

Colorectal

Introduction

The diagnosis of cancer of the colon or rectum, also called colorectal cancer, raises many questions and a need for clear, understandable answers. The following provides information on the symptoms, detection and diagnosis, and treatment, in addition to information on possible causes and prevention of cancers of the colon and rectum. Having this important information can make it easier for patients and their families to handle the challenges they face.

Together, cancers of the colon and rectum are among the most common cancers in Malaysia. About 3600 new cases are diagnosed every year. They occur in both men and women and are most often found among people who are over the age of 50.

Words that may be new to readers appear in italics. Definitions of these and other terms related to colorectal cancer can be found in the. For some words, a "sounds-like" spelling is also given.

Understanding the Cancer Process

Cancer affects our cells, the body's basic unit of life. To understand cancer, it is helpful to know what happens when normal cells become cancerous.

The body is made up of many types of cells. Normally, cells grow, divide, and produce more cells, as they are needed to keep the body healthy and functioning properly. Sometimes, however, the process goes astray -- cells keep dividing when new cells are not needed. The mass of extra cells forms a growth or *tumour*. Tumours can be either *benign* or *malignant*.

- Benign tumours are not cancer. They often can be removed and, in most cases, they do not come back. Cells in benign tumours do not spread to other parts of the body. Most important, benign tumours are rarely a threat to life.
- Malignant tumours are cancer. Cells in malignant tumours are abnormal and divide without control or order. These cancer cells can invade and destroy the tissue around them. Cancer cells can also break away from a malignant tumour. They may enter the bloodstream or *lymphatic system* (the tissues and organs that produce and store cells that fight infection and disease). This process, called *metastasis*, is how cancer spreads from the original (primary) tumour to form new (secondary) tumours in other parts of the body.

The Colon and Rectum

The colon and rectum are parts of the body's digestive system, which removes nutrients from food and stores waste until it passes out of the body. Together, the colon and rectum form a long, muscular tube called the large intestine (also called the large bowel). The colon is the first 6 feet of the large intestine, and the rectum is the last 8 to 10 inches.

Understanding Colorectal Cancer

Cancer that begins in the colon is called colon cancer, and cancer that begins in the rectum is called rectal cancer. Cancers affecting either of these organs may also be called *colorectal* cancer.

Colorectal Cancer: Who's at Risk?

The exact causes of colorectal cancer are not known. However, studies show that the following *risk factors* increase a person's chances of developing colorectal cancer:

- Age. Colorectal cancer is more likely to occur, as people get older. This disease is more common in people over the age of 50. However, colorectal cancer can occur at younger ages, even, in rare cases, in the teens.
- Personal medical history. Research shows that women with a history of cancer of the ovary, uterus, or breast have a somewhat increased chance of developing colorectal cancer. Also, a person who has already had colorectal cancer may develop this disease a second time.
- Family medical history. First-degree relatives (parents, siblings, children) of a person who has had colorectal cancer are somewhat more likely to develop this type of cancer themselves, especially if the relative had the cancer at a young age. If many family members have had colorectal cancer, the chances increase even more.
- Ulcerative colitis. *Ulcerative colitis* is a condition in which the lining of the colon becomes inflamed. Having this condition increases a person's chance of developing colorectal cancer.
- Polyps. *Polyps* are benign growths on the inner wall of the colon and rectum. They are fairly common in people over age 50. Some types of polyps increase a person's risk of developing colorectal cancer. A rare, inherited condition, called *familial polyposis*, causes hundreds of polyps to form in the colon and rectum. Unless this condition is treated, familial polyposis is almost certain to lead to colorectal cancer.
- Diet. Colorectal cancer seems to be associated with diets that are high in fat and calories and low in fibre. Researchers are exploring how these and other dietary factors play a role in the development of colorectal cancer.
- Obesity. Being very overweight may increase a person's risk of colon cancer. Having extra fat in the waist area increases this risk more than having fat in the thighs or hips.
- Sedentary Lifestyle. People who are not active or lack exercise have a higher risk of colorectal cancer
- Smoking. Recent studies show that smokers are 30 -40% more likely than non smokers to die from colorectal cancer.
- Alcohol. Heavy use of alcohol has been linked to colorectal cancer.

Risk Factors Associated with Colorectal Cancer

- Age
- Diet
- Polyps
- Personal
- History Family
- History Ulcerative
- Colitis
- Lifestyle – Obesity, Smoking, Alcohol, Sedentary lifestyle

Having one or more of these risk factors does not guarantee that a person will develop colorectal cancer. It just increases the chances. People may want to talk with a doctor about these risk factors. The doctor may be able to suggest ways to reduce the chance of developing colorectal cancer and can plan an appropriate schedule for checkups.

Colorectal Cancer: Reducing the Risk

Research shows that colorectal cancer develops gradually from benign polyps. Early detection and removal of polyps may help to prevent colorectal cancer. Studies are looking at smoking cessation, use of dietary supplements, use of aspirin or similar medicines, decreased alcohol consumption, and increased physical activity to see if these approaches can prevent colorectal cancer. Some studies suggest that a diet low in fat and calories and high in fibre can help prevent colorectal cancer.

Researchers have discovered that changes in certain genes (basic units of heredity) raise the risk of colorectal cancer. Individuals in families with several cases of colorectal cancer may

find it helpful to talk with a doctor. A doctor can discuss the availability of a special blood test to check for a genetic change that may increase the chance of developing colorectal cancer. Although having such a genetic change does not mean that a person is sure to develop colorectal cancer, those who have the change may want to talk with their doctor about what can be done to prevent the disease or detect it early.

Detecting Cancer Early

People who have any of the risk factors described above should ask a doctor when to begin checking for colorectal cancer, what tests to have, and how often to have them. The doctor may suggest one or more of the tests listed below. These tests are used to detect polyps, cancer, or other abnormalities, even when a person does not have symptoms. Your health care provider can explain more about each test.

- A faecal occult blood test (FOBT) is a test used to check for hidden blood in the stool. Sometimes cancers or polyps can bleed, and FOBT is used to detect small amounts of bleeding.
- A *sigmoidoscopy* is an examination of the rectum and *lower* colon (sigmoid colon) using a lighted instrument called a *sigmoidoscope*.
- A *colonoscopy* is an examination of the rectum and *entire* colon using a lighted instrument called a *colonoscope*.
- A CT colonoscopy or virtual colonoscopy is a special CT scan of the colon where a small tube is inserted into the rectum to capture the images
- A double contrast *barium enema* (DCBE) is a series of x-rays of the colon and rectum. The patient is given an enema with a solution that contains barium, which outlines the colon and rectum on the x-rays.
- A *digital rectal exam* (DRE) is an exam in which the doctor inserts a lubricated, gloved finger into the rectum to feel for abnormal areas.

Recognising Symptoms

Common signs and symptoms of colorectal cancer include:

- A change in bowel habits
- Diarrhoea, constipation, or feeling that the bowel does not empty completely
- Blood (either bright red or very dark) in the stool
- Stools that are narrower than usual
- General abdominal discomfort (frequent gas pains, bloating, fullness, and/or cramps)
- Weight loss with no known reason
- Constant tiredness
- Vomiting

These symptoms may be caused by colorectal cancer or by other conditions. It is important to check with a doctor.

Diagnosing Colorectal Cancer

To help find the cause of symptoms, the doctor evaluates a person's medical history. The doctor also performs a physical exam and may order one or more diagnostic tests.

X-rays of the large intestine, such as the DCBE, can reveal polyps or other changes.

A sigmoidoscopy lets the doctor see inside the rectum and the *lower* colon and remove polyps or other abnormal tissue for examination under a microscope.

A colonoscopy lets the doctor see inside the rectum and the *entire* colon and remove polyps or other abnormal tissue for examination under a microscope.

A polypectomy is the removal of a polyp during a sigmoidoscopy or colonoscopy.

A *biopsy* is the removal of a tissue sample for examination under a microscope by a pathologist to make a diagnosis.

Stages of Colorectal Cancer

If the diagnosis is cancer, the doctor needs to learn the *stage* (or extent) of disease. *Staging* is a careful attempt to find out whether the cancer has spread and, if so, to what parts of the body. More tests may be performed to help determine the stage. Knowing the stage of the disease helps the doctor plan treatment. Listed below are descriptions of the various stages of colorectal cancer.

- Stage 0. The cancer is very early. It is found only in the innermost lining of the colon or rectum.
- Stage I. The cancer involves more of the inner wall of the colon or rectum.
- Stage II. The cancer has spread outside the colon or rectum to nearby tissue, but not to the *lymph nodes*. (Lymph nodes are small, bean-shaped structures that are part of the body's immune system.)
- Stage III. The cancer has spread to nearby lymph nodes, but not to other parts of the body.
- Stage IV. The cancer has spread to other parts of the body. Colorectal cancer tends to spread to the liver and/or lungs.
- Recurrent. *Recurrent cancer* means the cancer has come back after treatment. The disease may recur in the colon or rectum or in another part of the body.

Treatment

Treatment depends mainly on the size, location, and extent of the tumour, and on the patient's general health. Patients are often treated by a team of specialists, which may include a *gastroenterologist*, surgeon, *medical oncologist*, and *radiation oncologist*. Several different types of treatment are used to treat colorectal cancer. Sometimes different treatments are combined.

Surgery to remove the tumour is the most common treatment for colorectal cancer. Generally, the surgeon removes the tumour along with part of the healthy colon or rectum and nearby lymph nodes. In most cases, the doctor is able to reconnect the healthy portions of the colon or rectum. When the surgeon cannot reconnect the healthy portions, a temporary or permanent *colostomy* is necessary. Colostomy, a surgical opening (*stoma*) through the wall of the *abdomen* into the colon, provides a new path for waste material to leave the body. After a colostomy, the patient wears a special bag to collect body waste. Some patients need a temporary colostomy to allow the lower colon or rectum to heal after surgery. About 15 percent of colorectal cancer patients require a permanent colostomy.

Chemotherapy is the use of anticancer drugs to kill cancer cells. Chemotherapy may be given to destroy any cancerous cells that may remain in the body after surgery, to control tumour growth, or to relieve symptoms of the disease. Chemotherapy is a *systemic therapy*, meaning that the drugs enter the bloodstream

and travel through the body. Most anticancer drugs are given by injection directly into a vein (*IV*) or by means of a *catheter*, a thin tube that is placed into a large vein and remains there as long as it is needed. Some anticancer drugs are given in the form of a pill.

Radiation therapy, also called radiotherapy, involves the use of high-energy x-rays to kill cancer cells. Radiation therapy is a *local therapy*, meaning that it affects the cancer cells only in the treated area. Most often it is used in patients whose cancer is in the rectum. Doctors may use radiation therapy before surgery (to shrink a tumour so that it is easier to remove) or after surgery (to destroy any cancer cells that remain in the treated area). Radiation therapy is also used to relieve symptoms. The radiation may come from a machine (*external radiation*) or from an implant (a small container of radioactive material) placed directly into or near the tumour (*internal radiation*). Some patients have both kinds of radiation therapy.

Biological therapy, also called immunotherapy, uses the body's immune system to fight cancer. The immune system finds cancer cells in the body and works to destroy them. Biological therapies are used to repair, stimulate, or enhance the immune system's natural anticancer function. Biological therapy may be given after surgery, either alone or in combination with chemotherapy or radiation treatment. Most biological treatments are given by injection into a vein (*IV*).

Clinical trials (research studies) to evaluate new ways to treat cancer are an appropriate option for many patients with colorectal cancer. In some studies, all patients receive the new treatment. In others, doctors compare different therapies by giving the promising new treatment to one group of patients and the usual (standard) therapy to another group.

Making decisions about treatment

Sometimes it is difficult to make decisions about what is the right treatment for you. You may feel that everything is happening so fast that you do not have time to think things through. Some people find that waiting for test results and for treatment to begin is very difficult.

While some people feel they are overwhelmed with information, other may feel that they do not have enough. You need to make sure that you understand enough about your illness, the possible treatment and side effects to make your own decisions.

If you are offered a choice of treatments, you will need to weigh up the advantages and disadvantages of each treatment. If only one type of treatment is recommended, ask your doctor to explain why other treatment choices have not been advised.

Some people with more advanced cancer will always choose treatment, even if it only offers a small chance of cure. Others want to make sure that the benefits of treatment outweigh any side effects. Still others will choose the treatment they consider offers them the best quality of life. Some may choose not to have treatment but to have their symptoms managed as they arise in order to maintain the best possible quality of life.

Talking with doctors

You may want to see your doctor a few times before making a final decision on treatment. The first consultation when you are told you have cancer is usually stressful and you may not remember very much. It is often difficult to take everything in, and you may need to ask the same question more than once. You always have the right to find out what a suggested treatment means for you, and the right to accept or refuse it.

Before you see the doctor, it may help to write down your questions. There is a list of questions to ask your doctor at the end of this section, which may assist you. Taking notes

during the session can also help. Many people like to have a family member or friend to go with them, to take part in the discussion, take notes, or simply listen. Some people find it is helpful to tape record the discussion.

Talking with others

Once you have discussed treatment options with your doctor, you may want to talk them over with family or friends, or your own religious or spiritual adviser. Talking it over can help to sort out what course of action is right for you.

A second opinion

You may want to ask for a second opinion from another specialist. This is understandable and can be a valuable part of your decision-making process. Your specialist or local doctor can refer you to another specialist and you can ask for your records to be sent to the second-opinion doctor. You can still ask for a second opinion even if you have already started treatment or still want to be treated by your first doctor.

Taking part in a clinical trial

Your doctor may suggest that you consider taking part in a clinical trial.

Clinical trials are a vital part of the search to find better treatments for cancer. Doctors conduct clinical trials to test new or modified treatments and see if they are better than existing treatments. Many people all over the world have taken part in clinical trials that have resulted in improvements to cancer treatment. However the decision to take part in a clinical trial is always yours.

If your doctor asks you to take part in a clinical trial, make sure that you fully understand the reasons for the trial and what it means for you. Before deciding whether or not to join the trial, you may wish to ask your doctor:

What treatments are being tested and why?

What tests are involved?

What are the possible risks or side effects?

How long will the trial last?

Will I need to go into hospital for treatment?

What will I do if any problems occur while I am in the trial?

If you decide to join a randomised clinical trial, you will be given either the best existing treatment or a promising new treatment. You will be chosen at random to receive one treatment or the other, but it will always be the best treatment available.

If you do join a clinical trial, you have the right to withdraw at any time. Doing so will not jeopardise your treatment for cancer.

It is always your decision to take part in a clinical trial. If you do not want to take part, your doctor will discuss the best current treatment choices with you.

Side Effects

The *side effects* of cancer treatment depend on the type of treatment and may be different for each person. Most often the side effects are temporary. Doctors and nurses can explain the possible side effects of treatment. Patients should report severe side effects to their

doctor. Doctors can suggest ways to help relieve symptoms that may occur during and after treatment.

Surgery causes short-term pain and tenderness in the area of the operation. Surgery for colorectal cancer may also cause temporary constipation or diarrhoea. Patients who have a colostomy may have irritation of the skin around the stoma. The doctor, nurse, or *enterostomal therapist* can teach the patient how to clean the area and prevent irritation and infection.

Chemotherapy affects normal as well as cancer cells. Side effects depend largely on the specific drugs and the dose (amount of drug given). Common side effects of chemotherapy include nausea and vomiting, hair loss, mouth sores, diarrhoea, and fatigue. Less often, serious side effects may occur, such as infection or bleeding.

Radiation therapy, like chemotherapy, affects normal as well as cancer cells. Side effects of radiation therapy depend mainly on the treatment dose and the part of the body that is treated. Common side effects of radiation therapy are fatigue, skin changes at the site where the treatment is given, loss of appetite, nausea, and diarrhoea. Sometimes, radiation therapy can cause bleeding through the rectum (bloody stools).

Biological therapy may cause side effects that vary with the specific type of treatment. Often, treatments cause flu-like symptoms, such as chills, fever, weakness, and nausea.

The Importance of Follow-up Care

Follow-up care after treatment for colorectal cancer is important. Regular checkups ensure that changes in health are noticed. If the cancer returns or a new cancer develops, it can be treated as soon as possible. Checkups may include a physical exam, a faecal occult blood test, a colonoscopy, chest x-rays, and lab tests. Between scheduled checkups, a person who has had colorectal cancer should report any health problems to the doctor as soon as they appear.

Seeking Support

When you are first diagnosed with cancer, you may feel a variety of emotions, such as fear, sadness, depression, anger or frustration. It may be helpful to talk about your feelings with your partner, family members or friends, or with a hospital counsellor, social worker, psychologist or your religious or spiritual advisor.

Sometimes you may find that your friends and family do not know what to say to you: they may have difficulty with the feelings as well. Some people may feel so uncomfortable that they avoid you. They may expect you to 'lead the way' and tell them what you need. This can be very difficult to bear and can make you feel very lonely. You may feel able to approach your friends directly and tell them what you need. You may prefer to ask a close family member or a friend to talk with other people for you.

Diet

A balanced nutritious diet will help you to keep as well as possible and cope with the cancer and any side effects if treatment. Depending on the kind of treatment you have had, you may

have special dietary needs. A dietician can help to plan the best foods for your particular situation – ones that you find tempting, easy to eat and nutritious.

The Resource and Wellness Centre has a resident dietician.

Relaxation techniques

Some people find relaxation or meditation helps them to feel better. The Resource and Wellness Centre offers relaxation and meditation classes.

Sexuality and cancer

We are all sexual beings and intimacy adds to the quality of our lives. Cancer treatment and the psychological effects of cancer may affect you and your partner in different ways.

Some people may withdraw through feelings of being unable to cope with the effects of chemotherapy and radiotherapy on themselves or their partner. Others may feel an increased need for sexual and intimate contact for reassurance.

Communication is essential in addressing any concerns or problems that may arise. Talk about your feelings with your partner. Try different positions and practices to find out what feels right and is satisfactory for both of you. If you have difficulties in continuing with your usual sexual activities, discuss this with your doctor or with a trained counsellor so that you may obtain the best advice.

Cancer Support Groups

Cancer support groups offer mutual support and information to people with cancer and, often, to their families. It can help to talk with others who have gone through the same experience. Support groups can also offer many practical suggestions and ways of coping. Call the Resource and Wellness Centre for information on support groups.

Caring for someone with cancer

Caring for someone with cancer can be very stressful, particularly when it is someone you care about very much. Look after yourself during this time. Give yourself some time out, and share your worries and concerns with someone outside.

You may have to make many decisions. You will probably have to attend many appointments with doctors, support services and hospitals. Many people have found it helpful to take with them another member of the family or a close friend. It also helps to write down questions beforehand, and to take notes during the appointment.

Cancer support group membership is generally open to patients and carers. A support group can offer the chance to share experiences and ways of coping.

Cancer Information and Support Service

The Resource and Wellness Centre is a service of the National Cancer Society of Malaysia. It is a telephone information and support service for people affected by cancer. It is a confidential service where you can talk about your concerns and needs with specially trained staff. The staff can send you written information and can put you in touch with appropriate services in your own area. The Centre also provides complementary services such as relaxation & meditation, massage & aromatherapy, yoga and qi-gong. Telephone 03 26987300 or e-mail contact@cancer.org.my

Information Checklist

Diagnosis

- What tests can diagnose colorectal cancer? Are they painful?
- How soon after the tests will I learn the results?
- Are my children or other relatives at higher risk for colorectal cancer?

Treatment

- What is the stage of my cancer?
- What treatments are recommended for me?
- Should I see a surgeon? Medical oncologist? Radiation oncologist?
- What clinical trials might be appropriate?
- Will I need a colostomy? Will it be permanent?
- What will happen if I don't have the suggested treatment?
- Will I need to be in the hospital to receive my treatment? For how long?
- How might my normal activities change during my treatment?
- After treatment, how often do I need to be checked? What type of followup care should I have?

Side Effects

- What side effects should I expect? How long will they last?
- What side effects should I report? Whom should I call?

The Health Care Team

- Who will be involved with my treatment and rehabilitation? What role will each member of the health care team play in my care?
- What has been your experience in caring for patients with colorectal cancer?

Resources

- Are there support groups in the area with people I can talk to?
- Where can I get more information about colorectal cancer?

Cancer Glossary Terms

abdomen (AB-do-men)

The area of the body that contains the pancreas, stomach, intestine, liver, gallbladder, and other organs.

barium enema

A procedure in which a liquid with barium in it is put into the rectum and colon by way of the anus. Barium is a silver-white metallic compound that helps to show the image of the lower gastrointestinal tract on an x-ray.

benign (beh-NINE)

Not cancerous; does not invade nearby tissue or spread to other parts of the body.

biological therapy (by-o-LAHJ-i-kul)

Treatment to stimulate or restore the ability of the immune system to fight infections and other diseases. Also used to lessen side effects that may be caused by some cancer treatments. Also known as immunotherapy, biotherapy, or biological response modifier (BRM) therapy.

biopsy (BY-op-see)

The removal of cells or tissues for examination under a microscope. When only a sample of tissue is removed, the procedure is called an incisional biopsy or core biopsy. When an entire lump or suspicious area is removed, the procedure is called an excisional biopsy. When a sample of tissue or fluid is removed with a needle, the procedure is called a needle biopsy or fine-needle aspiration.

cancer

A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissues and can spread through the bloodstream and lymphatic system to other parts of the body.

catheter (KATH-i-ter)

A flexible tube used to deliver fluids into or withdraw fluids from the body.

chemotherapy (kee-mo-THER-a-pee)

Treatment with anticancer drugs.

clinical trial

A type of research study that tests how well new medical treatments or other interventions work in people. Such studies test new methods of screening, prevention, diagnosis, or treatment of a disease. The study may be carried out in a clinic or other medical facility. Also called a clinical study.

colonoscope (ko-LAHN-o-skope)

A thin, lighted tube used to examine the inside of the colon.

colonoscopy (ko-lun-AHS-ko-pee)

An examination of the inside of the colon using a thin, lighted tube (called a colonoscope) inserted into the rectum. If abnormal areas are seen, tissue can be removed and examined under a microscope to determine whether disease is present.

colorectal (ko-lo-REK-tul)

Having to do with the colon or the rectum.

colostomy (ko-LAHS-toe-mee)

An opening into the colon from the outside of the body. A colostomy provides a new path for waste material to leave the body after part of the colon has been removed.

digital rectal examination

DRE. An examination, in which a doctor inserts a lubricated, gloved finger into the rectum to feel for abnormalities.

enterostomal therapist (en-ter-o-STO-mul)

A health professional trained in the care of persons with urostomies and other stomas.

external radiation (ray-dee-AY-shun)

Radiation therapy that uses a machine to aim high-energy rays at the cancer. Also called external-beam radiation.

familial polyposis (pah-li-PO-sis)

An inherited condition in which numerous polyps (growths that protrude from mucous membranes) form on the inside walls of the colon and rectum. It increases the risk for colon cancer. Also called familial adenomatous polyposis or FAP.

faecal occult blood test (FEE-kul o-KULT)

A test to check for blood in stool. (Fecal refers to stool; occult means hidden.)

gastroenterologist (GAS-tro-en-ter-AHL-o-jist)

A doctor who specializes in diagnosing and treating disorders of the digestive system.

internal radiation (ray-dee-AY-shun)

A procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near a tumor. Also called brachytherapy, implant radiation, or interstitial radiation therapy.

IV

Intravenous (in-tra-VEE-nus). Injected into a blood vessel.

local therapy

Treatment that affects cells in the tumour and the area close to it.

lymph node (limf node)

A rounded mass of lymphatic tissue that is surrounded by a capsule of connective tissue. Lymph nodes filter lymph (lymphatic fluid), and they store lymphocytes (white blood cells). They are located along lymphatic vessels. Also called a lymph gland.

lymphatic system (lim-FAT-ik SIS-tem)

The tissues and organs that produce, store, and carry white blood cells that fight infections and other diseases. This system includes the bone marrow, spleen, thymus, lymph nodes, and lymphatic vessels (a network of thin tubes that carry lymph and white blood cells). Lymphatic vessels branch, like blood vessels, into all the tissues of the body.

malignant (ma-LIG-nant)

Cancerous; a growth with a tendency to invade and destroy nearby tissue and spread to other parts of the body.

medical oncologist (on-KOL-o-jist)

A doctor who specializes in diagnosing and treating cancer using chemotherapy, hormonal therapy, and biological therapy. A medical oncologist often is the main caretaker of someone who has cancer and coordinates treatment provided by other specialists.

metastasis (meh-TAS-ta-sis)

The spread of cancer from one part of the body to another. A tumour formed from cells that have spread is called a secondary tumour, a metastatic tumour, or a metastasis. The secondary tumour contains cells that are like those in the original (primary) tumour. The plural form of metastasis is metastases (meh-TAS-ta-seez).

polyp (POL-ip)

A growth that protrudes from a mucous membrane.

radiation oncologist (ray-dee-AY-shun on-KOL-o-jist)

A doctor who specializes in using radiation to treat cancer.

radiation therapy (ray-dee-AY-shun)

The use of high-energy radiation from x-rays, gamma rays, neutrons, and other sources to kill cancer cells and shrink tumours. Radiation may come from a machine outside the body (external-beam radiation therapy), or from materials called radioisotopes. Radioisotopes produce radiation and can be placed in or near the tumour or in the area near cancer cells. This type of radiation treatment is called internal radiation therapy, implant radiation, interstitial radiation, or brachytherapy. Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. Also called radiotherapy, irradiation, and x-ray therapy.

recurrent cancer

Cancer that has returned after it had disappeared. It may return at the same site as the original (primary) tumour or in another location.

risk factor

Anything that increases a person's chance of developing a disease. Some examples of risk factors for cancer include a family history of cancer, use of tobacco products, certain foods, being exposed to radiation or other cancer-causing agents, and certain genetic changes.

side effects

Problems that occur when treatment affects tissues or organs other than the ones meant to be affected by the treatment. Common side effects of cancer treatment are fatigue, pain, nausea, vomiting, decreased blood cell counts, hair loss, and mouth sores.

sigmoidoscope (sig-MOY-da-skope)

A thin, lighted tube used to view the inside of the colon.

sigmoidoscopy (sig-moid-OSS-ko-pee)

Inspection of the lower colon using a thin, lighted tube called a sigmoidoscope. Samples of tissue or cells may be collected for examination under a microscope. Also called proctosigmoidoscopy.

stage

The extent of a cancer within the body, especially whether the disease has spread from the original site to other parts of the body.

staging (STAY-jing)

Performing exams and tests to learn the extent of the cancer within the body, especially

whether the disease has spread from the original site to other parts of the body. It is important to know the stage of the disease in order to plan the best treatment.

stoma (STO-ma)

A surgically created opening from an area inside the body to the outside.

systemic therapy (sis-TEM-ik THER-a-pee)

Treatment using substances that travel through the bloodstream, reaching and affecting cells all over the body.

tumour (TOO-mer)

An abnormal mass of tissue that results from excessive cell division. Tumours perform no useful body function. They may be benign (not cancerous) or malignant (cancerous).

ulcerative colitis

Chronic inflammation of the colon that produces ulcers in its lining. This condition is marked by abdominal pain, cramps, and loose discharges of pus, blood, and mucus from the bowel.

x-ray

A type of high-energy radiation. In low doses, x-rays are used to diagnose diseases by making pictures of the inside of the body. In high doses, x-rays are used to treat cancer.