# Adrenal Cancer Overview

The information that follows is an overview of this type of cancer. For more detailed information, call 1-800-227-2345. Or visit our Web site at www.cancer.org.

## What is cancer?

The body is made up of hundreds of millions of living cells. Normal body cells grow, divide, 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

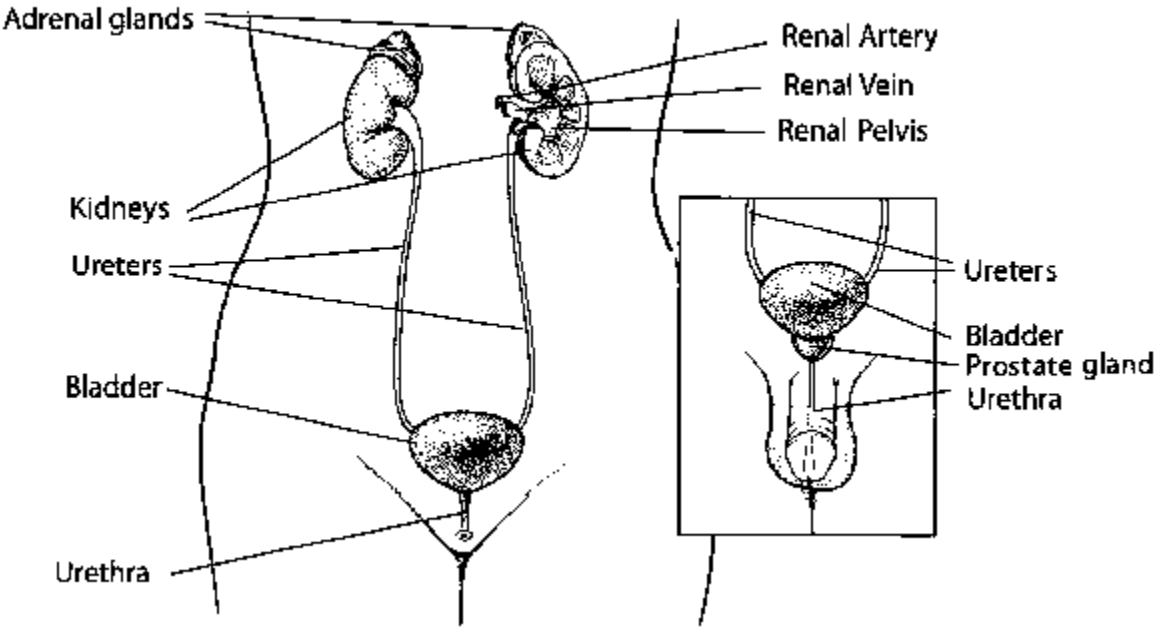
different treatments. That is why people with cancer need treatment that is aimed at their own kind of cancer.

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 adrenal cancer?

## About the adrenal glands

The adrenals are small glands that sit above each of the kidneys, as shown in the picture below. The kidneys are found deep inside the upper part of the belly (abdomen).




The adrenal gland has 2 parts. The outer part, called the cortex, is where adrenal cortical tumors start. The cortex makes certain hormones for the body. These hormones are called steroids.

The inner part of the adrenal gland, called the medulla, is really part of the nervous system. Nervous system hormones are made in the medulla. Tumors of the adrenal medulla are not covered here. This information is only about tumors of the adrenal cortex.

# Adrenal cortex tumors

There are 2 main types of adrenal cortex tumors.

- Benign adenoma -- these tumors are not cancer
- Adrenal cortical carcinoma -- these tumors are cancer

## Benign ademonas

Most tumors of the adrenal cortex are benign adenomas. These are small tumors, most of the time less than 2 inches (5 centimeters) across. In most cases, they occur in only one adrenal gland, but sometimes are in both glands.

Most people with adrenal adenomas have no symptoms. They don't know they have a tumor unless it is found when tests are being done because of other health problems. Some of these tumors make excess hormones, which may or may not cause symptoms. Many of the hormone-related symptoms of adenomas are the same as those from adrenal carcinomas (cancers). These symptoms are discussed in the section, "How is adrenal cancer found?"

**Treatment:** Adenomas can be cured by taking out the adrenal gland that contains the tumor. Some adrenal adenomas can be treated with medicine. This might be a good option for patients with other medical problems who might not be able to have surgery. Still other small adenomas that are not causing any symptoms do not need any treatment at all.

When an adrenal tumor is found "by accident," tests are often done to see if it is making hormones. If it is, surgery is often needed to take out the adrenal gland with the tumor. If it is not making hormones, surgery may only be needed if the tumor is likely to be cancer. Tumors that are small are less likely to be cancer, and are often watched but not treated. A CT (or MRI) scan will likely be done about 6 months later to see if the tumor has grown. If it has, the tumor may need to be removed. If it hasn't grown, hormone levels will be watched over the next few years. If the tumor stays small and doesn't make any hormones, it may not need to be treated at all.

**The rest of this document refers to adrenal cancers only, and not to adenomas.**

## Adrenal cortical cancer

Adrenal cortical cancers are usually found because of the symptoms they cause. They may make hormones that cause body changes such as weight gain, fluid build-up, early puberty in children, or excess facial or body hair in women. Some adrenal cancers get very large and cause symptoms by pressing on other organs. This can cause pain, a feeling of fullness, and weight loss because it is hard to eat very much. In most cases, adrenal cortical cancers are much larger than adenomas. If a tumor is larger than about 2 to 2-1/2 inches (5 or 6 centimeters), it is most likely cancer.

Most cancers found in the adrenal gland did not start there and are not adrenal cortical

cancers. These cancers started in other organs and then spread to the adrenal glands. For example, lung and breast cancers often spread to the adrenal glands. But these cancers are named after the place where they started. They are not called adrenal cancers, and they are treated like the cancers where they started.

# How many people get adrenal cancer?

Adrenal cancer is very rare. The exact number found in the United States is not certain. It is probably about 300 cases per year. The average age of those found with adrenal cancer is around 45 to 50, but it can happen at any age, even in children. It seems to occur more often in women.

# What causes adrenal cancer?

Scientists do not know exactly what causes most adrenal cortical tumors. Over the past few years, they have made great progress in learning how certain changes in a person's DNA can cause cells in the adrenal to become cancer. DNA carries the instructions for nearly all the things our cells do. We often look like our parents because they are the source of our DNA. But DNA affects more than the way we look. DNA changes play a part in our risk for getting certain diseases, including some types of cancer. Most DNA changes that are seen in cancers happen during life rather than having been inherited. These changes may be caused by exposure to radiation or cancer-causing chemicals. But most of these changes happen for no known reason.

A risk factor is anything that increases a person's chance of getting a disease. Different cancers have different risk factors. Some risk factors, such as smoking, can be controlled. Others, like a person's age or race, can't be changed. But scientists have found a few risk factors that make a person more likely to get adrenal cancer. But even if a person does have one or more risk factors for adrenal gland tumors, we can't know for sure how large a part they played in causing the cancer.

**Family history:** Most adrenal cancers are not linked to heredity. But certain clusters of symptoms called *syndromes* can cause a higher risk of several types of cancer, including adrenal cancer. Some of these syndromes are:

- Li-Fraumeni syndrome
- Beckwith-Wiedemann syndrome
- Multiple endocrine neoplasia (MEN-1)
- Familial adenomatous polyposis (FAP)

**Smoking:** Smoking has been suggested as a risk factor by some researchers.

# Can adrenal cancer be prevented?

Since people with adrenal cancer don't have any risk factors that can be prevented, right now there is no known way to prevent this disease. Not smoking is a way to lower the risk for many cancers, maybe even adrenal cancer.

# How is adrenal cancer found?

It is hard to find adrenal cancer early. In most cases the tumor has grown quite large before it is found. It is often found earlier in children than in adults because children react more to the hormones these tumors make. In adults, these tumors may be found early by accident, for example when a CT scan is done for some other health problem.

The symptoms of adrenal cancer can be caused by either the hormones they make or because the tumor has grown large and is pressing on nearby organs. If you or your child has any of the symptoms below, see a doctor right away. Getting the right tests is the only way to find out for sure what is causing the symptoms.

## Signs and symptoms of adrenal cancer

In about half of people with adrenal cortex cancer, symptoms are caused by the hormones made by the tumor. In the other half, symptoms occur because the tumor has grown so large that it presses on nearby organs.

### Symptoms caused by the hormones androgen or estrogen

In children, symptoms are most often caused by male-type hormones (androgens) that the tumor makes. These symptoms include:

- Excess growth of facial, pubic, and underarm hair
- Enlargement of the penis (boys)
- Enlargement of the clitoris (girls)

A different set of symptoms can happen if the tumor makes female-type hormones (estrogens). These include:

- Early puberty in girls (having periods and the breasts getting larger)
- Breasts getting larger (boys)

In adults, the symptoms from sex hormones are harder to spot because these changes have already taken place. Women with tumors that make estrogen often do not have any symptoms unless the tumor is large enough to press on nearby organs.

Symptoms are easier to notice if the tumor is making the hormone that is not usually there. For instance, men with tumors that make estrogen may have slight breast tenderness and enlargement. They may also notice less sex drive and trouble getting an

erection. Women with tumors that make androgens may notice the growth of excess facial and body hair, irregular periods, and deepening of their voice.

## Symptoms caused by high levels of cortisol

There is a group of symptoms called Cushing syndrome that are caused by high levels of a hormone called cortisol (or hormones like it). Some of the symptoms of Cushing syndrome include:

- Weight gain, often around the chest and stomach
- Fat deposits behind the neck and shoulders
- Purple stretch marks on the stomach
- Hair growth on the face, chest, and back in women
- Irregular periods
- Weakness in the legs
- Easy bruising
- Depression or moodiness
- Weak bones which can lead to broken bones
- High blood sugar, often leading to diabetes
- High blood pressure

There are several reasons a person may have high cortisol levels. Your doctor will need to do some tests to find out if the symptoms are from adrenal cancer or something else.

## Symptoms caused by high aldosterone levels

If the tumor makes a hormone called aldosterone, the main symptoms include:

- High blood pressure
- Weakness
- Muscle cramps
- Increased thirst
- Urinating very often

In most cases, aldosterone is made by a benign adenoma rather than by cancer.

### Symptoms caused by a large adrenal cancer pressing on nearby organs

If the tumor is large and presses on nearby organs and tissues it can cause pain, a feeling of fullness in the belly, or trouble eating because the stomach feels full quickly.

If you have any of the signs or symptoms above, talk to a doctor right away. Remember, the sooner your cancer is found, the sooner you can start treatment. And the earlier you get treatment, the better it will work.

## Medical history and physical exam

If there is any reason to think you might have cancer, the first step will be a complete medical history and physical exam. Your doctor will want to know if anyone in your family has had adrenal cancer. You'll also be asked about your periods or other sexual issues and what symptoms you have had.

## Imaging tests

Imaging tests are ways to take pictures of your insides. One or more of these tests may be done if the doctor thinks you may have adrenal cancer.

**Chest x-ray:** This can show if the cancer has spread to the lungs. It may also help to see if you have any lung or heart diseases.

**Ultrasound:** This test uses sound waves to make pictures of your insides. A computer shows the picture on a screen. This test can show if there is a tumor (mass) in the adrenal gland. It can also show if there is a tumor in the liver. Most likely it won't be used unless a CT scan can't be done.

**CT scans (computed tomography):** A CT scan uses x-rays to make detailed pictures of your insides. Instead of taking just 1 x-ray, a CT scanner takes many pictures as it moves around you. A computer then combines these into a picture of a slice of your body. CT scans can show the adrenal glands and can often confirm whether a tumor is present, how large it is, and whether it has spread to nearby sites. CT scans also show the organs near the adrenal glands, as well as lymph nodes and distant organs. This test can help show if the cancer has spread to the liver or other organs. It also may be used to guide a needle into an area of concern. Once the needle is in, a piece of tissue is removed to be looked at under a microscope. This is called a CT-guided needle biopsy.

Before any pictures are taken, you may be asked to drink some liquid called oral contrast. This helps outline the intestine so that certain areas are not mistaken for tumors. You may also get an IV (intravenous) line through which you get a contrast dye. This helps better outline structures in your body.

The contrast dye can cause some redness and a warm feeling that may last hours to days. A few people are allergic to the dye and get hives. Rarely, more serious reactions like trouble breathing and low blood pressure can happen. Medicine can be given to prevent

and treat these problems. Be sure to tell the doctor if you have ever had a reaction to any contrast substance used for x-rays.

CT scans take longer than regular x-rays and you need to lie still on a table while they are being done. Also, you might feel a bit confined by the large ring the table slides through while the scan is being done.

**PET scan (positron emission tomography):** For a PET scan, a type of radioactive sugar is put into your vein. The sugar collects in cancer cells. A scanner can spot these areas. This test is useful for finding cancer that has spread beyond the adrenal glands. It is also helpful in finding adrenal cortex cancer that has spread outside of the adrenal glands.

**MRI (magnetic resonance imaging):** MRI scans use radio waves and strong magnets instead of x-rays to take pictures. MRI pictures look a lot like those of a CT scan, but MRIs are more detailed. An MRI scan can also show views from different angles. The MRI sometimes gives more information than a CT scan because it can better show the difference between adrenal cancer and a benign adenoma. An MRI is especially helpful in looking at the brain and spinal cord.

MRIs are a little more uncomfortable than CT scans. First, they often take up to an hour. Also, you must lie still inside a narrow tube, which may be upsetting to some people. If you have problems with tight spaces, tell the doctor before your MRI is set up; you may be able to have the test done using an open MRI scanner. The machine makes a thumping and clicking noises as the magnet switches on and off. Some places have earplugs or headphones with music to block this out.

## Other tests

**Laparoscopy:** The doctor may do this test in order to get ready for surgery. The laparoscope is a thin, flexible tube with a tiny video camera on the end. It is put into the body through a small cut in the patient's side to allow the surgeon to see where the cancer is growing. It can be used to make sure all the cancer can be removed. Sometimes surgeons can remove small tumors through this tool. (This is described in the section, "Surgery.")

**Biopsy:** In a biopsy a sample of tissue is removed to see whether cancer cells are in it. This test may be done before surgery by using a needle that takes out small pieces of tissue. A CT scan or ultrasound might be used to help guide the needle. The results can show whether the tumor started in the adrenal cortex, the medulla, or some other part of the body. But it might not show whether the tumor is cancer or not. For this reason, surgery is done if the tumor's size and certain features suggest it is cancer. If it looks as if the cancer has spread to another part of the body, such as the liver, then a biopsy may be done in those places, too.

**Blood and urine tests:** These tests are important in deciding whether a patient with symptoms of adrenal cancer has the disease. Doctors choose which tests to do based on the patient's symptoms. Because they know which symptoms are linked with high levels of certain hormones, they can select the right test for the patient.

# After the tests: Staging

Staging is the process of finding out how far the cancer has spread. This is very important because the type of treatment used and the outlook for recovery depend on the stage of the cancer. The system used to stage adrenal cancer is the AJCC (American Joint Committee on Cancer) system. Stages are described using Roman numerals from 0 to IV (0 to 4). Some stages are further divided into A and B. 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.

As your doctor about the stage of your cancer and what that might mean for treatment.

# Survival rates for adrenal cortical cancer

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. Whether or not you want to read about survival rates is up to you.

Because the number of cases of adrenal cancer is so small, the survival rates are only estimates. Also, the cancer itself has certain features that make it more or less likely to grow fast and spread. While the numbers below give an overall picture, keep in mind that every person's situation is unique and the statistics can't predict exactly what will happen in your case. Talk with your cancer care team if you have questions about your personal chances of a cure, or how long you might survive your cancer. They know your situation best.

The 5-year survival rate refers to the percentage of patients who live at least 5 years after their cancer is found. Of course, many people live much longer than 5 years. 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 effect that cancer can have on survival. These rates are also based on people first treated more than 5 years ago. Improved treatments often mean better survival rates for patients today.

## Survival rates for adrenal cortical cancer*

| | **5-year Relative Survival Rate** |
|---|---|
| Stage I | 65% |
| Stage II | 65% |
| Stage III | 40% |
| Stage IV | Less than 10% |

** These numbers are from the National Cancer Institute's SEER program, which collects data about cancer cases from all over the country.*

# How is adrenal cancer 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 diagnosed and staged, your doctor will talk to you about your treatment options. Take time and think about all of the choices. In choosing a treatment plan, factors to think about include your overall health and the stage of the cancer. You might also want get a second opinion. This can give you more information and help you feel good about the choice you make. Another reason to get a second opinion is that these cancers are rare. Only large cancer centers will have much experience in treating them.

The main methods of treatment for adrenal gland cancer are surgery, radiation therapy, chemotherapy, and the use of other drugs.

## Surgery

The goal of surgery is to get out as much of the cancer as possible, no matter where it is found. There are 2 major approaches to removing the adrenal gland. One way is to remove the gland through a cut (incision) in the back, just below the ribs. This works well for small tumors, but it can be hard to see larger tumors this way. In the other method, the surgeon makes a cut through the front of the belly. If the cancer has grown into the kidney, it will be removed too. If it has grown into the muscle and fat around the gland, these tissues will also be removed. If the liver is involved, part of that organ will be taken out. If the cancer has grown into the large vein that carries blood from the lower part of the body to the heart (called the *inferior vena cava*), a more involved operation will be needed.

Sometimes adrenal tumors can be removed through a hollow lighted tube called a *laparoscope*. The main advantage of this method is that because the cuts are much smaller, patients recover from surgery faster. Laparoscopic surgery is often used to treat adenomas, but it may not be an option for treating some larger adrenal cancers. This is because when adrenal cancers have grown into nearby tissues or lymph nodes, it may be hard to remove the whole tumor using laparoscopy.

## Radiation therapy

This treatment uses high-energy radiation to kill cancer cells. But radiation therapy is not often used as the main treatment for adrenal cancer because the x-rays do not easily kill this type of cancer. Radiation may be used after surgery to help keep the tumor from coming back (this is called *adjuvant therapy)*. Radiation may also be used to treat areas of cancer spread, such as in the bones or brain.

## Chemotherapy

Chemotherapy (often just called *chemo*) is the use of drugs to kill cancer cells. Usually the drugs are given into a vein or by mouth as a pill. Once the drugs enter the bloodstream, they go throughout the body. Chemo does not cure adrenal cancer. It is most often used for adrenal cancer that has spread or come back after surgery.

The drug most often used for people with adrenal cancer is a drug called *mitotane*. Mitotane is helpful for people with adrenal carcinomas who are having problems from too much hormones being made. Even when it doesn't shrink the tumor, mitotane can reduce the amount of hormones and relieve symptoms. But this drug can cause major side effects. The most common are nausea, vomiting, diarrhea, rashes, and sleepiness. Sometimes lower doses of the drug can still work well while causing fewer side effects.

Giving mitotane after the cancer is removed may help keep the cancer from growing back. This is called *adjuvant chemotherapy*. It works well for other types of cancer, but has not been studied well in adrenal cortex cancer.

There are other chemo drugs that can be used to treat adrenal cancer, too. Chemo can cause side effects. The side effects depend on the type of drugs given, the amount taken, and how long the treatment lasts. Side effects could include:

- Nausea and vomiting
- Loss of appetite
- Hair loss (hair grows back after treatment)
- Hand and foot rashes
- Mouth sores
- Increased chance of infection (from low white blood cell counts)
- Bleeding or bruising easily (from a shortage of blood platelets)
- Tiredness (from low red blood cell counts)

If you have side effects, your doctor or nurse can suggest steps to ease them. For example, there are drugs to help control and prevent nausea and vomiting. The good news is that most side effects go away over time when your treatment ends.

## Other drugs to treat adrenal cancer

Other drugs besides mitotane may be used to block hormone production by the cancer. These can help relieve symptoms caused by these hormones, but they don't shrink the cancer.

## Clinical trials

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

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 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 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 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.

# What are some questions I can ask my doctor?

As you cope with cancer, we encourage you to have honest, open talks with your doctor. 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.

- Do I have an adrenal gland tumor? Is it cancer?
- Has my cancer spread beyond the adrenal gland?
- Is my tumor making large amounts of hormones?
- How do we treat the excess hormones?
- Are the changes to my body permanent?
- How do we treat these changes?
- Does my cancer affect any other organs?
- What treatment choices do I have?
- What side effects can I expect from treatment?
- What are the other risks of treatment?
- What should I do to be ready for treatment?
- What is the goal of this treatment?
- How long will it take me to recover from treatment?
- When can I go back to work after treatment?
- Do I need a second opinion?
- What are the chances that my cancer will come back?
- Based on what you've learned about my cancer, will it shorten my life?

Add your own questions below:

# Moving on after treatment

It can feel good to be done with treatment, but it can also be stressful. You may find that you now worry about the cancer coming back. This is a very common concern among those who have had cancer. (When cancer comes back, it is called a *recurrence*.)

It may take a while before your recovery begins to feel real and your fears are somewhat relieved. You can learn more about what to look for and how to learn to live with the chance of cancer coming back in *Living With Uncertainty: The Fear of Cancer Recurrence.*

## Follow-up care

If you are treated for adrenal carcinoma, your follow-up care will be very important. One reason for this is that no matter what stage the disease was, the cancer can come back. You will see your doctor often after treatment and then less often later on. If you have stage II, III, or IV cancer and have been treated with mitotane, you may need more frequent follow-up. This drug stops both adrenal glands from making steroid hormones. So you will need to take pills to replace these hormones.

During follow-up visits, your doctors will ask about symptoms, do physical exams, and order blood tests or imaging studies (like CT scans or MRIs). Follow-up is needed to watch for treatment side effects and to check for cancer that has come back or spread.

Almost any cancer treatment can have side effects. Some may last for a few weeks or months, but others can be permanent. Please tell your cancer care team about any symptoms or side effects that bother you so they can help you manage them. Use this time to ask your health care team questions and discuss any concerns you might have.

It is also important to keep health insurance. While you hope your cancer won't come back, it could happen. If it does, you don't want to have to worry about paying for treatment. Should your cancer come back, our document *When Your Cancer Comes Back: Cancer Recurrence* helps you manage and cope with this phase of your treatment.

## Seeing a new doctor

At some point after your cancer is found and treated, you may find yourself in the office of a new doctor. 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
- If you had surgery, a copy of your operative report
- If you were in the hospital, a copy of the discharge summary that the doctor wrote when you were sent home from the hospital
- If you had radiation treatment, a summary of the type and dose of radiation and when and where it was given
- If you had chemo or targeted therapies, a list of your drugs, drug doses, and when you took them

# Changes to think about during and after treatment

Having cancer and dealing with treatment can take a lot of time and energy, but it can also 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.

## Make healthier choices

Think about your life before you learned you had cancer. Were there things you did that might have made you less healthy? Maybe you drank too much alcohol, ate more than you needed, used tobacco, or didn't exercise very often.

Now is not the time to feel guilty or blame yourself. You can start making changes today that can have positive effects for the rest of your life. Not only will you feel better but 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 us at 1-800-227-2345.

## Diet

Eating right is hard for many people, but it can be even harder to do during and after cancer treatment. If you are still in treatment and are having eating problems related to your treatment, please call us for a copy of *Nutrition for the Person With Cancer During Treatment.* We also have *Nutrition and Physical Activity During and After Cancer Treatment: Answers to Common Questions*.

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. Try to eat 5 or more servings of vegetables and fruits each day. Choose whole-grain foods instead of white flour and sugars. Try to limit meats that are high in fat. Cut back on processed meats like hot dogs, bologna, and bacon. If you drink alcohol, limit yourself to one or 2 drinks a day at the most. And don't forget to get some type of regular exercise. A good diet along with regular exercise will help you stay at a healthy weight and give you more energy.

## 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.*

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.

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 lowers anxiety and depression.
- It makes you feel generally happier.
- It helps you feel better about yourself.

Long term, we know that exercise plays a role in preventing some cancers. The American Cancer Society recommends that adults be physically active for at least 30 minutes a day on 5 or more days of the week. Children and teens should try for at least 60 minutes of physical activity a day on 5 or more days a week.

## How about your emotional health?

Once your treatment ends, you may be surprised by the flood of emotions you go through. 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.

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 healthy choices and helping your body and mind feel well.

## What happens if treatment 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 can be 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 documents, *When Your Cancer Comes Back: Cancer Recurrence, Advanced Cancer, and Hospice Care*.

# How can I learn more?

## From your American Cancer Society

The following information that may also be helpful to you. These materials may be ordered from our toll-free number, 1-800-227-2345.

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

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

Understanding Radiation Therapy (also available in Spanish)

When Your Cancer Comes Back: Cancer Recurrence

### Books

The following books are available from the American Cancer Society. Call us at 1-800-227-2345 to ask about costs or to place your order.

*American Cancer Society's Guide to Pain Control*

*Caregiving: A Step-By-Step Resource for Caring for the Person With Cancer at Home*

*Consumers Guide to Cancer Drugs, Second Edition*

## 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)
TTY: 1-800-332-8615
Web site: www.cancer.gov

**National Coalition for Cancer Survivorship**
Toll-free number: 1-888-650-9127
Toll-free number: 1-877-NCCS-YES (1-877-622-7937) to order the Cancer Survival Toolbox® or publications
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 · ACS·2345 or www.cancer.org