

Esophagus Cancer Overview

The information that follows is an overview of this type of cancer. It is based on the more detailed information in our document, *Esophagus Cancer: Detailed Guide*. This document and other information can be obtained by calling 1-800-227-2345 or visiting our Web site at www.cancer.org.

What is cancer?

The body is made up of trillions of living cells. Normal body cells grow, divide into new cells, and die in an orderly way. During the early years of a person's life, normal cells divide faster to allow the person to grow. After the person becomes an adult, most cells divide only to replace worn-out, damaged, or dying cells.

Cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of this out-of-control growth of abnormal cells.

Cancer cell growth is different from normal cell growth. Instead of dying, cancer cells keep on growing and form new cancer cells. These cancer cells can grow into (invade) other tissues, something that normal cells cannot do. Being able to grow out of control and invade other tissues are what makes a cell a cancer cell.

In most cases the cancer cells form a tumor. But some cancers, like leukemia, rarely form tumors. Instead, these cancer cells are in the blood and bone marrow.

When cancer cells get into the bloodstream or lymph vessels, they can travel to other parts of the body. There they begin to grow and form new tumors that replace normal tissue. This process is called *metastasis* (muh-tas-tuh-sis).

No matter where a cancer may spread, it is always named for the place where it started. For instance, breast cancer that has spread to the liver is still called breast cancer, not liver cancer. Likewise, prostate cancer that has spread to the bone is called metastatic prostate cancer, not bone cancer.

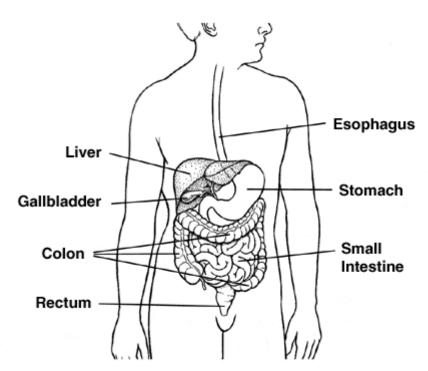
Different types of cancer can behave very differently. For example, lung cancer and breast cancer are very different diseases. They grow at different rates and respond to different treatments. That is why people with cancer need treatment that is aimed at their own kind of cancer.

Not all tumors are cancerous. Tumors that aren't cancer are called *benign* (be-**nine**). Benign tumors can cause problems – they can grow very large and press on healthy organs and tissues. But they cannot grow into other tissues. Because of this, they also can't spread to other parts of the body (metastasize). These tumors are almost never life threatening.

What is cancer of the esophagus?

The esophagus

The esophagus is a muscular tube that connects the throat to the stomach. It lies behind the windpipe (trachea) and in front of the spine and in adults is about 10-13 inches long. At its smallest point, it is a little less than one inch wide. It carries food and liquids to the stomach.



The wall of the esophagus has several layers. Cancer of the esophagus starts in the inner layer and grows outward into deeper layers.

In the lower part of the esophagus that connects to the stomach, a sphincter muscle opens to allow food to enter the stomach. This muscle also closes to keep stomach acid and juices from backing up into the esophagus. When stomach juices escape into the esophagus, it is called *gastroesophageal reflux disease* (GERD) or just *reflux*. In many cases, reflux can cause symptoms such as heartburn or a burning feeling spreading out from the middle of the chest. But sometimes, reflux can happen without any symptoms at all.

Long-term reflux of stomach acid into the esophagus can lead to problems. It can change the cells in the lower end of the esophagus. They become more like the cells that line the stomach. When these cells change, the person has a condition called *Barrett's esophagus*. These altered cells can change into cancer, so the person has a much higher risk of cancer of the esophagus and should be closely watched by a doctor. Still, most people with Barrett's esophagus do not go on to get cancer of the esophagus.

Esophageal cancer

There are 2 main types of cancer of the esophagus. One type grows in the cells that form the inside layer of the lining of the esophagus. These are called squamous cells, and cancer that starts there is called *squamous cell carcinoma*. Squamous cell cancer can grow anywhere along the length of the esophagus. It accounts for less than half of all cancers of the esophagus.

Cancers that start in gland cells are called *adenocarcinomas*. This type of cell is not normally part of the inner lining of the esophagus. Before an adenocarcinoma can develop, glandular cells must replace an area of squamous cells. This happens in Barrett's esophagus, so these cancers are mainly in the lower esophagus.

Cancers that start at the place where the esophagus joins the stomach (called the GE junction) or the first part of the stomach tend to behave like esophagus cancers (and are treated like them, as well), so they are grouped with esophagus cancers.

How many people get cancer of the esophagus?

The American Cancer Society's most recent estimates for esophagus cancer in the United States are for 2013:

- About 17,990 new cases of cancer of the esophagus
- About 15,210 deaths from cancer of the esophagus

This cancer is 3 to 4 times more common in men than in women. The lifetime risk of esophageal cancer in the United States is about 1 in 125 in men and about 1 in 435 in women. It is as common among African Americans as it is among whites.

Some countries, such as Iran, northern China, India, and countries in southern Africa have rates that are 10 to 100 times higher than the rates in the United States.

What are the risk factors for cancer of the esophagus?

We don't know the exact cause of esophageal cancer, but we do know some of the risk factors that make this cancer more likely. A risk factor is anything that affects a person's chance of getting a disease like cancer. Some risk factors, such as smoking, can be controlled. Others, like a person's age or race, can't be changed.

But risk factors don't tell us everything. Having a risk factor, or even several, does not mean that you will get the disease. Many people with risk factors never get esophagus cancer, while others with this disease may have few or no known risk factors.

Age

The risk of this cancer goes up with age. Less than 15% of cases are found in people younger than age 55.

Sex

Compared with women, men have a more than 3 times higher rate of this cancer.

Barrett's esophagus

This is caused by long-term reflux of acid from the stomach into the lower esophagus. Most people with Barrett's esophagus have had symptoms of "heartburn," but many have no symptoms at all. Over time, reflux can change the cells in the esophagus. This raises the risk of adenocarcinoma of the esophagus. But not everyone with Barrett's esophagus will get cancer of the esophagus.

Reflux

Reflux (or GERD: *gastroesophageal reflux disease*) of acid and gastric juices from the stomach into the esophagus can cause symptoms such as heartburn or pain that seem to come from the middle of the chest. In some cases though, reflux doesn't cause any symptoms at all. GERD can cause Barrett's esophagus, but it also increases the risk of

this cancer even without Barrett's esophagus. The risk goes up based on how long the reflux has been going on and how severe the symptoms are.

Tobacco and alcohol

Using any form of tobacco (cigarettes, cigars, pipes, chewing tobacco) raises the risk of this cancer. The longer a person uses tobacco, the greater the risk. The risk of esophageal cancer goes down if tobacco use stops.

Drinking alcohol also increases the risk of esophageal cancer. The chance of getting esophageal cancer goes up the more a person drinks.

Those who both smoke and drink alcohol raise their risk of esophageal cancer much more than using either alone.

Overweight

The risk of esophageal cancer is higher for people who are overweight or obese. This may be because people who are obese are more likely to have esophageal reflux.

Diet

A diet high in fruits and vegetables is linked to a lower risk of esophageal cancer. The exact reasons for this are not clear, but fruits and vegetables provide a number of vitamins and minerals that may help prevent cancer. It is also possible, although it has not yet been proven, that a diet high in processed meat may increase the risk of esophageal cancer. (Processed meats are things like deli meats, hot dogs, and bacon.)

Overeating, which leads to being overweight, also raises the risk.

Drinking a lot of very hot liquids might increase the risk of this cancer, too.

Achalasia

In this disease, the muscle at the bottom of the esophagus does not relax to release food into the stomach. So the lower end of the esophagus expands. Food collects there instead of moving into the stomach. Over time, this raises the risk for esophageal cancer.

Tylosis

This is a rare, inherited disease that causes extra skin to grow on the palms of the hands and soles of the feet. People with tylosis also develop small growths (papillomas) in the esophagus and are at a very high risk for esophageal cancer. They should be seen by a

doctor regularly to watch for this cancer. Often this means having upper endoscopies (described in "How is cancer of the esophagus found?").

Esophageal webs

A web is an abnormal bulge of tissue that causes the esophagus to become narrow. Most esophageal webs do not cause any problems, but larger webs may cause food to get stuck in the esophagus, which can lead to problems swallowing. People who have these webs may have a syndrome (called *Plummer-Vinson syndrome* or *Paterson-Kelly syndrome*) that causes other symptoms, too, like problems with the tongue, fingernails, spleen, and other organs. About 1 in 10 people with this syndrome will get cancer of the esophagus.

Workplace exposure

Chemical fumes in certain workplaces may lead to an increased risk of esophageal cancer. Some studies have found that dry cleaning workers have a higher rate of cancer of the esophagus.

Injury to the esophagus

Lye is a chemical found in strong cleaners such as drain cleaners. Lye can burn and destroy cells. Sometimes small children mistakenly drink from a lye-based cleaner bottle. The lye causes a severe chemical burn in the esophagus. As the injury heals, the scar tissue can cause an area of the esophagus to become very narrow (called a *stricture*). People with these strictures have an increased rate of the squamous cell type of esophageal cancer as adults. The cancers occur on average about 40 years after the lye was swallowed.

Other cancers

People who have had certain other cancers such as lung cancer, mouth cancer, and throat cancer have a high risk of getting esophageal cancer, too. This may be because all of these cancers can be caused by smoking.

Human papilloma virus

Genes from human papilloma virus (HPV) have been found in up to one-third of esophagus cancer tumors from patients living in Asia and South Africa. Signs of HPV infection have not been found in esophagus cancers from patients living in the other places, including the US.

Can cancer of the esophagus be prevented?

Not all cases of esophageal cancer can be prevented, but the risk of getting this disease can be greatly reduced by not using tobacco and alcohol. Diet is also important. Eating many fruits and vegetables may offer some protection. Staying active and keeping a healthy weight may also help.

Some studies have found that the risk can be lowered in people who take aspirin or other drugs such as ibuprofen (NSAIDs) that reduce inflammation. But using these drugs every day can lead to problems like kidney damage and bleeding in the stomach. For this reason, most doctors do not advise the use of NSAIDs to prevent cancer. If you are thinking of using one of these regularly, you first should talk to your doctor about the pros and cons.

Some studies have also found a lower risk of esophageal cancer in patients with Barrett's esophagus who take a type of drug called *statins*. Statins are used to treat high cholesterol. These are drugs like atorvastatin (Lipitor[®]) and rosuvastatin (Crestor[®]). While taking one of these drugs to lower cholesterol may also help some patients lower esophageal cancer risk, doctors don't advise taking them to prevent cancer. These drugs can have serious side effects.

Doctors recommend that people with Barrett's esophagus have certain tests done to look for cell changes that may be a sign of cancer. Treating reflux may help to prevent Barrett's esophagus and esophageal cancer. If you have chronic heartburn (or reflux), you should talk to your health care team about it. Treatment with drugs or even surgery can improve symptoms and may prevent future problems.

How is cancer of the esophagus found?

Looking for a disease in someone without symptoms is called *screening*. Screening the general public for esophageal cancer is not recommended at this time. This is because no screening test has been shown to lower the risk of dying from esophageal cancer in people who are at normal risk.

Testing for people at high risk

People at higher risk for esophageal cancer, such as those with Barrett's esophagus, are often watched closely to look for signs that could mean that the cells lining the esophagus have changed. Many experts recommend that they have a test called *upper endoscopy* regularly (this test is discussed later in this section). Often, samples of tissue are removed (biopsies) and checked to see if they contain abnormal or even cancer cells. If they do, the patient may need to be treated. This is discussed in more detail in our document, *Esophagus Cancer*.

Signs and symptoms of cancer of the esophagus

In most cases, esophageal cancer is found because of the symptoms it causes. But often these symptoms don't appear until the cancer is advanced, making a cure less likely. If esophagus cancer is suspected, tests will be needed to confirm the diagnosis.

Trouble swallowing (dysphagia)

This is the most common symptom of cancer of the esophagus. It means you feel like food gets stuck in your throat or chest. This is often mild when it starts, and then gets worse over time. Solid foods like bread and meat often get stuck. People with dysphagia may switch to softer foods or even liquids to help with swallowing. To help the food go down, the body makes more saliva. This causes some people to have lots of thick mucus or saliva. If the cancer keeps growing, at some point even liquids will not be able to pass.

Chest pain

In some cases, pain in the mid-chest or a feeling of pressure or burning can be a sign of cancer. But these symptoms can also be caused by something else such as heartburn. Swallowing may become painful when the cancer is large enough to limit the passage of food down the esophagus.

Weight loss

About half of people with esophageal cancer lose weight without trying. This is because they are not getting enough food since they have trouble swallowing. They may also find they don't feel like eating.

Other symptoms

Other possible symptoms include hoarseness, constant cough, hiccups, pneumonia, bone pain, and bleeding into the esophagus, which can turn stools dark or black. Over time, this blood loss can lead to low red blood cell levels, which may make a person feel tired and weak.

These symptoms can be caused by other problems, too. Still, if you have any of these symptoms, especially trouble swallowing, have them checked by a doctor so that the cause can be found and treated, if needed.

If certain symptoms suggest that you may have esophagus cancer, your doctor will use one or more tests to find out if the disease is really present. After asking questions about your health and symptoms and doing a physical exam, your doctor will tell you which of the tests below you will need. You may also be referred to a gastroenterologist (a doctor who is an expert in diseases of digestive tract).

Imaging tests

Imaging tests use different methods to create pictures of the inside of your body. These tests may be done for a number of reasons both before and after a diagnosis of esophageal cancer

Barium swallow or upper GI x-rays

This is a series of x-rays taken after you swallow barium, a dense liquid that shows up on x-rays. Barium coats the surface of the esophagus and helps make a good picture. Any lumps on the lining of the esophagus show up on the x-ray. A barium swallow is often the first test to be done in people who have trouble swallowing.

CT scan (computed tomography)

A CT (or CAT) scan is a type of x-ray that takes many pictures of the part of your body being studied. These pictures are combined by a computer to give a detailed view of your insides.

A CT scanner has been described as a large donut, with a narrow table in the middle "hole". You will need to lie still on the table while the scan is being done. CT scans take longer than regular x-rays, and you might feel a bit confined by the ring while the pictures are being taken.

Before any pictures are taken, you may be asked to drink 1 to 2 pints of a liquid dye. This helps outline the esophagus and intestines so that certain areas are not mistaken for tumors. If you are having any trouble swallowing, you need to tell your doctor before the scan. You may also get an IV (intravenous) line through which you get a different kind of contrast dye (IV contrast).

The dye can cause some redness and warm feeling that may last hours to days. A few people are allergic to the dye and get hives. Rarely, more serious problems like trouble breathing and low blood pressure can happen. You can be given medicine to prevent and treat allergic reactions. Be sure to tell your doctor if you have any allergies or have ever had such a reaction.

A CT scan can be helpful in finding out the where and how big the cancer is. This test can help the doctor decide whether surgery is a good treatment option. CT scans can also be used to guide a biopsy needle (see below) into a place that might be cancer. The needle is used to remove a sample of tissue for study in the lab.

MRI (magnetic resonance imaging) scan

MRI scans use radio waves and strong magnets instead of x-rays to take pictures. They are a little more uncomfortable than CT scans. First, MRI scans take longer – often up to

an hour. Also, you have to be placed inside a narrow, tube-like machine, which can upset people who fear enclosed spaces. Special, more open MRI machines can sometimes help with this if needed, although the pictures may not be as sharp in some cases.

A contrast material might be put into a vein. This contrast is different than the one used for CT scans, so being allergic to one doesn't mean you are allergic to the other. The MRI machine makes thumping and clicking noises. Some places provide earplugs to block this out. MRI scans are very helpful in looking at the brain and spinal cord.

PET scan (positron emission tomography)

For this test, a special radioactive sugar is put into a vein. The tissues with cancer quickly take up the sugar. Then a scanner can spot those areas. This test may be useful for finding cancer that has spread if nothing is found on other imaging tests. Special machines combine a PET scan with a CT scan.

Endoscopy

Endoscopy is an important test for finding esophageal cancer. An endoscope is a thin, tube that can bend. It has a light and video camera on the end. The doctor uses it to look at the inside of the esophagus and the stomach. Several tests that use endoscopes can help find esophageal cancer or show how much it has spread. If there are any areas of concern, a small piece of tissue can be removed through the tube to see if the area is cancer. (This is called a *biopsy*.)

Upper endoscopy

You will first be given drugs to make you sleepy (a sedative) and then the back of your throat will be sprayed with something to numb it. Then the tube is passed through your mouth and down your esophagus into your stomach.

This test is useful because:

- The doctor can see the esophagus clearly.
- A tissue sample can be taken to find out if there is cancer.
- If the cancer is blocking the opening of the esophagus, the opening can be made bigger to help food and liquids pass through to the stomach.
- The doctor can learn more about whether the cancer can be removed with surgery.

Endoscopic ultrasound

Ultrasound tests use sound waves to take pictures of parts of the body. For an endoscopic ultrasound, the probe that gives off the sound waves is at the end of an endoscope (see above). This allows the probe to get very close to the cancer. The ultrasound can show how far the cancer has grown into the esophagus to help in making choices about surgery. It can also be used to guide the doctor when getting biopsy samples of nearby lymph nodes.

Bronchoscopy

This test is much like an endoscopy except that the doctor passes the scope into the windpipe (*trachea*) and the tubes leading into the lungs to see if the cancer has spread there. The mouth and throat are sprayed first with a numbing medicine. You may also be given medicine into a vein line to make you feel relaxed. A biopsy sample might also be taken.

Thoracoscopy and laparoscopy

These are methods that allow the doctor to see lymph nodes and other organs inside the chest or belly (abdomen) using a hollow lighted tube with a small camera. The doctor can also remove lymph nodes through the same tube to test them for cancer. This information is helpful in telling whether surgery is a good option. For these tests the patient is in the hospital and is put into a deep sleep (general anesthesia). A small cut is then made in the side of the chest wall (for thoracoscopy) or the belly (for laparoscopy) to insert the tube.

Lab testing of biopsy samples

A spot seen on endoscopy or on an imaging test may look like cancer, but the only way to know for sure is to do a biopsy. For a biopsy, the doctor takes out a small piece of tissue from the area that looks like it could be cancer. The tissue is looked at under the microscope to see if cancer is present and to find out what type of cancer cells there are. It usually takes at least a few days to get the results.

If esophageal cancer is found but is too advanced for surgery, your doctor might have your biopsy samples tested for the HER2 gene or protein. Some people with esophageal cancer have too much of this gene or protein on the surface of their cancer cells, which helps the cells grow. But a drug that targets the HER2 protein may help treat these cancers when used along with chemotherapy.

Other tests

A doctor may order a blood test called a complete blood count (CBC) to look for anemia (which could be caused by bleeding inside the body). A stool sample may be checked to see if it contains unseen (occult) blood.

If esophageal cancer is found, the doctor may recommend other tests, especially if surgery may be an option.

Staging for cancer of the esophagus

Staging is the process of finding out how far cancer has spread. This is very important because your treatment and the outlook for your recovery depend to a large extent on the stage of your cancer.

Cancer of the esophagus is staged using the results of the tests described in the section, "How is cancer of the esophagus found?" Staging also takes into account the cell type of the cancer (squamous cell carcinoma or adenocarcinoma), as well as the grade of the cancer. As used here, "grade" refers to whether the cells look more or less like normal cells. For squamous cell cancers, the place where the tumor is found can also be a factor in staging.

Stages are grouped using the number zero (0) and the Roman numerals I through IV (1 - 4). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV (4), means a more advanced cancer.

Stages provide a detailed summary of how far the cancer has spread. But for treatment purposes, doctors are often more concerned about whether the cancer is resectable or not – that is, whether it can be completely removed (resected) with surgery. Early stage cancers are more likely to be resectable.

After looking at your test results, the doctor will tell you the stage of your cancer. Be sure to ask your doctor to explain your stage in a way you understand. This will help you both decide on the best treatment for you.

Survival rates by stage for cancer of the esophagus

Some people with cancer may want to know the survival rates for their type of cancer. Others may not find the numbers helpful, or may even not want to know them. If you decide that you don't want to know them, stop reading here and skip to the next section.

The 5-year survival rate is the percentage of patients who are alive 5 years after diagnosis. Five-year *relative* survival rates compare the number of people who are still

alive 5 years after their cancer was found to the survival of others the same age who don't have cancer. This is a better way to see the impact that cancer can have on survival. Of course, patients might live more than 5 years after their cancer is found.

Survival rates for esophagus cancer are grouped in terms of *localized*, *regional*, and *distant*. *Localized* means that the cancer is only growing in the esophagus. *Regional* means that the cancer has spread to nearby lymph nodes or tissues. *Distant* means that the cancer has spread to organs or lymph nodes away from the esophagus.

Stage	5-Year Relative Survival Rate
Localized	38%
Regional	20%
Distant	3%

These numbers do not separate squamous cell carcinomas from adenocarcinomas, although adenocarcinomas are generally thought to have a slightly better outlook (prognosis) overall.

While these numbers give you an overall picture, keep in mind that every person is unique and statistics can't predict what will happen in your case. Talk with your cancer care team if you have questions about your own chances of a cure, or how long you might expect to live. They know your situation best.

How is cancer of the esophagus treated?

This information represents the views of the doctors and nurses serving on the American Cancer Society's Cancer Information Database Editorial Board. These views are based on their interpretation of studies published in medical journals, as well as their own professional experience.

The treatment information in this document is not official policy of the Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor.

Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask him or her questions about your treatment options.

About treatment

After the cancer is found and staged, your doctor will talk to you about a treatment plan. There is a lot for you to think about when choosing the best way to treat or manage your

cancer. There may be more than one treatment to choose from. Give yourself time to think about the information you have been given.

You may want to get a second opinion. A second opinion can give you more information and help you feel good about the treatment you choose.

The main options for treatment of cancer of the esophagus include:

- Surgery
- Radiation
- Chemotherapy
- Targeted therapy

Other treatments may also be used for early cancers and pre-cancers of the esophagus. Some of these help relieve symptoms such as pain and blockage.

You may have different types of doctors on your treatment team. These doctors might include:

- A thoracic surgeon: a doctor who treats diseases of the chest with surgery.
- A radiation oncologist: a doctor who treats cancer with radiation.
- A medical oncologist: a doctor who treats cancer with medicines such as chemotherapy.
- A gastroenterologist: a doctor who specializes in treatment of diseases of the digestive system.

Many other specialists may be involved in your care as well.

Surgery for cancer of the esophagus

How much surgery is done depends on the stage of the cancer. Surgery can also be used along with other treatments such as chemotherapy (chemo) and radiation treatment.

While surgery can cure some patients whose cancer has not spread beyond the esophagus, often these cancers are not found early enough. So it's important to know whether the goal of surgery is it to try to cure the cancer or to ease symptoms.

Esophagectomy

Surgery to remove all or part of the esophagus is called an *esophagectomy*. Often a small amount of the stomach is taken out, too. When the esophagus is removed as treatment for cancer, lymph nodes near the esophagus are also removed. The top of the esophagus is

then reattached to the stomach, or the surgeon may replace the removed part of the esophagus with a piece of the small or large intestine.

There are several different ways to do an esophagectomy. All of these surgeries are complex. Surgeons who do this surgery must be experts. You should feel free to ask your surgeon about his or her experience with these operations and how many were successful. The success rate is higher when surgery is done in a hospital where it is done often.

There are 2 main ways to do an esophagectomy:

Open esophagectomy

Many different approaches can be used for surgery on esophageal cancer. The main cut (incision) is often in either the chest or the belly (abdomen). Some methods involve incisions in the neck, chest, and abdomen. You and your surgeon should discuss in detail the planned operation and what you can expect. The surgeon may use pictures to show you how the operation will be done.

Minimally invasive esophagectomy

For some early (small) cancers, the esophagus can be removed through several small incisions (cuts). The surgeon puts a scope (like a tiny telescope) through one of the incisions to see everything during the operation. Then long, thin surgical instruments go in through other small incisions. In order to do this type of surgery well, the surgeon needs to be highly skilled and have a great deal of experience removing the esophagus this way. When successful, this surgery allows the patient to leave the hospital sooner and recover faster.

No matter which approach is used, esophagectomy is not a simple operation, and it may require a long hospital stay.

If the cancer has not yet spread beyond the esophagus, taking out the esophagus might cure the cancer. But most esophageal cancers are not found early enough for doctors to cure them with surgery.

Taking out lymph nodes

When taking out some or all of the esophagus, nearby lymph nodes are removed too. These are then checked to see if they contain cancer cells. If the cancer has spread to lymph nodes, the outlook is not as good, and the doctor may recommend other treatments after surgery.

Risks and side effects of surgery

Like most major operations, surgery of the esophagus has some risks. A heart attack or a blood clot in the lungs or the brain can happen during or after surgery. Lung problems are common. Infection is a risk with any surgery. The patient may get pneumonia, leading to

a longer hospital stay, and sometimes even death. There may be a leak at the place where the stomach is attached to the esophagus, which could mean another surgery. After surgery, the stomach may empty too slowly. Sometimes this can lead to frequent nausea and vomiting.

Some patients have narrowing of the esophagus which causes trouble swallowing after surgery. To relieve this symptom, these narrow places can be stretched during an upper endoscopy. After surgery, bile and stomach contents can get into the esophagus because the muscle that normally controls this (the lower esophageal sphincter) is often removed or changed by the surgery. This can cause heartburn and other symptoms. Sometimes antacids or other drugs can help relieve these symptoms.

Some complications from surgery can be very serious, even fatal. It is important to have a surgeon with experience and a hospital where these operations are done often. Don't be afraid to ask the surgeon about his or her experience and about the survival rates at the hospital.

Radiation treatment for cancer of the esophagus

Radiation treatment uses high energy rays (such as x-rays) to kill cancer cells or shrink tumors. External radiation uses a beam from outside the body. This is the kind most often used for cancer of the esophagus. It is often combined with other types of treatment, such as chemotherapy (chemo) and/or surgery.

For internal or implant radiation (also called *brachytherapy*), the doctor places radioactive material very close to the cancer through an endoscope. This is most often used with more advanced esophageal cancers to shrink tumors so a patient can swallow more easily. This method cannot be used to treat a very large area, so it is better used as a way to relieve symptoms (and not to try to cure the cancer).

Side effects of radiation treatment may include:

- Skin changes ranging from something like a sunburn to blistering and open sores
- Nausea and vomiting
- Diarrhea
- Extreme tiredness (fatigue)
- Painful sores in the mouth and throat
- Dry mouth or thick saliva
- Low blood counts

These side effects may be worse if chemo and radiation are given at the same time. Often these side effects go away when treatment ends, but some may last longer. Radiation to the chest may cause lung damage and lead to trouble breathing and shortness of breath.

Talk with your doctor before and during treatment about what side effects you can expect and any ways that they could be reduced.

Chemotherapy for cancer of the esophagus

Chemotherapy (chemo) is the use of drugs to kill cancer cells. Usually the drugs are given into a vein or taken by mouth. Once the drugs enter the bloodstream, they spread throughout the body.

Chemo by itself rarely cures esophageal cancer. Often it is combined with radiation or surgery.

Chemo can be used in several ways:

- As the main treatment along with radiation
- Before surgery (most often with radiation) to shrink the cancer and make it easier to remove. (This called *neoadjuvant treatment*.)
- After the cancer has been removed by surgery. (This is called *adjuvant treatment*.) This treatment is used to try to kill any tumor cells that were too small to be seen and may have been left behind.
- Alone or with radiation to help control symptoms like pain or trouble swallowing when the cancer can't be cured. (This is called *palliative treatment*.)

Side effects of chemotherapy

The side effects of chemo will depend on the type of drugs given, the amount taken, and how long treatment lasts. The most common side effects include:

- Nausea and vomiting
- Loss of appetite
- Hair loss
- Mouth sores
- Diarrhea
- Increased chance of infection (from a shortage of white blood cells)
- Bleeding or bruising after minor cuts or injuries (from a shortage of blood platelets)

• Tiredness or shortness of breath (from a shortage of red blood cells)

Along with the risks above, some chemo drugs can cause other, less common side effects. Most side effects go away once treatment is over. Anyone who has problems with side effects should talk with their doctor or nurse as there are often ways to help.

People with esophageal cancer often have trouble eating and problems with weight loss before the cancer is even found. Treatment like chemo and radiation can cause painful sores in the mouth and throat, which can make it even harder to eat and get good nutrition. Some people with esophagus cancer need to have a feeding tube put in during a minor operation before treatment. This allows liquid "food" to be put right into the intestine. A feeding tube can help prevent further weight loss. It may help make it easier to get through treatment.

Targeted therapy for cancer of the esophagus

As researchers have learned more about the changes in cells that cause cancer, they have been able to find newer drugs that are aimed at (target) these changes. Targeted drugs work in a different way from standard chemo drugs. They often have different (and less severe) side effects.

A drug called trastuzumab (Herceptin[®]) that targets a certain protein (HER2) may help treat some esophagus cancers when used along with chemo. If you have esophagus cancer and cannot have surgery, your doctor may have your tumor biopsy samples tested for the HER2 gene or protein. Only cancers that have too much of the HER2 protein are likely to respond to this drug.

Trastuzumab is given into a vein (IV) once every 3 weeks along with chemo. The best length of time to give it is not yet known. The side effects are fairly mild and may include fever and chills, weakness, nausea, vomiting, cough, diarrhea, and headache. Less often, this drug can cause heart damage, leading to the heart muscle becoming weak. Before starting treatment with this drug, your doctor may check your heart function.

Other types of treatments for cancer of the esophagus

Several types of treatment can be done by passing an endoscope (a long, flexible tube) down the throat and into the esophagus. Some of these may be used to try to cure or even prevent very early stage cancers. Others are used mainly to help relieve symptoms from more advanced cancers that can't be removed.

Endoscopic mucosal resection

Endoscopic mucosal resection (EMR) is a treatment where the inner lining of the esophagus is removed with instruments attached to the endoscope. EMR can be used for dysplasia (pre-cancer or cell changes that have not yet become cancer) and some very

early, single, small tumors of the esophagus. Drugs that reduce stomach acid are given after the abnormal tissue is removed. This can help keep the disease from coming back.

Radiofrequency ablation (RFA)

This may be used to treat areas of abnormal cells (called dysplasia) in Barrett's esophagus.

In this method, a balloon with many small electrodes is passed into an area of Barrett's esophagus. It is inflated so that the surface of the balloon is in contact with the inner lining. Then high-power energy is passed through the balloon to kill the cells in the lining by heating them. Over time, normal cells grow in to replace the Barrett's cells.

The patient needs to stay on drugs to block the stomach from making too much acid after the treatment. Endoscopies (with biopsies) are then done to watch for any further changes in the lining of the esophagus.

PDT (photodynamic therapy)

This method may be used when the cancer has been found very early or to help with symptoms for some cancers that are too advanced to be removed. First, a harmless chemical is put into the bloodstream. It collects in the tumor for a few days. Then a special type of laser light is focused on the cancer through an endoscope. The light "turns on" the chemical in the tumor so that it can kill cancer cells.

PDT is useful because it can kill cancer cells with very little harm to normal cells. But because the light must be used, it can reach only cancers near the surface of the esophagus. It doesn't work for cancers that have spread deeper or into other organs.

Side effects of PDT include swelling in the esophagus for a few days, which may lead to some problems swallowing. Scar tissue that narrows the esophagus (strictures) also occurs in some patients. Other side effects could include bleeding or holes in the esophagus. PDT can also cause redness of the skin and sensitivity to the sun or other light sources. Because of this, people having this treatment may be told to stay indoors for about 6 weeks.

PDT is used to relieve symptoms of advanced cancer that is blocking the esophagus. It is also being used to treat Barrett's esophagus and very early changes (pre-cancers) found in Barrett's esophagus.

To find out more, please see our document, *Photodynamic Therapy*.

Laser ablation

This method uses a laser that is aimed through the endoscope to kill cancer cells. It is used to open up the esophagus when it is blocked. This can make swallowing problems

better. The cancer often grows back, so the treatment may need to be done again every month or two.

Argon plasma coagulation

This is a method something like laser ablation but it uses argon gas. It is also used to unblock the esophagus when the patient has trouble swallowing.

Electrocoagulation

This method involves burning the tumor off with electric current. In some cases, this treatment can help relieve esophageal blockage.

Esophageal stent

A stent is a device made of mesh. Most often stents are made out of metal, but they can also be made out of plastic. Using endoscopy, a stent can be placed into the esophagus across the length of the tumor. Once in place, it self-expands (opens up) to become a tube that helps hold the esophagus open.

The success of the stent depends on the type of stent that is used and where it is placed. Stents will relieve trouble swallowing in most patients that are treated. They are often used after other treatments to help keep the esophagus open.

Clinical trials for cancer of the esophagus

You may have had to make a lot of decisions since you've been told you have cancer. One of the most important decisions you will make is deciding which treatment is best for you. You may have heard about clinical trials being done for your type of cancer. Or maybe someone on your health care team has mentioned a clinical trial to you.

Clinical trials are carefully controlled research studies that are done with patients who volunteer for them. They are done to get a closer look at promising new treatments or procedures.

If you would like to take part in a clinical trial, you should start by asking your doctor if your clinic or hospital conducts clinical trials. You can also call our clinical trials matching service for a list of clinical trials that meet your medical needs. You can reach this service at 1-800-303-5691 or on our Web site at www.cancer.org/clinicaltrials. You can also get a list of current clinical trials by calling the National Cancer Institute's Cancer Information Service toll-free at 1-800-4-CANCER (1-800-422-6237) or by visiting the NCI clinical trials Web site at www.cancer.gov/clinicaltrials.

There are requirements you must meet to take part in any clinical trial. If you do qualify for a clinical trial, it is up to you whether or not to enter (enroll in) it.

Clinical trials are one way to get state-of-the art cancer treatment. They are the only way for doctors to learn better methods to treat cancer. Still, they are not right for everyone.

You can get a lot more information on clinical trials, in our document called *Clinical Trials: What You Need to Know*. You can read it on our Web site or call our toll-free number and have it sent to you.

Complementary and alternative therapies for cancer of the esophagus

When you have cancer you are likely to hear about ways to treat your cancer or relieve symptoms that your doctor hasn't mentioned. Everyone from friends and family to Internet groups and Web sites may offer ideas for what might help you. These methods can include vitamins, herbs, and special diets, or other methods such as acupuncture or massage, to name a few.

What are complementary and alternative therapies?

It can be confusing because not everyone uses these terms the same way, and they are used to refer to many different methods. We use *complementary* to refer to treatments that are used *along with* your regular medical care. Alternative treatments are used *instead of* a doctor's medical treatment.

Complementary methods: Most complementary treatment methods are not offered as cures for cancer. Mainly, they are used to help you feel better. Some examples of methods that are used along with regular treatment are meditation to reduce stress, acupuncture to help relieve pain, or peppermint tea to relieve nausea. Some complementary methods are known to help, while others have not been tested. Some have been proven not to be helpful, and a few are even harmful.

Alternative treatments: Alternative treatments may be offered as cancer cures. These treatments have not been proven safe and effective in clinical trials. Some of these methods may be harmful, or have life-threatening side effects. But the biggest danger in most cases is that you may lose the chance to be helped by standard medical treatment. Delays or interruptions in your medical treatments may give the cancer more time to grow and make it less likely that treatment will help.

Finding out more

It is easy to see why people with cancer think about alternative methods. You want to do all you can to fight the cancer, and the idea of a treatment with few or no side effects sounds great. Sometimes medical treatments like chemotherapy can be hard to take, or they may no longer be working. But the truth is that most of these alternative methods have not been tested and proven to work in treating cancer.

As you think about your options, here are 3 important steps you can take:

- Look for "red flags" that suggest fraud. Does the method promise to cure all or most cancers? Are you told not to have regular medical treatments? Is the treatment a "secret" that requires you to visit certain providers or travel to another country?
- Talk to your doctor or nurse about any method you are thinking of using.
- Contact us at 1-800-227-2345 to learn more about complementary and alternative methods in general and to find out about the specific methods you are looking at.

The choice is yours

Decisions about how to treat or manage your cancer are always yours to make. If you want to use a non-standard treatment, learn all you can about the method and talk to your doctor about it. With good information and the support of your health care team, you may be able to safely use the methods that can help you while avoiding those that could be harmful.

Some questions to ask your doctor about cancer of the esophagus

As you cope with cancer and cancer treatment, you need to have honest, open talks with your doctor. You should feel free to ask any question that's on your mind, no matter how small it might seem. Here are some questions you might want to ask. Be sure to add your own questions as you think of them. Nurses, social workers, and other members of the treatment team may also be able to answer many of your questions.

- Would you please write down the type of esophagus cancer I have?
- Has my cancer spread beyond the esophagus?
- What is the stage of my cancer and what does that mean in my case?
- Are there other tests that need to be done before we can decide on treatment?
- Are there other doctors I need to see?
- How often have you treated this type of cancer?
- What treatment choices do I have?
- What do you recommend? Why?
- What is the goal of the treatment?

- What are the chances my cancer can be cured with these options?
- What are the risks or side effects that I should expect? How long are they likely to last?
- How quickly do we need to decide on treatment?
- What should I do to be ready for treatment?
- Should I follow a special diet?
- How long will treatment last? What will it involve? Where will it be done?
- What are the chances my cancer will come back with this treatment plan?
- What would we do if the treatment doesn't work or if the cancer recurs?
- What type of follow-up will I need after treatment?
- Where can I get more information and support?

Add your own questions below:

Moving on after treatment

For some people with esophagus cancer, treatment may remove or destroy the cancer. Completing treatment can be both stressful and exciting. You may be relieved to finish treatment, but find it hard not to worry about cancer growing or coming back. (When cancer comes back after treatment, it is called *recurrence*.) This is a very common concern in people who have had cancer.

It may take a while before your fears lessen. But it may help to know that many cancer survivors have learned to live with this uncertainty and are living full lives. To learn more, see our document, *Living With Uncertainty: The Fear of Cancer Recurrence*.

For other people, the esophagus cancer may never go away completely. These people may get regular treatments with chemotherapy, radiation therapy, or other treatments to help keep the cancer in check. Learning to live with cancer as an on-going (chronic) disease can be difficult and very stressful. It has its own type of uncertainty. Our document, *When Cancer Doesn't Go Away*, talks more about this.

Follow-up care

If you have finished treatment, your doctors will still want to watch you closely. It is very important to keep all these follow-up visits. Your doctors will ask about symptoms, examine you, and may order blood tests, upper endoscopy, or imaging tests such as barium swallows or CT scans. These tests are described in the section, "How is cancer of the esophagus found?") Follow-up is needed to check for cancer that has come back or spread, and to look for possible side effects of certain treatments.

Almost any cancer treatment can have side effects. Some may last for a few weeks or months, but others can last for the rest of your life. It is very important to report any new symptoms to the doctor right away, especially if they include trouble swallowing or chest pain. Early treatment can relieve many symptoms and improve your quality of life. Use this time to ask your health care team questions and discuss any concerns you might have. You may also want to see our document, *When Your Cancer Comes Back: Cancer Recurrence*.

Help for trouble swallowing, nutrition, and pain

There are treatments aimed at helping to relieve the symptoms of esophagus cancer, rather than trying to cure the cancer (palliative treatments). In some cases they are used along with other treatments that focus on curing the cancer, but palliative treatments are often used in people with advanced cancer to help improve their quality of life.

Cancer of the esophagus often causes trouble swallowing. For this reason, weight loss and weakness due to poor nutrition are common problems. Your doctor and others can work with you to help you eat well and maintain your weight.

There are many ways to control pain caused by cancer of the esophagus. If you have pain, please tell your cancer care team right away, so they can make sure you get good relief.

Seeing a new doctor

At some point after your cancer is found and treated, you may find yourself seeing a new doctor who doesn't know about your cancer. It is important that you be able to give your new doctor the exact details of your diagnosis and treatment. Make sure you have this information handy and always keep copies for yourself:

- A copy of your pathology report from any biopsy or surgery
- Copies of imaging tests (CT or MRI scans, etc.), which is often stored on a CD, DVD, *etc*.
- If you had surgery, a copy of your operative report

- If you stayed in the hospital, a copy of the discharge summary that the doctor wrote when you were sent home
- If you had radiation treatment, a summary of the type and dose of radiation and when and where it was given
- If you had chemotherapy or targeted therapies, a list of your drugs, drug doses, and when you took them

Lifestyle changes after treatment for cancer of the esophagus

You can't change the fact that you have had cancer. What you can change is how you live the rest of your life – making choices to help you stay healthy and feel as well as you can. This can be a time to look at your life in new ways. Maybe you are thinking about how to improve your health over the long term. Some people even start during cancer treatment.

Make healthier choices

For many people, finding out they have cancer helps them focus on their health in ways they may not have thought much about in the past. Are there things you could do that might make you healthier? Maybe you could try to eat better or get more exercise. Maybe you could cut down on the alcohol, or give up tobacco. Even things like keeping your stress level under control might help. Now is a good time to think about making changes that can have good effects for the rest of your life. You will feel better and you will also be healthier.

You can start by working on those things that worry you most. Get help with those that are harder for you. For instance, if you are thinking about quitting smoking and need help, call the American Cancer Society at 1-800-227-2345.

Eating better

Eating right is hard for many people. This is especially true for cancers that affect the digestive tract, such as esophagus cancer. The cancer or its treatment can affect how you swallow. Nausea can be a problem from some treatments. You may lose your appetite for a while and lose weight when you don't want to.

During treatment: Many people lose weight or have taste problems during treatment. If this happens to you, do the best you can. Eat whatever appeals to you. Eat what you can, when you can. Now is not the time to restrict your diet. You may find it helps to eat small portions every 2 to 3 hours. Try to keep in mind that these problems usually improve over time. You may want to ask your cancer team about seeing a dietitian, an expert in

nutrition who can give you ideas on how to fight some of the side effects of your treatment.

After treatment: Many patients have trouble with reflux after treatment. It may help to stay upright for several hours after eating.

In some patients, the stomach was used to replace all or part of the esophagus. This can mean that the stomach can't hold food for digestion like it did before. The food that is swallowed quickly passes into the intestine, leading to symptoms of diarrhea, sweating, and flushing after eating. This is called the *dumping syndrome*. This may mean you have to change your diet and how you eat. For example, you may need to eat smaller amounts of food more often.

Your health care team can help you adjust your diet if you are having problems eating.

One of the best things you can do after treatment is to put healthy eating habits into place. You may be surprised at the long-term benefits of some simple changes, like increasing the variety of healthy foods you eat. Getting to and staying at a healthy weight, eating a healthy diet, and limiting your alcohol intake may lower your risk for a number of types of cancer, as well as having many other health benefits.

Rest, fatigue, and exercise

Feeling tired (fatigue) is a very common problem during and after cancer treatment. This is not a normal type of tiredness but a "bone-weary" exhaustion that doesn't get better with rest. For some people, fatigue lasts a long time after treatment and can keep them from staying active. But exercise can actually help reduce fatigue and the sense of depression that sometimes comes with feeling so tired.

If you are very tired, though, you will need to balance activity with rest. It is OK to rest when you need to. To learn more about fatigue, please see our document, *Fatigue in People With Cancer* and *Anemia in People With Cancer*.

If you were very ill or weren't able to do much during treatment, it is normal that your fitness, staying power, and muscle strength declined. You need to find an exercise plan that fits your own needs. Talk with your health care team before starting. Get their input on your exercise plans. Then try to get an exercise buddy so that you're not doing it alone.

If you are very tired, you will need to balance activity with rest. It is OK to rest when you need to. Sometimes it's really hard for people to allow themselves to rest when they are used to working all day or taking care of a household, but this is not the time to push yourself too hard. Listen to your body and rest when you need to.

Exercise can improve your physical and emotional health.

• It improves your cardiovascular (heart and circulation) fitness.

- It makes your muscles stronger.
- It reduces fatigue.
- It helps lower anxiety and depression.
- It can make you feel generally happier.
- It helps you feel better about yourself.

Long term, we know that getting regular physical activity plays a role in helping to lower the risk of some cancers, as well as having other health benefits.

Can I lower the risk of my esophagus cancer growing or coming back?

Most people want to know if there are certain lifestyle changes they can make to reduce their risk of their cancer growing or coming back. Unfortunately, for most cancers there is little solid evidence to guide people. This doesn't mean that nothing will help – it's just that for the most part this is something that hasn't been well studied. Most studies have looked at lifestyle changes as ways of preventing cancer in the first place, not slowing it down or keeping it from coming back.

At this time, not enough is known about esophagus cancer to say for sure if there are things you can do that will be helpful. Tobacco and alcohol use have clearly been linked to esophagus cancer, so not smoking or drinking may help reduce your risk. We don't know for certain if this will help, but we do know that it can help improve your appetite and overall health. It can also reduce the chance of getting other types of cancer. If you want to quit smoking and need help, call your American Cancer Society at 1-800-227-2345.

Other healthy behaviors such as eating well, getting regular exercise, and staying at a healthy weight may help as well, but no one knows for sure. However, we do know that these types of changes can have positive effects on your health that can extend beyond your risk of cancer.

How about your emotional health after treatment for cancer of the esophagus?

During and after treatment, you may find yourself overcome with many different emotions. This happens to a lot of people. You may find that you think about the effect of your cancer on things like your family, friends, and career. Money may be a concern as the medical bills pile up. Or you may begin to think about the changes that cancer has brought to your relationship with your spouse or partner. Unexpected issues may also

cause concern – for instance, as you get better and need fewer doctor visits, you will see your health care team less often. This can be hard for some people.

This is a good time to look for emotional and social support. You need people you can turn to. Support can come in many forms: family, friends, cancer support groups, church or spiritual groups, online support communities, or private counselors.

The cancer journey can feel very lonely. You don't need to go it alone. Your friends and family may feel shut out if you decide not include them. Let them in – and let in anyone else who you feel may help. If you aren't sure who can help, call your American Cancer Society at 1-800-227-2345 and we can put you in touch with a group or resource that may work for you.

If treatment for cancer of the esophagus is no longer working

When a person has had many different treatments and the cancer has not been cured, over time the cancer tends to resist all treatment. At this time you may have to weigh the possible benefits of a new treatment against the downsides, like treatment side effects and clinic visits.

This is likely to be the hardest time in your battle with cancer – when you have tried everything within reason and it's just not working anymore. Your doctor may offer you new treatment, but you will need to talk about whether the treatment is likely to improve your health or change your outlook for survival.

No matter what you decide to do, it is important for you to feel as good as possible. Make sure you are asking for and getting treatment for pain, nausea, or any other problems you may have. This type of treatment is called *palliative treatment*. It helps relieve symptoms but is not meant to cure the cancer.

At some point you may want to think about hospice care. Most of the time it is given at home. Your cancer may be causing symptoms or problems that need to be treated. Hospice focuses on your comfort. You should know that having hospice care doesn't mean you can't have treatment for the problems caused by your cancer or other health issues. It just means that the purpose of your care is to help you live life as fully as possible and to feel as well as you can. You can learn more about this in our document, *Hospice Care*.

Staying hopeful is important, too. Your hope for a cure may not be as bright, but there is still hope for good times with family and friends – times that are filled with joy and meaning. Pausing at this time in your cancer treatment gives you a chance to refocus on the most important things in your life. Now is the time to do some things you've always wanted to do and to stop doing the things you no longer want to do. Though the cancer may be beyond your control, there are still choices you can make.

What's new in esophagus cancer research?

Research on the causes, prevention and treatment of this cancer is now being done at many places across the nation.

Genetics

Research has found that certain gene changes are more common in people with Barrett's esophagus. Once more is known about this, we might be able design new tests for finding the people who are likely to get Barrett's esophagus and esophageal cancer earlier, so that these problems can be prevented. Knowing about these changes may also lead to new targeted treatments that overcome the effects of these abnormal genes.

Screening and prevention

The rate of adenocarcinoma of the esophagus has risen sharply in recent decades. Efforts are now being made to reduce obesity, a major risk factor for this form of cancer (and several other types as well).

In people with Barrett's esophagus, researchers are trying to find out if newer tests can tell which patients are likely to go on to develop cancer. This may help doctors decide which patients need intense follow-up and which ones may be examined less often.

Researchers are also looking for ways to help stop Barrett's cells from turning into precancer or cancer. Drugs such as proton pump inhibitors (that lower stomach acid) and aspirin are now being studied for this purpose. There are many proton pump inhibitors, such as omeprazole (Prilosec[®]) and lansoprazole (Prevacid[®]).

Drug treatment

Many studies are being done on new ways to combine chemotherapy drugs to get the best results. Drugs that target certain substances in the cancer cell are becoming available. This is known as *targeted therapy* and it has been successful in some other cancers. It is now being tested in esophagus cancer.

How can I learn more about cancer of the esophagus?

From the American Cancer Society

Here is more information you might find helpful. You also can order free copies of our documents from our toll-free number, 1-800-227-2345, or read them on our Web site, www.cancer.org.

Esophagus Cancer: Detailed Guide (also in Spanish)

After Diagnosis: A Guide for Patients and Families (also in Spanish)

Caring for the Patient With Cancer at Home (also in Spanish)

Clinical Trials: What You Need to Know

Living with Uncertainty: The Fear of Cancer Recurrence

Pain Control: A Guide for Those With Cancer and Their Loved Ones

Photodynamic Therapy

Questions About Smoking, Tobacco, and Health (also available in Spanish)

Understanding Cancer Surgery: A Guide for Patients and Families (also in Spanish)

Understanding Chemotherapy: A Guide for Patients and Families (also in Spanish)

Understanding Radiation Therapy: A Guide for Patients and Families (also in Spanish)

When Cancer Doesn't Go Away

When Your Cancer Comes Back: Cancer Recurrence

Your American Cancer Society also has books that you might find helpful. Call us at 1-800-227-2345 or visit our bookstore online at cancer.org/bookstore to find out about costs or to place an order.

National organizations and Web sites*

Along with the American Cancer Society, other sources of information and support include

National Cancer Institute

Toll-free number: 1-800-4-CANCER (1-800-422-6237)

Web site: www.cancer.gov

National Coalition for Cancer Survivorship

Toll-free number: 1-877-NCCS-YES (1-877-622-7937) for some publications and Cancer

Survivor Toolbox® orders

Web site: www.canceradvocacy.org

*Inclusion on this list does not imply endorsement by the American Cancer Society.

No matter who you are, we can help. Contact us anytime, day or night, for cancer-related information and support. Call us at 1-800-227-2345 or visit www.cancer.org.

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For additional assistance please contact your American Cancer Society 1-800-227-2345 or www.cancer.org