive therapy. Recent studies have found that these therapies work differently and that a combination of psychotherapy and biological therapy often is more successful than either one alone.

Psychotherapeutic interventions involve listening, talking, dealing with negative or unproductive thoughts and feelings, identifying destructive behaviors, and then changing these thoughts and behaviors to benefit the individual. Biological interventions include antidepressants, stimulants, and mood-stabilizing medications. These agents often take several weeks to work, and individuals may experience side-effects before they experience the effectiveness of medications. Many medications are chosen on the basis of their specific side-effects. For example, some medications can produce drowsiness. Therefore, individuals with higher levels of anxiety and insomnia may benefit from more sedating antidepressants. On the other hand, those who are withdrawn, lethargic (sluggish/tired), or fatigued will benefit from more stimulating antidepressants.

Many options are available to treat depression if cancer patients develop it. Patients should work with their health care providers to recognize clinical depression and determine which treatments may be best for them. Early intervention may decrease the risk of unnecessary suffering associated with depression, thereby increasing the patient's quality of life. Treatment of depression can be coordinated with other therapies to ensure the highest possible quality of life for patients with cancer.

Supportive Resources for Cancer Patients

American Cancer Society
<http://www.cancer.org>
Cancer Care
<http://www.cancercare.org>
Cancer Hope Network
<http://www.cancerhopenetwork.org>
People Living With Cancer
<http://www.plwc.org>
National Coalition for Cancer Survivorship
<http://www.canceradvocacy.org>
National Institute of Mental Health
<http://www.nimh.nih.gov>
National Cancer Institute - Coping with Cancer
http://www.cancer.gov/cancer_information/coping



Teresa Rummans, M.D., PhD

*Hahn C, Dunn R, Halperin E. Routine screening for depression in radiation oncology patients. American Journal of Clinical Oncology. 2004;27(5):497-499.

External Radiation Therapy — What is it and What Does it Involve?

By Julie Earle, RN

External Radiation Therapy

External radiation therapy is most commonly delivered using a machine called a linear accelerator. This machine produces high energy X-rays that can be used to treat cancers and occasionally benign or non-cancerous conditions. When cancer cells are exposed to therapeutic doses of radiation, they lose their ability to divide and grow. Radiation can be used as the primary form of treatment, or in combination with other treatments such as surgery and/or chemotherapy to reduce the risk of a cancer returning, or to alleviate pain or other symptoms. Radiation therapy is often part of a standard treatment course but may also be a component of a clinical trial.

Evaluation

When evaluating whether radiation would be beneficial, the radiation oncologist (a physician specialized in the treatment of cancer using radiation) works closely with other physicians such as surgeons, medical oncologists and general internists to determine the best options for the patient. Diagnostic tests such as blood work, CT or MRI scans and pathology reports are reviewed prior to any decisions being made. The patient and family members are included throughout the process to determine the best treatment options.

Simulation

Once it is determined that radiation therapy will be part of the patient's treatment course, a coordinated timeline is determined. A simulation (planning session) is scheduled prior to beginning radiation. During simulation, several things may occur. A special device may be made such as a face mask or shoulder rest to help the patient maintain the exact position daily. A contrast dye may be used to help identify the area to be treated. A CT scan or X-ray films are taken and special marks are placed on the skin as reference points for daily treatment. These marks are often permanent like a tattoo and are about the size of a freckle. Once all the information is gathered during the simulation process, the radiation treatment plan can be developed.

Radiation Treatment Plan

Following simulation, the radiation oncologist determines the area(s) to be treated and the area(s) to be protected. With the help of a dosimetrist and physicist (health care team members specially trained in the properties of radiation), the physician completes a treatment plan. This planning process may take from several hours to a week or more, depending on the complexity of the plan. IMRT (Intensity Modulated Radiation Therapy), stereotactic, and 3-D conformal are examples of more complex treatment plans. This takes place behind the scenes and the patient does not need to be present for this portion of the planning process. Once completed, the radiation treatments can start.

Radiation Treatments

Radiation treatments can be arranged as a one time appointment or as long as daily appointments for eight weeks. The treatments are generally once a day, Monday through Friday. Some patients may have variations in their treatment schedule such as twice daily or twice weekly treatments based on their cancer type and other considerations. Treatments generally last several minutes, but depending on the complexity of delivery of the treatment, a 15-45 minute appointment slot is made. Patients will meet with their radiation oncologist, or another member of their treatment team, weekly to monitor how they are tolerating the treatments. As

with other treatment courses, such as surgery or chemotherapy, each individual may tolerate the treatment differently.

After completion of a course of radiation therapy, follow-up care may include diagnostic tests, blood work, visits with the radiation oncologist and other members of the care team such as the surgeon, medical oncologist or hematologist. Follow-up visits may vary for each individual, but are important components of ongoing care.



Julie Earle, RN

Programs Available at Mayo Clinic Arizona



Look Good ... Feel Better

What – Free program that teaches cosmetic techniques to women to help them manage the appearance-related side effects of cancer treatment

Who – Any female patient with cancer currently in treatment

Where – Mayo Clinic Hospital – 1st floor, 5777 E. Mayo Blvd, Phoenix, Ariz.

When – Second Tuesday of each month, 5:30-7:00 p.m.

Cancer can rob a woman of her energy, appetite and strength, but it doesn't have to take away her self-confidence. Look Good ... Feel Better trained, volunteer cosmetologists teach women how to cope with skin changes and hair loss using cosmetics and skin care products donated by the cosmetic industry. Free cosmetic kits provided at these groups are available to enhance all complexion types. Women also learn ways to disguise hair loss with wigs, scarves and other accessories. Call to register.

Shayna Diamond, ACS Patient Navigator, 480-301-5990.

Submitted by Shayna Diamond, ACS Navigator

Cancer Education Group

What – Free program offering education and support

Who – Cancer patients, their families and care-givers

Where – Mayo Clinic – Classroom inside the Patient Library, Concourse level, Scottsdale, Ariz.

When – Tuesdays, 9:30-11:00 a.m.

Each meeting will focus on a different topic for education, but there will also be time for general discussions and group support. Topics include nutrition and exercise, managing side-effects of treatment, community resources, financial issues, coping with changes and emotions. Space is limited. Call to register.

Shayna Diamond, ACS Patient Navigator, 480-301-5990.

Support Items

What – Items include wigs, head coverings, liquid nutrition, and breast forms

Who – Cancer patients

Where – Onsite in the ACS Patient Navigator's office, inside the Patient Library, Concourse level, Scottsdale, Ariz.

When – Tuesdays, Thursdays and Fridays

Call to make an appointment with Shayna Diamond, ACS Patient Navigator 480-301-5990.



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