



THE ROBERT AND BEVERLY LEWIS FAMILY CANCER CARE CENTER

in touch

P O M O N A V A L L E Y H O S P I T A L M E D I C A L C E N T E R

A Comprehensive Guide to COLO-RECTAL CANCER

CONTRIBUTING AUTHORS

Linda Bosserman, M.D., F.A.C.P.

Bridget Flannagan

Gerald D. Goldman, M.D.

Ellen R. Knell, Ph.D.

Kenneth Lam, M.D.

Robert McCarthy

A.R. Mohan, M.D., F.A.C.S.

Phyllis Potts

Page Soapes, M.P.H., R.D.

Bunny Spanier

Jade Yang, M.P.H., R.D.

Cancers of the colon and rectum are occurring in one in 25 people who live to 70 years of age or longer. This year alone, 130,000 Americans (14,200 Californians) are expected to be diagnosed with colo-rectal cancer and almost 56,000 American (5,400 Californians) will die from this disease. A major goal of The Robert and Beverly Lewis Family Cancer Care Center is to provide you, and your physician, up-to-date information so you can work together to reduce the occurrence of cancer in the community. We gratefully acknowledge the many medical experts from the Pomona Valley Community who kindly contributed the detailed information necessary to bring you this special clinical issue of *InTouch*.

This special issue provides information on many aspects of colo-rectal cancer. To help you use this information, it is divided into two sections: The first section is for everyone and the second section are for those dealing with a colon or rectal cancer diagnosis.

The first section focuses on prevention, nutrition, warning signs, screening tests and family risk assessment. The second section focuses on diagnosis, surgical procedures, radiation therapy options, chemotherapy treatments, clinical trials and new treatments. We also present a survivors' perspective on living with this disease, a book review and references to helpful internet web sites for more information.

Working together, we can decrease the burden of colo-rectal cancer by practicing the known prevention techniques, undergoing effective screening tests and treating the disease at its earliest stages, where 90 percent of people can be cured! We hope this information empowers you to join the battle against cancer. Please share this information with friends and family. We invite and appreciate your comments/suggestions to ensure that our special clinical issues answer your questions and address your concerns in a way that is clear and effective.



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Understanding and Preventing Colo-Rectal Cancer

Colo-rectal cancer is the third most common cancer in both men (behind lung and prostate) and women (behind breast and lung). The chance of developing colo-rectal cancer from birth to age 70 is about 4 percent, or 1 in 25. Twelve percent of all cancers at Pomona Valley Hospital in 1996 were colo-rectal cancers. These are cancers that can be found as pre-malignant lesions and cured if found early. There are a number of approaches that may be helpful in predicting the risk of developing colo-rectal cancers. Tests are available to help detect these cancers at its earliest and most curable stages. Diet and lifestyle changes may decrease the chances of developing this disease.

So Where are the Colon and Rectum and What Do They Do?

The colon and rectum make up what we call the large bowel (See Figure 1). These are the portions of the gastrointestinal tract which carry material after passing through the esophagus, stomach and small intestine. In the colon, water and potassium are removed and stool is formed into a solid package for excretion via the rectum and anus. The large bowel is divided into a number of anatomical locations (detailed in Figure 1) so that we can describe the place tumors or other problems are located. The areas of the large bowel are the cecum, ascending colon, transverse colon, descending colon, sigmoid colon, rectum and anus (See Figure 1). Not only are these locations important for description, they are important in discussing and understanding various medical and surgical treatment options.

Where Are These Cancers Found?

Cancer of the colon and rectum, also called colo-rectal cancer, begins in the inner lining cells (mucosa) of the colon. They are called adenocarcinomas (see Figure 2). They are somewhat more common in the areas of the colon closest to the rectum, but more are now being found in the colon closer to the small intestine. Many of these cancers begin with a non-malignant growth. This growth is called a polyp. These polyps grow with time, and the chance of their becoming malignant increases with their size.

At What Age Are These Malignancies Found?

The diagnosis of colo-rectal cancer is uncommon before the age of 50. There are a number of definite exceptions where this cancer can be found in younger people. People who have ulcerative colitis for greater than 10 to 15 years are at a higher risk. People in families that carry certain rare genetic mutations may have an increased for developing colo-rectal cancers at an earlier than usual age. The majority of individuals who develop colon cancer, however, will not have a pre-malignant polyp until the age of 50. Colon cancers begin to be more common starting at age 50 and become more common each decade thereafter, peaking at age 75. This is why regular screening for colo-rectal cancers is recommended for all patients after age 50.

Cancer of the Anus

Cancers that arise in the anus are from squamous lining cells (squamous cell carcinoma) and are very rare. This type of cancer is treated differently than colo-rectal carcinomas and will not be further addressed in this issue. ➤

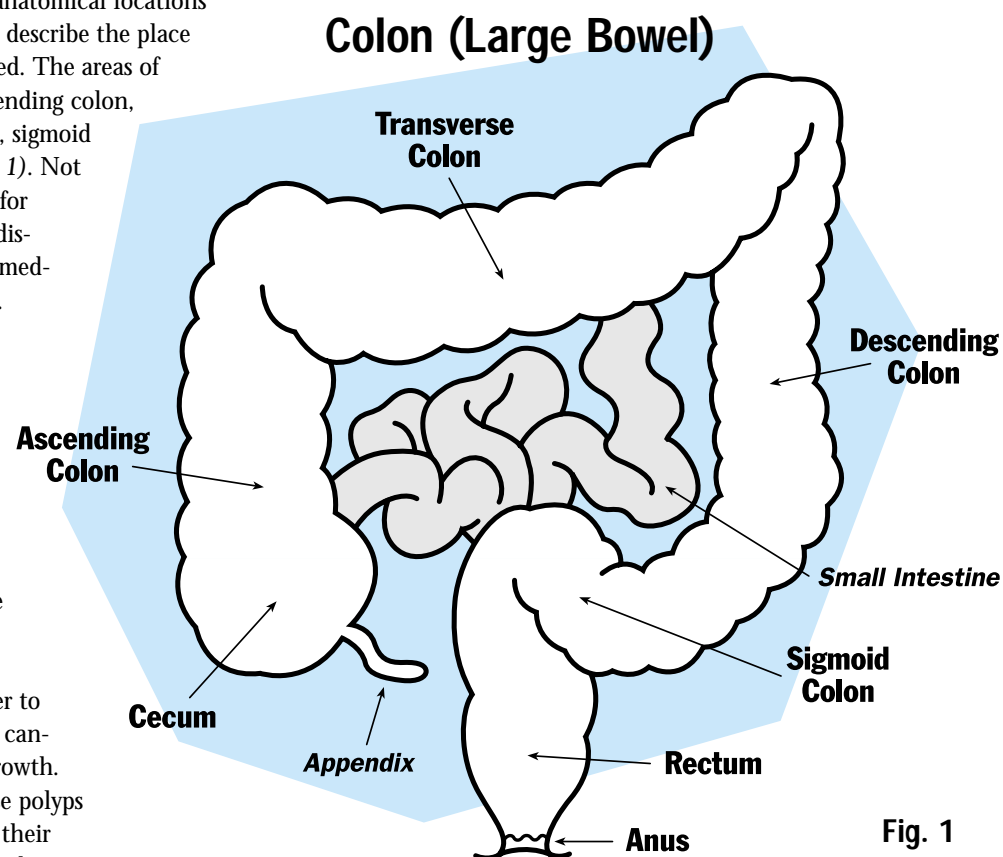


Fig. 1

Prevention

A common question that doctors are asked is, "How can we prevent cancers from occurring?" In colo-rectal cancer there is good news. There are effective ways to decrease the development of these cancers. Although there is no guaranteed way to prevent a cancer from developing, broad dietary and exercise guidelines have been developed to decrease the risk. The addition of aspirin or aspirin like medications may also help some people. Any program of diet, exercise or medication should be discussed with your doctor to be sure the plan you follow fits with other medications you may be taking and with your overall plan for health maintenance.

The Benefits of a High Fiber Diet

Researchers think that fiber helps reduce colon cancer in two ways. First, fiber helps move waste through the digestive track quickly which decreases the time harmful toxins stay in the bowel. Secondly, fiber helps form larger stools which then help remove harmful substances that are present in the intestine.

By eating a high fiber diet daily you are cleaning out your digestive track by moving out harmful toxins. In order for fiber to be useful, experts recommend eating 25-35 grams daily. How to best increase the fiber in your diet is a frequent question.

There are two different types of fiber, soluble and insoluble. Both can help prevent cancer. Soluble fiber is found in legumes (peas, peanuts, lentils and bean), barley oats and fruits. Insoluble (undigested) fiber is found in vegetables, whole grains, baked goods made with whole wheat and wheat bran. A balanced diet including six servings daily of fruits and vegetables will easily provide the amount of fiber recommended for prevention. The chart (on page 4) identifies foods with different amounts and kinds of fiber to help you with diet planning.

What About Fat in the Diet?

A diet low in fat (<20-30 percent of total calories each day from fat) has been shown to lower the risk of many diseases and is recommended by the American Cancer Society as part of a prudent or reasonable diet guideline. Colo-rectal cancer studies to date have not provided exact guidelines for recommending the exact amount of dietary fat that would best help prevent these cancers. Studies have shown that diets high in saturated fats, especially when associate with high red meat intake significantly increase the risk of developing colo-rectal polyps that are the precursors of colo-rectal cancers. According to the American Cancer Society's Nutrition and Cancer Guidelines, reducing the intake of saturated and unsaturated fats from both plant and animal sources not only may decrease the chances of getting cancers of the colon, breast and prostate but is an effective way to reduce daily calorie consumption. The National Academy of Sciences suggests reducing fat in the diet to 30 percent of total calories. There

Colo-Rectal Cancers

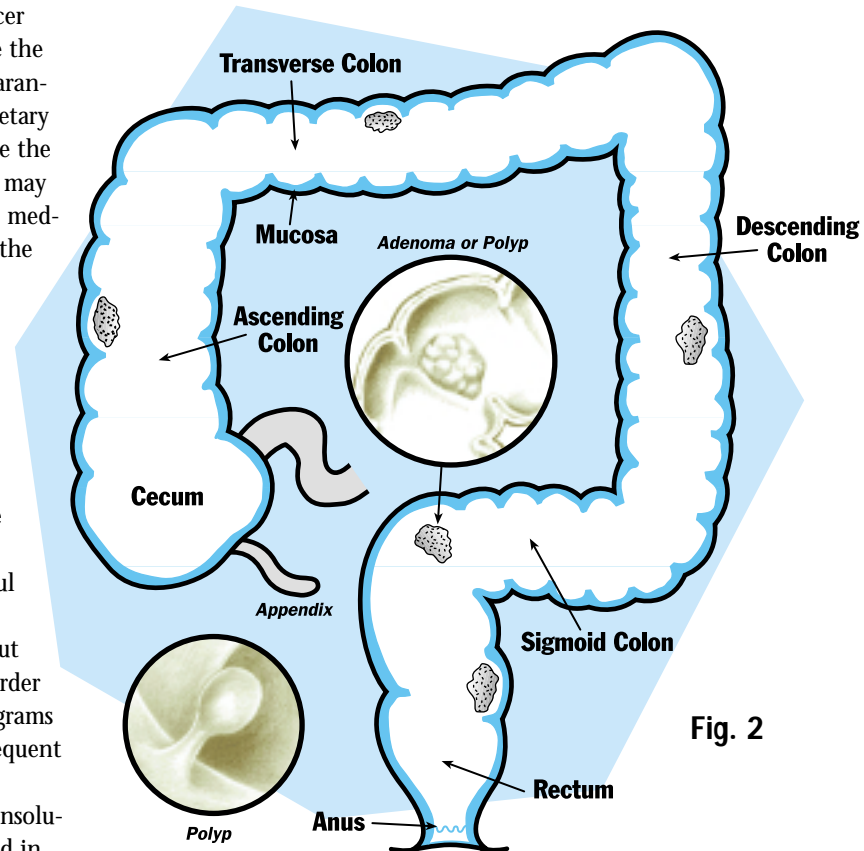


Fig. 2

are even research studies showing that diets with only 15-20 percent of total calories from fat may be more beneficial in reducing the risk of some cancers but we need more information before such drastic dietary restrictions are recommended.

Many studies suggest that the kind of fat in the diet is important. The omega-3 fatty acids found in fish oils and some plant foods (olive oil and flaxseed oil) have been found to reduce the incidence of colon cancer in some studies. In contrast, a diet high in animal fat, especially from red meats, and polyunsaturated oils, like corn or safflower, may increase the risk of breast and colon cancers. It is postulated that a high consumption of corn oil for example, may lead to an increased production of bile acids, compounds that may raise the risk of colon cancer.

Maintaining an ideal body weight is also recommended by the American Cancer Society based on their first 12 year Cancer Prevention Study. In that study they found that people who were overweight, particularly those men and women who were 40 percent or more overweight, had increased incidences of cancers of the colon, breast, stomach, kidney, gallbladder and uterus.

Although no concrete dietary advice can be given that will guarantee prevention of any specific human cancer, a prudent diet would consist of total calories to keep weight ➤

Plan Your Diet — Figuring Fat and Fiber

What do 30% fat and 20% fat of total daily calories mean?

If your total daily calorie intake is 1,800 calories (Remember: 1 gram of fat provides 9 calories)

30% fat of total daily calories	20% fat of total daily calories
1800 x 30% = 540 cal from fat	1800 x 20% = 360 cal from fat
540 cal ÷ 9 cal/1 gm fat = 60 gms fat	360 cal ÷ 9 cal/1 gm fat = 40 gms fat

What is your daily total fat limit?

If your total daily calories is	Your total daily fats from 30% fat diet	Your total daily fats from 20% fat diet
1200	40	27
1500	50	33
1800	60	40
2000	67	44
2200	73	49
2500	83	56

Total fat comparison chart (grams)

BEEF (3.5 oz.)		FISH (3.5 oz.)		FROZEN DESSERTS (1 cup)	
Top round, broiled	5.0	Haddock, dry heat	0.9	Sherbet orange	3.8
Salami, about 4 slices	20.1	Tuna, dry heat	6.3	Ice cream, vanilla, regular	14.3
PORK (3.5 oz.)		SHELLFISH (3.5 oz.)		BREADS	
Ham steak, extra lean	4.2	Lobster	0.6	English muffin, 1	1.0
Fresh, leg, rump half, braised	10.7	Clam, breaded and fried	11.2	Croissant, 1	12.0
LAMB (3.5 oz.)		MILK (8 oz.)		CEREALS (1 cup)	
Leg, roasted	7.7	Skim Milk	0.4	Corn Flakes	0.1
Arm, chop, braised	14.1	Whole Milk	8.2	Granola	33.1
POULTRY (3.5 oz.)		SOFT CHEESE (4 oz.)		SWEETS AND SNACKS	
Turkey, roasted, light meat without skin	1.2	Cottage cheese, low fat	1.2	Popcorn, air-popped, 1 cup	0
Turkey, roasted, dark meat with skin	7.1	Ricotta cheese, whole milk	14.5	Chocolate chip cookies, 4	11.0
Ground turkey	13.8	HARD CHEESE (1 oz.)			
Chicken, broilers, roasted, light meat without skin	4.5	Mozzarella, part skim	4.5		
Chicken, broilers, roasted, dark meat with skin	15.8	Cheddar	9.4		

Common fast food restaurant menu items (Think Fast/Think Fat)

HAMBURGERS	Calories	Fat (g)	NUGGETS AND FRIES	Calories	Fat (g)
McDonald's Hamburger	270	9	Burger King Chicken Tenders (6)	250	12
McDonald's McLean Deluxe	340	12	McDonald's Chicken McNuggets (6)	300	18
McDonald's Quarter Pounder	420	20	McDonald's French Fries (large)	450	22
McDonald's Big Mac	510	26			
McDonald's Quarter Pounder with Cheese	520	29			
Burger King Hamburger	260	10			
Burger King Whopper	630	39			
Burger King Double Whopper with Cheese	950	63			
Carl's Jr. Double Western Bacon Cheeseburger	1030	63			
CHICKEN AND TURKEY SANDWICHES					
McDonald's McGrilled Chicken Classic	250	3			
Carl's Jr. Charbroiled BBQ Chicken	310	6			
Taco Bell Chicken Burrito	345	13			
Burger King Chicken Sandwich	700	43			
ROAST BEEF SANDWICHES					
Arby's Light Roast Beef Deluxe	294	10			
Arby's Regular Roast Beef	383	18			
Arby's Bac 'N Cheddar Deluxe	512	32			

Dietary fiber content of some common foods

Food Item	Serving size	Fiber (gms)
Apple, unpared	1 medium	2.0
Bread, whole wheat	1 slice	1.3
Broccoli, raw	1/2 cup	3.3
Carrots, raw	1 medium	2.5
Cereal, all bran	1/3 cup	9.0
Cereal, shredded wheat	1/2 cup	8.0
Cereal, oatmeal	1 oz.	2.5
Legumes, lentils	1/2 cup	3.7
Legumes, baked beans	1/2 cup	8.8
Potato, baked with skin	1 medium	4.0
Rice, brown	1/2 cup	1.6
Tomato, fresh	1 medium	1.5

within an ideal range, 25-35 grams of fiber each day, and most likely, no more than 20-30 percent of your total calories from fat. Animal fat intake should emphasize more chicken and fish compared to red meat. The adjacent chart will help you calculate dietary fiber and fat content so you can make adjustments to your diet based on the overall plan you and your doctor determine is best for you.

Increased Activity

In the past few years, a number of studies have shown that increased exercise can decrease the risk of developing colo-rectal cancer. Low levels of activity and high levels of caloric intake associated with increased body mass may be associated with colon cancer. Increasing activity both at leisure and at work might be useful particularly if it results in less obesity. Other medical problems, if present, should be considered by you and your doctor when making lifestyle changes. Many other medical conditions are improved by a regular exercise program.

The Use of Aspirin or Non-Steroidal Anti-Inflammatory Drugs (NSAID?s)

Studies have shown that taking two aspirin tablets, at least two to three times per week or one aspirin per day regularly for more than 10 years can significantly decrease the incidence of the adenomas that progress to invasive cancers, as well as invasive colon and rectal cancers. Aspirin use may also decrease metastasis from colo-rectal cancers. A 1995 article in the New England Journal of Medicine (V:333, page 609) not only concluded that "regular aspirin use substantially reduces the risk of colo-rectal cancer," but that it does so at doses that have also been shown to prevent heart attacks and strokes.

The exact ways that aspirin helps prevent colon and rectal cancers is not known, but there are several ways that it is thought to work. Aspirin interferes with several important

Prevention

- Removal of polyps, resection of the colon with familial polyposis and timely surgical treatment for inflammatory bowel disease such as ulcerative colitis.
- It is reported that there is decreased risk of developing cancer of the colon or rectum in those who use aspirin at least three times a week.
- Diets that maintain lean body weight.
- Diet high in fiber.
- Maintain healthy activity level.

Goals

- Calories to maintain optimal weight
- High fiber
- Low sugar
- Low animal fat, protein and refined carbohydrates

growth signaling pathways. Interfering with these signals prevents the overgrowth of cells that cause cancers.

A similar benefit in cancer reduction has been seen in some patients who use the pain and arthritis medicines in the category called non-steroidal anti-inflammatory drugs or NSAIDs for short. These medications include the medications: Ibuprofen (generic, Advil, Motrin and others), Naproxyn (Naprosyn, Aleve), Sulindac and others. Although only small numbers of patients have been studied with these medications, the reduction in colon and rectal cancers seems to be similar as with regular aspirin use. The doses required to provide the most benefit are not known for sure, but regular use, several times per week would seem prudent. Many people whose can tolerate these medications already use them regularly for the control of chronic pain or arthritis.

Despite the positive effects seen in some studies from aspirin or various NSAIDs, there is no national recommendation for regular aspirin or NSAIDs use because the beneficial effects of these medications are often outweighed by the increased risks of bleeding from stomach inflammation or ulcer development. Before deciding if these medications should be considered as part of any cancer prevention program, be sure to talk with your doctor. People on blood thinners or those with a history of stomach inflammation or bleeding ulcers may need to avoid the use of these medications entirely.

Newer drugs are under active development that may interfere with the growth pathways of colo-rectal cells without the side effects of bleeding and stomach upset. These medications are being developed for the treatment of chronic arthritis pain. As they become available for the treatment of arthritis, they will also be studied carefully for any ability to help prevent colo-rectal cancer development. It is hoped that effective medications to prevent polyps and colo-rectal cancers without significant side effects will be available in the next few years.

Understanding Predisposing Diseases and Genetic Factors

Some diseases, such as Ulcerative Colitis, especially when it starts early in life or involves the entire colon, increase the risk of developing colon and rectal cancers at an early age. Cancers that develop in the setting of colitis can be difficult to diagnosis because of the overall inflammation of the colon. Often physicians advise the removal of the colon and rectal tissue to prevent the development of later cancers.

Another factor to consider in determining your ➤

colo-rectal cancer risk is family history. We now know why approximately 10 percent of people get colon cancer—they inherit a certain gene mutation that makes them more likely to get colo-rectal cancers and to get them at earlier ages. These gene mutations can be inherited through either the mother or the father.

You should suspect a gene mutation when:

- two or more blood relatives have colon cancer
- a family member has colon cancer before age 50
- relatives have polyps (growths in the intestine)
- relatives have colon, ovarian, and/or endometrial (uterine) cancer

There are two main categories of inherited colon cancers. The first is FAP (Familial Adenomatous Polyposis Coli), where mutations of the APC (Adenomatous Polyposis Coli) gene are suspected. This gene mutation may be present when either there is a family or personal history of many polyps (growths in the colon) or colon cancer occurring at a young age.

The other category of gene mutation is referred to as HNPCC (Hereditary Non-Polyposis Colon Cancer). In families with these mutations, colon cancer occurs where few or no polyps are evident. In addition to colon cancer, women in these families have a higher risk for ovarian and endometrial (uterine) cancers (see Family Tree diagram below for an example of an HNPCC Family Tree).

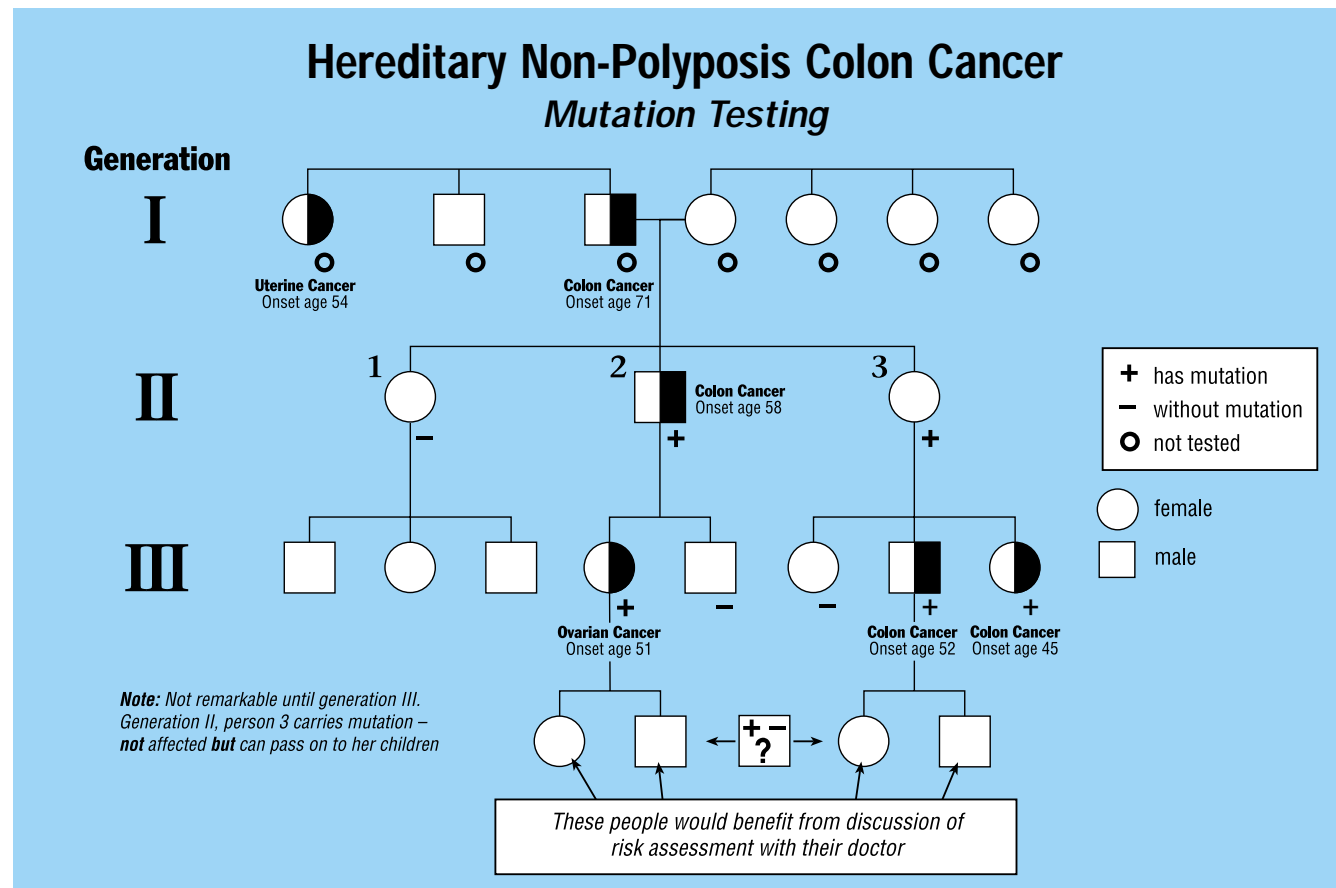
If you are identified to be at a high risk of developing colon cancer, it is important to increase the frequency and

extent of screening tests. It may be advisable to have a colonoscopy (see Figure 3) before the usual recommended age of 50. Often increased screening is recommended starting 10 years before any affected family member was diagnosed with colo-rectal cancer. You should discuss your specific family history with your doctor so that a screening program can be developed to best suit your needs. If further questions arise, your doctor may recommend you meet with a geneticist who specializes in cancer risk assessment to get a better understanding of your particular risk and any testing you might want to have done.

Genetic Counseling – What is It About?

It would be appropriate to consider seeing a specialist in genetic risk counseling with possible “gene testing” if you suspect a gene mutation in your family. People with inherited mutations have a MUCH higher risk for getting colon, and some other types of cancer, and the risk begins at an earlier age than for the general population. Many times, however, what is thought to be an increased risk of a cancer turns out not to be after a detailed family genetics history is determined and unnecessary worry or testing can be limited.

The goal of genetic risk assessment counseling is to identify who is at higher risk, and to help manage that risk to result in better health and longevity. At the consultation a detailed family history, of who had what type of cancer and at what age, is developed and discussed. Based on your ➤



individual family profile the chances of each family member being at risk for specific cancers is discussed.

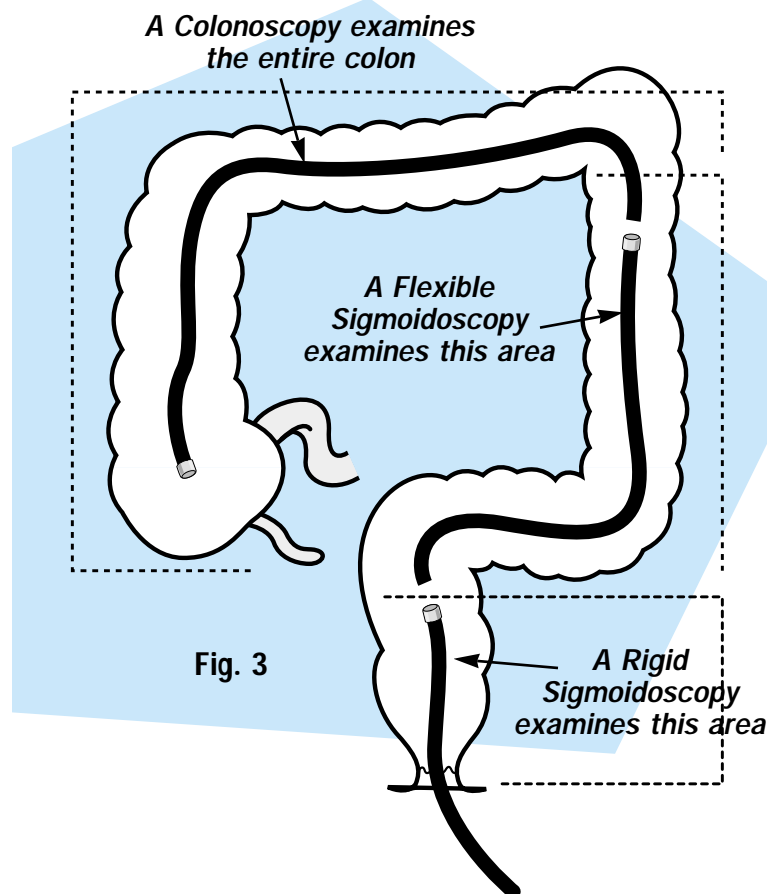
If, after this counseling, you or other family members wish to pursue genetic testing, this can now be arranged. Follow-up counseling is done so that if a gene mutation is found, specific recommendations can be offered. Half of the members of a high-risk family will *not* have inherited the gene mutation and they can be spared the discomfort and expense of unnecessary testing, while those who would benefit most from testing and the various preventive therapies can utilize them to their advantage. After any testing, patients return to the care of their regular physician to follow up any recommended screening plan.

Editor's Note: Genetic Risk Assessment counseling is available through the Cancer Care Center by Dr. Ellen Knell, Ph.D. Dr. Knell is a board certified geneticist specializing in cancer risk evaluation, testing and family counseling. Prevention trials for interested people at increased risk for certain cancers are available and others are under development.

Screening

When serious diseases have few early signs and symptoms, it only makes sense that doctors recommend and people follow screening guidelines to increase early diagnosis. Screening for

Detecting Colon Cancer by Colonoscopy and Sigmoidoscopy



Screening Tests for Colo-Rectal Cancer:

- Digital exam of rectum
- Occult blood in stool
- Sigmoidoscopy - rigid or flexible
- Colonoscopy
- Barium enema examination (x-ray study)
- Detailed family history

colo-rectal cancer can save lives. It is not necessary to be embarrassed by the exams as they are vital in finding abnormalities at their most curable stages.

The easiest screening test can be a digital rectal exam at the time of a physical examination. In men, this same exam evaluates the prostate gland. In women, this can be done as part of the routine pelvic exam. Cancers of the rectum can often be found at these exams.

A sample of stool during the rectal exam, or stool samples collected at home (often on cards with specially treated paper) can detect blood not seen by looking at the stool. Testing the stool for silent blood loss is often referred to as "Guaiac Testing" in reference to the testing chemicals.

Flexible sigmoidoscopy can be done to examine the rectum and colon closest to the rectum. This may include up to 65 cm (About 25 in.) of large intestine. This examination is often done in the physician office and does not require sedation. A very small, flexible, lighted scope is used to view most of the large bowel to look for adenomas, cancers and other abnormalities.

A barium enema examines the entire colon, however it is often done in combination with a flexible sigmoidoscopy. The rectum and adjacent colon (sigmoid colon) are filled with a dye that details the large bowel on X-rays. Areas that do not fill normally may represent a cancer that can be further evaluated. This procedure is done at the hospital or special X-ray facility, and no sedation is needed.

A colonoscopy is the most sensitive test available. It looks at the entire colon and is most often done at a hospital or a special facility. Intravenous sedation is routinely used so that discomfort is minimal. A very complete bowel cleansing with laxatives is done at home before the test. Colonoscopy has the advantage of allowing the biopsy of any large lesions or the removal of smaller growths during the procedure. With a biopsy, the type of polyp (benign or malignant) can be determined to assist with treatment planning and follow up (See Figure 3).

For those with no risk factors, routine colo-rectal cancer screening includes a flexible sigmoidoscopy or colonoscopy about every five years starting at age 50. Occasionally a barium enema might be ordered as well.

For those people at a higher risk, a colonoscopy is the usual screening choice. The most common risk factor is hav-

- **Men with diabetes have a 30% higher risk for colorectal cancer than men who do not have diabetes. In women, diabetes increased the cancer risk by 16%.**

- Center for Disease Control and Prevention

ing a prior colon cancer or colonic polyp. Other risk factors include a family history of colon cancer, occurring in several family members or an individual family member who developed colon cancer at an early age. A few diseases such as ulcerative colitis also require colonoscopies at regular intervals. People who have had such diseases need periodic testing for a number of years.

What Exactly is Cancer of the Colon and Rectum?

Colon and rectal cancers start when a cell, lining some part of the large bowel, makes a mistake when it divides and is no longer regulated by the normal checks and balances of cell growth. These cells divide more frequently and do not die normally. This results in a piling up of cells on the surface of the bowel wall. This pile of cancer cells can grow locally into a polyp that hangs down into the bowel lumen. These are called adenomas (See Figure 2). These cancer cells can also develop further mutations that allow them to grow back through the wall of the bowel where they can cause blockages and where cells can invade and float away through the lymphatic and blood vessels. Any cells that float away can lodge

Check It Out Yourself

American Cancer Society

www.cancer.org

National organization and site for all issues relating to cancer. Links to other relevant sites.

American College of Gastroenterology

www.acg.gi.org

Consumer information on gastrointestinal conditions and digestive health.

American Society of Colon and Rectal Surgeons

www.fascrs.org/brochures/colorectal-cancer.html

Promotes high-quality treatment, education and research. Offers free patient education brochures and referrals.

National Cancer Institute

www.nci.nih.gov

A research and consumer information branch of the National Institutes of Health which offers information brochures.

elsewhere in lymph nodes, liver and lung tissues where later growth results in metastasis.

How Will I Know If I Have It?

Colo-Rectal cancer is unique because there is usually a pre-malignant stage called the colonic polyp. The challenge of finding these polyps and any early cancer is difficult because there are often no visible signs or symptoms. Rectal bleeding is one of the few visible signs that might be found. Other symptoms, such as a change in bowel habits, especially when the stools become very thin, or abdominal pain are also found in a number of other conditions and may only occur when the cancer is already in an "advanced" stage. Any bleeding from the bowels should be discussed with your doctor. Assuming bleeding is from simple hemorrhoids leads people to miss the diagnosis of early colo-rectal cancers. ●

Signs and Symptoms

- Changes in bowel habits, unusual constipation or diarrhea
- Changes in the caliber of stool
- Bright rectal bleeding
- Stool mixed with blood or mucous
- Pain during bowel movements
- Abdominal pain
- Black colored stool (tarry stool)
- Chronic unexplained anemia

Oncolink

oncolink.upenn.edu/disease/colon/

University of Pennsylvania sponsors this site and offers general information on colon cancer as well as discussion groups for patients, families and friends.

Web Sites dealing with Nutrition:

International Food Information Council

ificinfo.health.org

Center for Food Safety and Applied Nutrition

vm.cfsan.fda.gov/fnic.html

Note: At the time of review, the information at these internet sites appeared valid and valuable. However, due to the rapidly changing nature of internet web sites, we strongly urge you to review information with your physicians as appropriate.

Having Cancer of the Colon and Rectum

What You Need to Know to Understand Tests and Treatment

Being told you have any type of cancer is often frightening and emotionally overwhelming. Knowledge can help alleviate those feelings so you can actively participate in your work-up and treatment planning. The following information explains diagnostic tests and treatments for colo-rectal cancer.

Before any treatment is recommended for a cancer, two questions must be answered: “What ‘kind’ of cancer is it?” and “What ‘stage’ is it?” (“Stage” is the medical term to answer the question of—Where is it now?)

The first part of this issue detailed and showed what and where colo-rectal cancer is found. (See pages 2 & 3 for review.) As shown, the first step towards a cancer is a piling up of cells to form adenomas or adenomatous polyps. When found, these are removed by the colonoscope or by surgery, if they are too big to be removed by the scope. Colo-rectal polyps are local, non-invasive cancers that are considered

cured after they are removed. Once removed, further treatment with chemotherapy or radiation therapy is not needed. Doctors will recommend screening colonoscopies afterwards to keep a close eye on any new adenomas or polyps that might develop so that they can be removed before they ever have a chance to become malignant cancers.

A more serious situation occurs when colon or rectal polyps are found to be malignant, meaning an invasive colo-rectal cancer has developed. These malignancies are called adenocarcinomas of the colon or rectum. Adenocarcinomas are the most common kind of colon and rectal cancer. Once an invasive cancer has developed, it can spread through the lymph channels and blood vessels to other parts of the body.

After discovering an adenocarcinoma, a thorough examination is completed to determine if any cancer cells have spread beyond the bowel and exactly how much of the bowel wall has been involved with the local cancer. This information determines the “stage” of the cancer. A final staging determination is often not possible until after surgery is done to remove the cancer, the lymph nodes are examined and other parts of the abdomen where cancer cells might have spread are examined. Additional testing includes a physical exam, blood tests and a chest X-Ray to see if there are any signs of cancer outside the colon or rectum. Sometimes a CAT scan is done to look at the inside of the liver, lymph nodes, abdominal and pelvic areas in more detail. The stage of cancer is determined based on whether the malignant cells are just in the colon or rectum, whether or not any lymph nodes are involved, and whether or not any malignant cells are detected in other parts of the body. Two universally accepted staging systems determine Stages from 1 to 4 or A to D. (See adjacent chart for staging system details)

Treatments for colo-rectal cancer often involve various combinations of surgery to remove the cancer cells, radiation therapy to focus extra cancer fighting therapy to a local area and chemotherapy to circulate through the blood stream and kill any cancer cells that may have floated away from the original cancer site. The use of these three types of cancer therapies depends on where the cancer started and the final stage of the cancer. For some stages, combinations of these three treatments are needed. As each type of treatment is discussed, its role in the various stages of colo-rectal cancer therapy will be detailed. ➤

Treatment by Stage Overview

STAGE	COLON CANCER	RECTAL CANCER
0 (Polyp)	Surgery Alone	Surgery Alone
1 or A	Surgery Alone	Surgery Alone
2 or B1	Surgery Alone	Surgery Alone
2 or B2	Surgery Chemo sometimes	Surgery Chemo sometimes Radiation Therapy
3 or C1	Surgery + Chemotherapy	Surgery + Chemotherapy + Radiation Therapy
3 or C2	Surgery + Chemotherapy	Surgery + Chemotherapy + Radiation Therapy
4 or D	Surgery Usually Chemotherapy if needed Radiation Therapy if needed	Surgery Usually Chemotherapy if needed Radiation Therapy if needed

The Role of Surgery

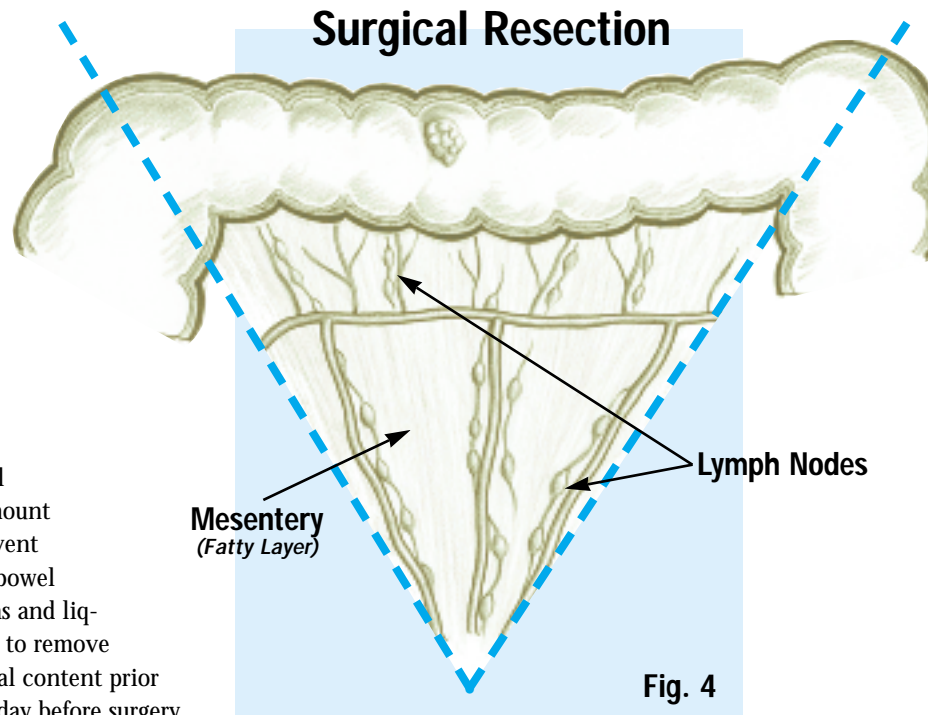
Surgery is used to remove the bulk, if not all, of the cancer cells. This can range from simple polyp removal to the removal of a large piece of bowel requiring the bowels to be rerouted in some way. It also involves removing local lymph nodes for examination under a microscope to see if the cancer has spread. The surgeon also examines the entire abdomen and pelvis area during surgery, including the liver surface, to be sure no further cancer can be found.

Surgical procedures start with a Bowel Prep. A clean bowel, without the usual amount of natural bacteria, is very essential to prevent infections and promote healing following bowel surgery. Patients are prescribed medications and liquids along with antibiotics prior to surgery to remove stool from the colon and to reduce bacterial content prior to surgery. Typical bowel preps starts the day before surgery.

Types of Surgeries:

Malignant Polyps: If the polyps show invasion into the deep structures of the lining of the bowl, or if cancer involves the stalk of the polyp, then segmental resection of the colon will be required as in other colo-rectal cancers. Large villous adenomas (polyps) will also require segmental resection of the colon or rectum because the incidence of cancer in this type of polyp is up to 40%.

Colon Resections: Surgical treatment of cancer of the colon and rectum primarily consists of wide excision or resection of the involved colon or rectum along with 2.5-5.0 cm of normal bowel on either side of the tumor along with the attached "mesentery" which is a thin membrane connected to the bowel where the blood vessels, lymphatic channels and lymph nodes are located (See Figure 4). Enbloc resection or removal of specific parts of involved colon or rectum along with its attached mesentery with draining blood vessels and lymphatics is very important. All of the following resections



are done with immediate reconnections unless perforation has occurred. The typical areas of bowel removed are referred to as:

Right Hemicolectomy: This resection is for cancerous tumors arising in the cecum, ascending colon and proximal transverse colon (See Figure 5).

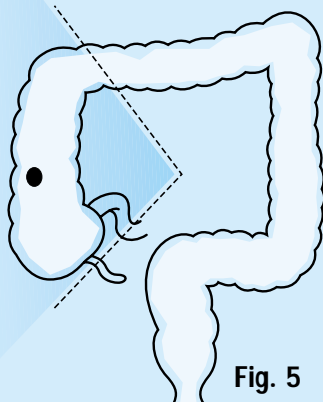
Transverse Colectomy: This resection is for tumors that arise in the transverse colon (See Figure 6).

Left Hemicolectomy: This resection is for tumors in the descending colon (See Figure 7).

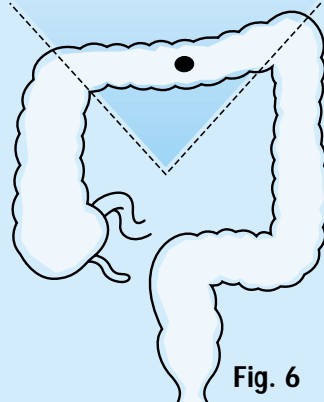
Sigmoid Colectomy: This section is removed if the tumor is in the sigmoid colon (See Figure 8).

Rectal Resections:

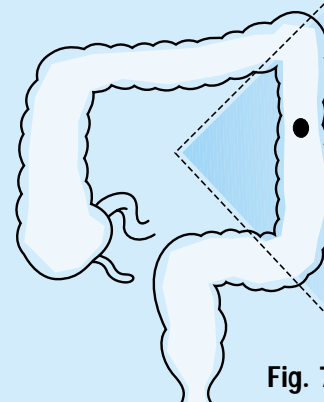
Low Anterior Resection with Reanastomosis: For tumors in the proximal (upper) rectum this surgery removes part of the distal sigmoid colon and proximal rectum (see Figure 9). ➤



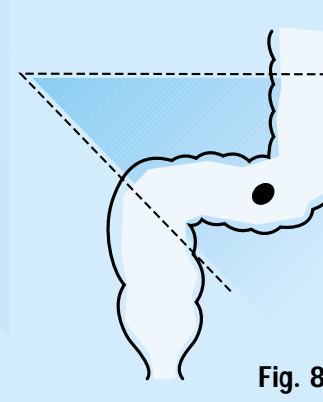
Right Hemicolectomy



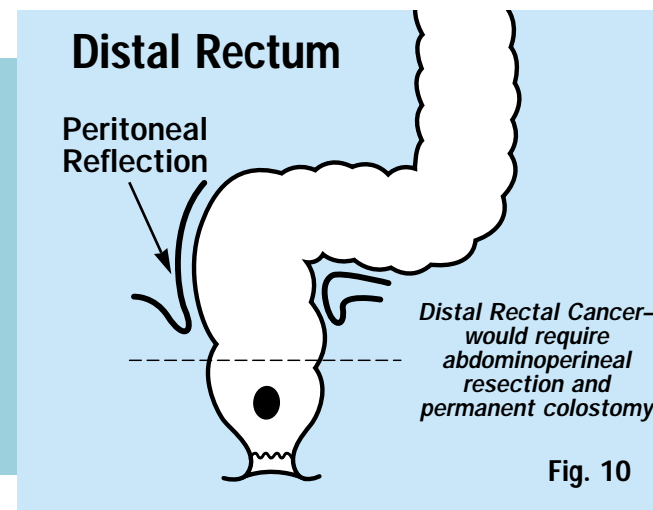
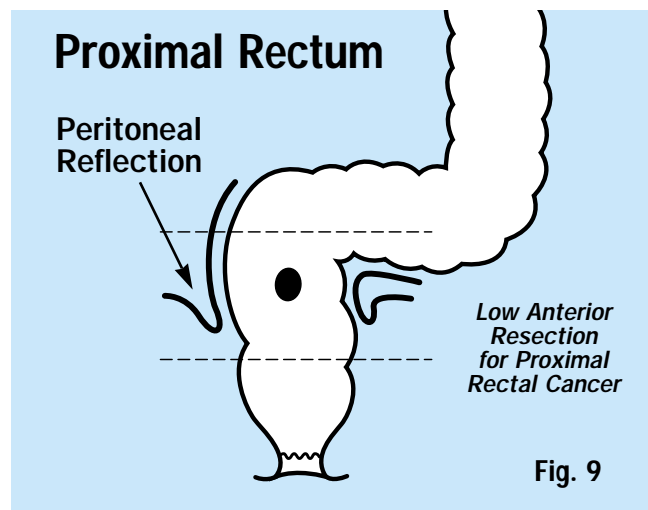
Transverse Colectomy



Left Hemicolectomy



Sigmoid Colectomy



Abdomino-Perineal Resection with Permanent Colostomy: Tumors in the distal (lower) rectum, about 8-10 cm from the outside of the anus, require what is called abdomino-perineal resection where the rectum and anus are completely removed and a permanent colostomy is created (see Figure 10). These patients will eliminate their stools through the colostomy opening which is made when the surgeon attaches the new end of the lower bowel to an opening made on the abdominal wall. Stool from the bowel passes through the colostomy into a bag that is attached to the skin site on the abdomen.

Other Surgical Modalities:

Fulguration of tumor with electric cautery or laser probe: These instruments can be used to destroy tumor cells without removal of the segment of colon or rectum involved by tumor. Because they do not remove the whole thickness of the bowel or the associated mesentery with its blood vessels and lymphatics, these procedures are less effective treatments for cancer of the colon and rectum. They are used for patients who cannot undergo a standard surgical procedure.

Laparoscopic Colon Surgery: Removal of the necessary segment of bowel can sometimes be done through a laparoscopic approach. In this procedure, small incisions are made in the abdominal wall through which a the scope and other instruments are inserted to visualize, operate on and remove the lesion. As the instruments and techniques for this procedure improve, more surgeries may be done this way. It is not currently the standard because it is important that the surgeon fully examine the abdomen and pelvis at the time of surgery to be sure no cancer cells are left behind and large areas of bowel are necessary to remove (see Figures 4-10) which are more easily done through a standard abdominal incision.

Surgical resection of metastatic disease to the liver and lung: If colo-rectal cancer cells spread or metastasize they commonly go to the liver and lung. If patients are found to have a metastasis to only one of these organs and if it is limited to a single tumor, or involves only one lobe of the lung or liver, then surgical treatment can be attempted to remove the tumor or involved lobe. This type of surgery usually occurs 2-5

years (or longer) after the initial diagnosis when cancer is then found to have a solitary metastasis to the lung or liver. For these rare patients, one in five, may be cured with this type of surgery. Often, however, even in these patients, more microscopic tumor implants are found at the time of surgery and further resection is not done.

Pre-operative evaluation with specialized tumor scans are occasionally used to evaluate and help guide surgery of recurrent tumors. Many tumors have a protein on their surface called CEA (carcino-embryonic antigen). A radioactively labeled antibody to the CEA molecule can be injected into patients and a scan taken to look for metastatic disease. The radiolabeled anti-CEA antibodies can also be injected pre-operatively where they can bind to sites of metastasis. Surgeons can then use a specialized probe to locate and remove cancer cells bound to the radioactive antibodies. At this time, however, these methods are not sensitive enough to detect all microscopic nests of cancer cells. Most patients with multiple metastasis are not recommended for surgery because complete removal of all metastatic lesions is rarely possible. For those with multiple metastasis chemotherapy treatments are a more appropriate option as the drugs can treat tumor cells throughout the body whether they are seen on x-rays or only microscopically.

Complicated colo-rectal cancers: Sometimes patients have obstruction of the large bowel or rectum, or perforation of the bowel by a tumor. These patients will require staged (several) operations. Initially an operation is performed to remove the involved bowel with the tumor and to create a temporary colostomy to divert the fecal material to a bag on the abdomen while the patient heals. A second surgical procedure later re-attaches the bowel to allow normal elimination of feces through the rectum.

The Role of Radiation Therapy

Radiation therapy is used differently depending on whether the tumor started in the colon or in the rectum. For colon cancers, radiation therapy is not commonly



A linear accelerator delivers radiation therapy.

needed. It is sometimes recommended after surgery when the pathology shows that the tumor penetrated through the muscle layer of the bowel wall and attached itself to the pelvic side walls or other organs. Radiation treatments to the pelvic area begin approximately four to six weeks after surgery and are coordinated with any chemotherapy treatments.

For rectal cancers, radiation therapy is part of the standard treatment plan after surgery for Stages B, C and sometimes D. It is combined with chemotherapy to enhance the effectiveness of the radiation in killing any remaining cancer cells. The most common chemotherapy drug combined with radiation is called 5-Fluorouracil (5-FU). This drug is given daily, intravenously for three days during the first and fifth week of radiation treatments or continuously with a portable pump throughout the radiation therapy. Further chemotherapy treatments are given alone after radiation is completed. In some rectal cancers, radiation therapy and chemotherapy are given before surgery which is called Neo-adjuvant therapy. Several studies have indicated this method is successful with some stages of rectal cancers.

The standard radiation therapy of colon or rectal cancers is for six weeks, with treatments lasting 5-6 minutes, each day, Monday through Friday. Overall, the treatments are well tolerated. Common side-effects directly related to radiation include irritation of the bowel, which can lead to diarrhea, and irritation of the urinary bladder, causing frequent urina-

tion. Fatigue is also frequently experienced. Patients may experience nausea and the skin does usually get red or irritated from the treatments. Generally any of these side-effects are mild. Medications are available to treat diarrhea, bladder irritation or nausea if they develop. With the use of the Linear Accelerator to deliver radiation treatments and a state-of-the-art computerized treatment planning system, long term injury to the bowel following radiation therapy is now uncommon.

If patients develop metastasis of their cancer to specific places like bone or brain, radiation treatments are given to stop the growth and to relieve any pain or pressure symptoms. This is not a common problem with colo-rectal cancers.

The Role of Chemotherapy

Chemotherapy is drug therapy given to circulate throughout the body to stop cancer cells from growing. It is used in colo-rectal cancers both to prevent cancer recurrence after surgery and to treat more advanced colo-rectal cancers that have metastasized to other areas.

The standard drugs for treatment of colon and rectal cancers are 5-Fluorouracil (5-FU), Leucovorin, Levamisole and CPT11. 5-FU is often given along with Leucovorin for better results. Studies have also shown the benefit of using 5-FU with a drug called Levamisole. Over the past five years, several clinical trials in the U.S. and Europe have helped improve treatment. One study showed the duration of preventive chemotherapy courses could effectively be decreased from 12 to 6 months. Other studies helped decrease the side effects of treatments and brought us several new drugs including Irinotecan, also called CPT-11. Several other new drugs are now available in research trials including the immune antibody Panorex. It is the first available human anti-angiogenesis directed drug, anti-VEGF. There are clinical trials studying new chemotherapy agents such as oxaliplatin, and a trial evaluating a growth factor called KGF to see if it can decrease side effects and further increase the effectiveness of standard 5-FU/Leucovorin treatments. These new treatments are further discussed in the clinical trials section that follows (see page 14).

For colon cancers, chemotherapy is used for Stage B2 tumors in young people or when the tumors have caused bowel obstruction or perforation of the bowel wall before surgery. After surgery for Stage B2 disease, patients should have a consultation with a medical oncologist to discuss the ➤

■ *I feel strongly that everyone who has been diagnosed with colon cancer should have a colonoscopy yearly to find a recurrence. I waited two years and my cancer recurred at a stage III. I recommend yearly check-ups!* Arthur Huschle, colon cancer survivor since 1993, recurred in 1996

specific risks and benefits of six months of preventive chemotherapy based on their age, health and the details of their tumor pathology. The usual treatments are with 5-FU and Leucovorin given daily, Monday through Friday for one week out of every 4 weeks for six total treatments. Chemotherapy is as effective for cancer prevention in Stage B disease as in Stage C but for many patients, their chance of cure with surgery alone is so high that chemotherapy is not necessary. At the time of medical oncology consultation, the opportunity to participate in clinical trials of new chemotherapy or biologic therapies should also be discussed.

In Stage C colon cancer, adjuvant or preventive chemotherapy for six courses (series of treatments) is offered to all patients after recovery from surgery. Three chemotherapy regimens are considered standard:

(1) 5-FU with Leucovorin, intravenously (IV) Monday through Friday for one week of every four weeks till six treatments are completed

(2) 5-FU with Leucovorin given in higher doses, one day each week for 6 weeks followed by a two week break. Thus each "course" takes 8 weeks. Patients are given 6 total courses of eight weeks each so it takes 48 weeks or 11 months to complete the therapy

(3) 5-FU with Levamisole pills where 5-FU is given Monday through Friday for one week during first month then once a week to complete 6 months of therapy. Levamisole pills are given three times a day, Monday through Wednesday every other week for the same six months.

Which, if any, of these regimens are better has not been determined. A study combining all three drugs has not shown additional initial benefits but a study by the Southwest Oncology Group (SWOG) is available locally to people at high risk for recurrence. This study uses the triple combination of 5-FU, Leucovorin and Levamisole in comparison to the triple combination where the 5-FU is given by a continuous IV infusion by a portable pump for the six months.

Patients with Stages B and C rectal cancers are all given preventive combined therapy with chemotherapy and radiation therapy. The combination is given because rectal cancers have a higher chance of recurrence due to the greater lymphatic drainage. Radiation therapy is given for six weeks as previously described, along with 5-FU by short IV treatments or continuous portable pump infusion. The best way to give combination therapy is being studied in an available Radiation Therapy Oncology Group (RTOG) study through the Cancer Care Center, as discussed on page 14.

Pre-operative or Neo-Adjuvant Combined Modality Chemotherapy and Radiation Therapy: People with locally advanced rectal cancer may be better treated with the combination of radiation therapy and chemotherapy before surgery



Linda Bosserman, M.D., with a patient in Ambulatory Day Care.

which would facilitate resection of the tumor by shrinking it and also prevent the spread of cancer cells during surgery. The cancer specialists in surgery, medical oncology and radiation oncology work together to coordinate these types of treatments when necessary and, when appropriate, make patients aware of pre-operative treatments.

Stage D colon and rectal cancers are those where metastasis to distant sites have developed. In rare cases of a single metastasis, surgery can remove it, then chemotherapy is given. For the majority of patients, chemotherapy is used to shrink and prevent tumor growth in order to prolong quality of life and prevent symptoms from developing. Common treatments are, again, the various 5-FU regimens that have been discussed. For those whose tumors are not sensitive to 5-FU treatments, the new drug, CPT-11 is available and effective. CPT-11 is usually given IV, one day per week for 4 weeks followed by a two week rest. This six week cycle is then repeated as needed to control the disease. The major side effect of this drug is diarrhea which is aggressively treated. In some patients with metastatic disease, the disease is not active and there are no symptoms. For these patients, close follow up without initial chemotherapy is just as effective in prolonging life and promoting quality of life as jumping in with chemotherapy at the time of diagnosis.

Balancing the expected results of any therapy for metastatic disease with the side effects requires that the patient and treatment team be able to frankly discuss individual goals and expected outcomes in order to arrive at the best treatment plan for the individual. New drugs are needed for patients whose tumors are not sensitive to 5-FU or CPT-11 therapies.

For all these chemotherapy regimens, diarrhea remains the major side effect. Several medications are used to ➤

control diarrhea. Nausea, if any, is mild and easily treated and fatigue is treated by resting as needed. Patients should work closely with their medical team to optimize treatments while minimizing side effects to maintain the best quality of life throughout treatment.

Treatment of Specific Colon and Rectal Cancers:

Decisions about treatments after surgery are based on the final Stage of the cancer and whether the cancer started in the colon or rectum. The chart on page 9 summarizes the usual treatments for the different stages of these cancers:

New Therapies and Clinical Trials

Colo-Rectal cancer is one of the most common cancers diagnosed in the United States. Standard therapies based on clinical trials conducted throughout the 1980s and 1990s have improved disease control and survival for Stage C colon and

■ ***Almost three quarters (73%) of all new colon cancer cases seen at PVHMC (1990-1995) had already spread beyond the colon at the time of diagnosis.***

LINDA FINE, CTR—Supervisor,
PVHMC Cancer Registry

for Stages B & C rectal cancers. Chemotherapy for advanced disease can shrink tumors and decrease symptoms in some patients but in 1998, it rarely, if ever, cures advanced or metastatic cancers. Cancer researchers continue to explore new and innovative treatments in an attempt further improve these statistics. Clinicians at the Cancer Care Center are currently participating in a number of promising studies. Through participation in clinical trials for specific stages of colon and rectal cancers, patients have access to the latest treatments while helping to bring newer, easier and more effective therapies to clinical practice.

The following trials illustrate the many new drugs and approaches for this disease:

1 For patients with newly diagnosed Stage III (Dukes C) colon cancer, Glaxo Wellcome is sponsoring a national study, available locally, using six months of standard 5Fu and Leucovorin chemotherapy with or without the addition of Panorex, a monoclonal antibody that is directed against colon cancer cells. Pilot trials of the Panorex antibody alone show that it is as effective as our standard chemotherapies. Researchers are hoping that the combination of standard chemotherapy with the antibody will decrease cancer recurrences and improve survival even longer. The Panorex antibody is provided at no cost to patients.

2 Patients with Dukes Stage B2, B3 or C rectal cancer, may be eligible for treatment on the RTOG-9403 protocol, which is evaluating the benefits of the standard three ways of giving 5-FU in conjunction with radiation therapy. It is known that combined therapy is better than giving each therapy sequentially. It is important to also know which, if any, of the stan-

dard chemotherapy programs might have the least side effects with the best outcome.

3 Colo-Rectal cancer patients with untreated measurable metastatic disease are eligible for a Community/UCLA Oncology Network study looking at three different treatments, CPT-11 alone vs. CPT-11 plus 5Fu and Leucovorin vs. 5Fu and Leucovorin. This important study will tell us whether the addition of the new drug, CPT-11, alone or in combination, should become the new standard for prevention of recurrence.

4 Patients who need standard 5-FU/Leucovorin chemotherapy for colo-rectal cancer are eligible for treatment at the Cancer Care Center in conjunction with Dr. Rosen at UCLA where Keratinocyte Growth Factor (KGF) is given (no cost to the patient) along with the standard chemotherapy. This protocol is coordinated so that visits to UCLA are minimized and, after the first week, most of the treatments can be given at the Cancer Care Center or participating medical oncologist's office.

5 Recent advances in blocking blood vessel development to stop cancer cells from growing or getting a foothold have generated considerable excitement in the national press and among cancer patients. Although the mouse studies recently reported will not generate human trials for several years, the anti-angiogenesis factor, anti-VEGF (anti-vascular endothelial growth factor) developed through the UCLA research network is available to patients now! Patients with newly diagnosed, measurable metastatic disease can enter this anti-VEGF trial through Community-UCLA Research Network doctors and receive their treatments at the Cancer Care Center or the oncologist's office. Patients will be randomized to receive standard chemotherapy for recurrence vs. standard chemotherapy with the anti-VEGF factor. The patients randomized to receive standard chemotherapy alone will be able to receive the anti-VEGF factor if the tumor does not respond or if their tumor progresses. All patients in the trial, therefore, have access to this new anti-angiogenesis drug. The drug is provided at no cost to patients on the study.

6 Several other new drugs are in clinical trials for colo-rectal cancers. Oxaliplatin is available for 5-FU/Leucovorin resistant tumors through a special access program and through UCLA. This drug, given IV, also works in combination with 5-FU and Leucovorin. We expect several new trials to be available with this agent soon to further study its role in the treatment of these cancers. Another drug called UFT which is a combination of the drugs Tegafur and Uracil. This oral drug regimen is under active study for several cancers, including colo-rectal cancers.

7 In addition to these trials, physicians at the Cancer Care Center and some community medical oncologists continue to participate in national cooperative group studies available through the Southwest Oncology Group (SWOG) and the National Adjuvant Breast and Bowel Project (NSABP).

Clinical trials from all sources are constantly being updated and new trials are made available to patients through the several research groups affiliated with physicians at the Cancer Care Center and in our community. *continued on back page* ➤

One Survivor's Perspective...

As a bit of background, I was born in Pomona Valley Hospital January 24, 1928 and was never in a hospital again until I returned to PVHMC for x-rays on January 10, 1994. In fact, during a 45 year career I missed one week of work when I had chicken pox at age 18, and two weeks when my son thoughtfully brought the mumps home to me at age 50.

Other than those two sessions, I always had enjoyed excellent health. I retired from work in 1987 and assumed that good health would continue until somewhere around 2010, when, like the old soldier, I would simply fade away.

This, however, was not to be. I guess that I was due to get a few bumps in the road, and as my wife Betty says, "We have to adjust our speed to accommodate those bumps." It is amazing how much those bumps can smooth out when you have someone like her to share them with.

In late December 1993 I started having leg pain and difficulty walking. In the beginning of January 1994 I went to the doctor who prescribed physical therapy, which helped. Near the end of that month I went back to have a follow-up and mini physical. He gave me a "stool for occult blood" test to do at home. A few days later, after I returned the test, the doctor told me he scheduled a lower G.I. test for me. My primary care doctor broke the bad news—Colon Cancer—and pretty well advanced. We met to discuss my options—I didn't have any. He set up for HMO approval/referral for a colonoscopy by an Gastroenterologist.

On March 1st all my fears were confirmed. A couple of days later I met with the surgeon who outlined the procedure and set a surgery date for a few days later. The night before my surgery my primary doctor called me at home to chat about the surgery and let me know that he would be assisting. I found that call to be a very thoughtful act on the part of a very busy man. We agreed that whatever surgical steps were needed would be taken. I told my wife that evening, that for the first time in my life I felt that my fate was not under my control, but that it was in good hands.

I awoke from surgery that evening to find that I had a brand new colostomy and as a bonus they even took out my appendix! I got to go home after five days. Hospital food is not bad, but it cannot be compared to 45 years of being spoiled by my wife Betty's cooking.

After recovering for a few weeks, I got measured and marked up for radiation treatments. I had six weeks of daily radiation treatments. Daily, that is, except for weekends. The girls (in the radiation department) tell me that the first thing they learned in cancer school was that it (cancer) went into remission on Saturday and Sunday!

Near the end of April I played in a golf tournament—my first game that year. At the end of May I started weekly 5Fu and Leukovorin chemo treatments for 45 weeks. At the end of June I interrupted my chemo for two weeks to take a cruise to Alaska.

The beginning of April 1995 my chemo was over—everything looked good. Took a slow boat to China for three weeks. It was a great trip. Back to living the good life.

Two years later in April 1997 I came home from playing golf with sore leg. It became so sore that I couldn't walk. Betty had to borrow a wheel chair to get me to the Doctor. He ordered a CAT scan. No problem found in my leg, but a spot was found on my liver. Two weeks later I still couldn't walk without a walker, but the scan showed nothing. I was referred to an Oncologist at the Cancer Center.

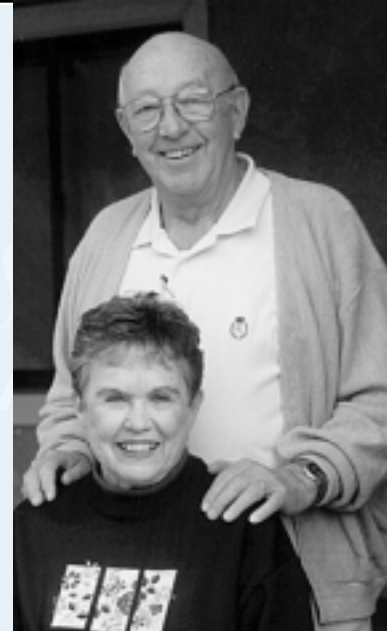
On May 1, 1997 the oncologist ordered more tests. The MRI found a small muscle tear in my leg—probably not related to cancer, but to a bad golf swing! On Mother's Day the entire family had brunch. What a great 16 person support group! They were supportive, but refuse to let me feel sorry for myself. When all the tests were in, the oncologist told us the cancer had metastasized, as we suspected, into the liver and the lungs. The treatment that we agreed upon is Camptosar—a chemotherapy which I got weekly for four weeks, took two weeks off, then started another cycle. I planned to have six cycles. After five cycles (of chemotherapy) the oncologist stopped the chemo for tests to see whether the chemo was working or not. Well, the CT scan showed that the tumors were shrinking! I plan to continue chemo after the first of the year. Merry Christmas!

In January 1998, having had great Holidays, I started another cycle of Camptosar. I sometimes feel like a pin cushion from blood tests and can probably look forward to a certain amount of chemo for a long time. My oncologist and I agree however that there is still a bunch of mileage left in the "old man."

Betty and I have a lot of trips to take, and I have a lot of golf balls that need to be hit. In conclusion I make the following statements:

1. A caring and concerned primary physician is a wonderful asset.
2. PVHMC and The Robert and Beverly Lewis Family Cancer Care Center are staffed with very professional, competent and caring people.
3. A brilliant oncologist with a zest for life is an inspiration.
4. Don't believe all the bad things that you hear about HMOs. Mine has stood tall and been right there when needed.

Robert McCarthy



Robert and Betty McCarthy

Book Review

Second Act: Life After Colostomy & Other Adventures

by Barbara Barrie

Cancer never seems to strike at a convenient time. And, it certainly didn't in the busy life of actress Barbara Barrie. While involved in the filming of "Scarlett" in South Carolina, this stoic woman struggled daily to keep a happy face in spite of the pain and recurring rectal bleeding that eventually took her to the ER in a strange city.

As it turns out, this was not the first time Ms. Barrie suffered symptoms that should have taken her to a specialist months or even years earlier. "Why had I meticulously taken care of every other aspect of my health and ignored the one area of my body that had always been a problem?" she later writes. In retrospect, she believes she might have been in denial because she certainly was aware of the extensive history of colorectal cancer in her family.

In *Second Act*, Ms. Barrie outlines (sometimes rather graphically) the two year period of her life when she was diagnosed with colo-rectal cancer and endured three surgeries, chemotherapy and radiation. As one reads of her courageous battle, it becomes clear that this woman is not only an accomplished actress but a fine writer. Her vivid memoir is informative, touching, honest and yes, witty. Even during the serious lows in her treatment, she never lost her sense of humor and her abundant optimism. Furthermore, she was rarely absent from her acting commitments for very long between 1994, when she was diagnosed, and 1996 when she finished her last treatment.

Today, Ms. Barrie is appearing on a weekly TV series, has resumed her challenging tennis games and claims to be leading a life as full as previously. Certainly her determination is admirable and because of this, I believe this slim volume could be important readying for anyone facing the prospect of colo-rectal cancer surgery.

Bunny Spanier
Volunteer Librarian

Valuable nutrition information available
in the Patient/Community Library:

Fats that Heal, Fats that Kill,
by Udo Erasmus

Enter The Zone, by Barry Sears, Ph.D.
Cancer & Nutrition,
by Charles Simone, M.D.

Interested patients and family members can contact participating physicians or the clinical trials data coordinator at the Cancer Care Center to find out details of participating in specific clinical trials. Clinical trials need consideration early-on in comprehensive treatment planning.

Summary

Colo-rectal cancer remains the third most common cancer of men and women in America and the second most common cause of cancer death. One in 25 of us will experience this cancer unless we work toward better prevention methods. Although a simple pill to prevent cancer might be preferable, it doesn't exist. We do know several ways to prevent colo-rectal cancers from developing and to find it early, at a curable stage. Diet, exercise and the use of aspirin or aspirin like medications can help you today to decrease your chance of getting colon or rectal cancer. Only you can choose to follow these recommendations.

For people with colon or rectal cancer, understanding testing, treatments and ways to minimize side effects can increase survival rates along with improving quality of life.

The many new treatments currently available, those available through clinical trials and those working their way through the research laboratories towards clinical trials hold further promise that we can conquer this all too common cancer.

Participation in state-of-the-art treatment programs and clinical trials is available to patients through our extensive network of community trials in coordination with the Community-UCLA oncology network, pharmaceutical companies, and national cooperative cancer groups including NSABP, RTOG and SWOG, under the direction of our National Cancer Institute. This means people in our community can be assured they are receiving the best available care without long drives to research institutions.

We hope this special issue will encourage community members to follow up with their doctors so that an individual plan of colo-rectal cancer prevention and screening can be developed and followed. These are exciting times in cancer care as scientific research is yielding more effective cancer treatments on a daily basis. We will update this special issue as new therapies change the standards of care. As always, we welcome your feedback so that we can develop materials that most effectively meet our community's educational needs in cancer prevention, screening, treatment and care. ●

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This special issue of *InTouch* is published by The Robert and Beverly Lewis Family Cancer Care Center, 1910 Royalty Drive, Pomona, California 91767

PHONE: (909) 865-9555 FAX: (909) 865-9697

Richard E. Yochum
President/CEO

Tamara Aldworth
Editor

Douglas W. Blayney, M.D., F.A.C.P.
Medical Director

Kenneth Minamiji
Graphic Designer

Linda D. Bosserman, M.D., F.A.C.P.
Associate Medical Director,
Medical Editor