Bladder Cancer Overview

This overview is based on the more detailed information in our document, *Bladder Cancer: Detailed Guide*.

**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 while they are growing, normal cells divide faster. Once 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. In most cases the cancer cells form a tumor. Cancer cells can also grow into (invade) other tissues, something that normal cells can’t do. Being able to grow out of control and invade other tissues is what makes a cell a cancer cell.

Sometimes cancer cells spread to other parts of the body. There they begin to grow and form new tumors. This process is called *metastasis*.

No matter where a cancer spreads, it is named (and treated) based on the place where it started. For instance, breast cancer that has spread to the liver is still breast cancer, not liver cancer. Likewise, prostate cancer that has spread to the bones is still prostate cancer, not bone cancer.

Different types of cancer can behave very differently. They grow at different rates and respond to different treatments. This is why people with cancer need treatment that is aimed at their own kind of cancer.

Not all tumors are cancer. Tumors that aren’t cancer are called *benign*. Benign tumors can cause problems – they can grow very large and press on healthy organs and tissues.
But they can’t 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 bladder cancer?**

Bladder cancer starts in the bladder. To understand bladder cancer, it helps to know about the normal bladder and what it does.

**The normal bladder**

The bladder is a hollow organ that stores urine. Urine is made in the kidneys and flows into the bladder through thin tubes called *ureters*. Urine leaves the bladder through another tube called the *urethra*. In women the urethra is very short. In men it is longer and passes through the prostate gland to the tip of the penis.

![Diagram of the urogenital system](image)

The wall of the bladder has several layers. The innermost layer of the bladder is called the *urothelium*. Most bladder cancers start there. Over time, they can grow into or through the other layers of the bladder, and then can spread outside the bladder. As the cancer grows through the layers it becomes more advanced and harder to treat.

**Types of bladder cancer**

There are different types of bladder cancer. The type you have can affect your treatment options because different types need different treatments.
Transitional cell carcinoma (TCC)

This is by far the most common type of bladder cancer. It starts in the inner layer of the bladder – the urothelium – so it is also called *urothelial carcinoma*.

This group has subtypes:

- **Papillary cancers** grow like tiny fingers from the inner bladder lining toward its hollow center.
- **Flat cancers** do not grow toward the center.

These tumors are also named based on whether they have grown into the bladder wall:

- **Non-invasive** cancers are still in the inner layer of cells (the urothelium) but have not grown into the deeper layers.
- **Invasive** cancers have grown into the deeper layers of the bladder. These cancers are more likely to spread and are harder to treat.

Other cancers that start in the bladder

**Squamous cell carcinoma:** This type is much less common and is usually invasive.

**Adenocarcinoma:** This type is also much less common, and almost all are invasive.

**Small-cell carcinoma:** A very small number of bladder cancers are of this type. These cancers often grow quickly.

**Sarcoma:** Sarcomas start in the muscle cells of the bladder, but they are rare. To find out more about sarcomas, see our documents *Sarcoma: Adult Soft Tissue Cancer* and *Rhabdomyosarcoma*.

The rest of this document deals only with transitional cell (urothelial) cancers of the bladder.

How many people get bladder cancer?

The American Cancer Society’s estimates for bladder cancer in the United States for 2015 are:

- About 74,000 new cases of bladder cancer
- About 16,000 deaths from bladder cancer

Bladder cancer is more common among men than women and more common among whites than blacks. The chance of a man having this cancer during his lifetime is about 1
in 26. For women, it is about 1 in 90. Risk factors (such as smoking) can affect these chances.

This is a cancer mainly of older people. About 9 out of 10 people with this cancer are over the age of 55. The average age when the cancer is found is 73.

**What are the risk factors for bladder cancer?**

We do not know exactly what causes most bladder cancers, but we do know that certain risk factors are linked to the disease. A risk factor is anything that affects your chance of getting a disease such as cancer. Different cancers have different risk factors. Some risk factors, like smoking, can be controlled. Others, like a person’s age or family history, can’t be changed.

But having a risk factor, or even several, does not mean that you will get the disease. Many people with risk factors never get bladder cancer, while others with this disease may have few or no known risk factors.

Still, it is good to know about some of the risk factors for bladder cancer because there may be things you can do that might lower your risk of getting it. If you are at higher risk because of certain factors, there are tests that might help find it early, when treatment is most likely to be helpful.

**Risk factors for bladder cancer**

The following risk factors have been linked to bladder cancer:

- **Smoking:** Smoking is the greatest risk factor for bladder cancer. Smokers get bladder cancer at least 3 times as often as people who don’t smoke.

- **Workplace chemical exposure:** Workers in industries with higher risks of bladder cancer include the makers of rubber, leather, textiles, dyes, and paint products, as well as printing companies. Other workers with a higher risk of bladder cancer include painters, hairdressers, machinists, printers, and truck drivers. Smoking can increase the risk even more among these workers.

- **Race:** Whites are about twice as likely to get bladder cancer as are African Americans. Hispanics, Asian Americans, and American Indians have slightly lower rates of bladder cancer.

- **Age:** The risk of bladder cancer goes up with age.

- **Gender:** Bladder cancer is much more common in men than in women.
Chronic (on-going) bladder irritation and infections: Urinary infections, kidney stones, bladder stones, and bladder catheters left in for a long time have been linked with bladder cancer, but it is not clear if they actually cause bladder cancer.

Personal history of bladder (or other urothelial) cancer: People who have had a cancer in the lining of any part of the urinary tract have a higher chance of getting another tumor.

Bladder birth defects: Before birth, there is a connection between the belly button and the bladder. Very rarely this connection doesn’t go away as it should, and cancer can start there. Another rare birth defect called extrophy can also lead to bladder cancer.

Genes and family history: People whose family members have had bladder cancer have a higher risk. People who inherit certain gene syndromes also have a higher risk of bladder cancer.

Prior cancer treatment: Some chemo drugs or radiation used to treat other cancers can increase the risk of bladder cancer.

Certain medicines and herbal supplements: Use of the diabetes medicine pioglitazone (Actos) for more than a year has been linked with bladder cancer. Supplements that contain aristolochic acid have also been linked with bladder cancer.

Arsenic: Arsenic in drinking water has been linked to a higher risk of bladder cancer in some parts of the world.

Not drinking enough liquids: People who drink lots of liquids each day have a lower rate of bladder cancer.

Can bladder cancer be prevented?

At this time, there is no sure way to prevent bladder cancer. But there are things you can do that might lower your risk.

Don’t smoke

The best way to lower your risk is not to smoke. Smoking is believed to cause about half of bladder cancer cases among men and women. If you’re thinking about quitting smoking and need help, call the American Cancer Society for information and support at 1-800-227-2345.

Limit workplace chemical exposures

It’s important to follow good safety habits if you work with chemicals that might increase bladder cancer risk. These chemicals are commonly used by the makers of rubber,
leather, printing materials, textiles, and paint products. They are also found in many hair
dyes, so it is important for hairdressers and barbers who are often exposed to these
products to use them safely. Most studies have not found that personal use of hair dyes
increases bladder cancer risk. To learn more, see our document *Hair Dyes.*

**Drink plenty of fluids**

Some studies have found that drinking plenty of fluids (mainly water) might lower the
risk of bladder cancer.

**Eat lots of fruits and vegetables**

Some studies have suggested that a diet high in fruits and vegetables might help protect
against bladder cancer, but other studies have not found this. Still, eating such a diet has
been shown to have many health benefits, including lowering the risk of several other
types of cancer.

**How is bladder cancer found?**

Bladder cancer can sometimes be found early. Finding it early improves the chances that
it can be treated with success.

**Screening for bladder cancer**

Screening tests are used to look for a disease in people who do not have any symptoms.
Expert groups do not advise screening tests for bladder cancer for most people, but they
may be used if you are at very high risk. Risk factors that may lead to screening include:

- Having had bladder cancer before
- Certain defects of the bladder
- Working with certain chemicals

If you are at high risk of bladder cancer, your doctor might suggest certain tests such as
urine tests or cystoscopy. These tests are explained below.

**Signs and symptoms of bladder cancer**

Even without screening, bladder cancer can often be found early because it causes blood
in the urine or other symptoms. Many of these symptoms often have less serious causes,
but it’s important to have them checked by a doctor right away so the cause can be found
and treated, if needed. If the symptoms are caused by bladder cancer, finding it early gives you the best chance of treating it successfully.

**Blood in the urine**

In most cases, blood in the urine is the first sign of bladder cancer. Sometimes there is enough blood to change the color of the urine. The urine may be orange, pink or – less often – darker red. Sometimes, the color of the urine is normal but small amounts of blood are found by urine tests that were done because of other symptoms or as part of a check-up.

But blood in the urine does not mean you have bladder cancer. Much more often it is caused by other things, such as infection, benign tumors, or stones in the kidney or bladder. But it’s important to have it checked by a doctor.

**Changes in bladder habits**

Having to urinate more often, feeling pain or burning when going, or feeling as if you need to go right away even when your bladder is not full can be symptoms of bladder cancer. But these problems are more often caused by something other than cancer.

**Symptoms of advanced bladder cancer**

Bladder cancers that have grown large enough or have spread to other parts of the body may cause other symptoms, such as:

- Not being able to urinate
- Lower back pain on one side
- Loss of appetite and weight loss
- Swelling in the feet
- Bone pain

**Tests to find bladder cancer**

If there is a reason to suspect you might have bladder cancer, the doctor will use one or more of the methods below to find out if the disease is really there.

**Medical history and physical exam**

Your doctor will ask you about your medical history to check for risk factors and learn more about your symptoms. The doctor might check the rectum and vagina (in women)
to feel for a tumor. If the results of the exam are not normal, your doctor will probably order blood and urine tests and might refer you to a urologist (a doctor who treats problems of the urinary system) for further tests and treatment.

**Cystoscopy**

A cystoscope is a thin tube with a light and a lens or tiny video camera on the end. The doctor puts it into the bladder through the urethra. The area may be numbed first, or drugs may be used to put you into a deep sleep. With the cystoscope the doctor can see the inside of the bladder. If there is anything that doesn’t look normal, a small piece of tissue is removed (biopsied) and looked at under a microscope. (Read further for more about biopsies.)

**Urine tests**

**Urinalysis:** This is a simple test to check for blood and other substances in the urine, which might point toward bladder cancer or other problems.

**Urine cytology:** In this test, urine or cells “washed” from the bladder during cystoscopy are sent to the lab to see if cancer cells (or pre-cancer cells) are present. This test can help find some cancers, but it is not perfect. Not finding cancer on this test doesn’t always mean you are cancer-free.

**Urine culture:** For this test, a sample of your urine is sent to the lab to see if germs grow in it, which can show if you have an infection. An infection can sometimes cause symptoms like those of bladder cancer. It may take a few days to get the results of this test.

**Urine tumor marker tests:** These tests look for certain substances released by cancer cells into the urine. Some doctors use these tests (along with cytology), but most think that cystoscopy is still the best way to find bladder cancer.

**Biopsy**

When a small piece of body tissue is removed and sent to the lab to see if it contains cancer cells, it is called a biopsy. Bladder biopsy samples are most often taken during cystoscopy.

This test can tell if bladder cancer is present and what type of cancer it is. It can also tell other important features of the cancer.

**Invasiveness:** A biopsy can show how deep the cancer has grown into (invaded) the bladder wall. It’s important for the doctor to know if cancer cells have grown into the bladder’s muscle layers.
**Grade:** Bladder cancers are given a grade based on how they look under the microscope. Low-grade cancers look more like normal tissue and tend to grow more slowly. A high-grade means the cancer looks less like normal tissue and is more likely to spread outside the bladder. These cancers can be harder to treat.

If imaging tests (see the next section) suggest the cancer has spread outside of the bladder, a biopsy is the only way to be sure. In some cases, biopsy samples of suspicious areas are taken during the surgery to remove the bladder cancer. Or a thin, hollow needle may be used to take a small piece of tissue from the abnormal area. This is known as a **needle biopsy**, and it allows the doctor to take samples without an operation.

**Imaging tests**

Imaging tests make pictures of the inside of your body. They let your doctor “see” your bladder and other organs. If you have bladder cancer, your doctor may order some of these tests to find out if the cancer has spread to tissues near the bladder, to nearby lymph nodes, or to distant organs.

**Intravenous pyelogram (IVP):** An IVP is an x-ray of the urinary system taken after a special dye is put into a vein. The dye passes into the ureters and bladder. This more clearly outlines these organs on x-rays and helps find tumors. Some people are allergic to the dye, so be sure to tell your doctor if you have any allergies or have ever had any reactions to x-ray dyes.

**Retrograde pyelogram:** For this test, a thin, flexible tube called a **catheter** is put through the urethra and up into the bladder or into a ureter. Then a dye is put through the catheter to show the lining of the bladder, ureters, and kidneys on x-rays. Like IVP, this test can be used to find tumors in the urinary tract.

**Computed tomography (CT) scan:** The CT scan is a special kind of x-ray that makes detailed pictures of your insides. It can help find tumors in your bladder, kidneys, and other organs, as well as show any swollen lymph nodes that might contain cancer.

A CT scanner has been described as a large donut, with a narrow table that slides in and out of the “hole”. You will need to lie still on the table while the scan is done.

Before any pictures are taken, you may be asked to drink a liquid called **oral contrast**. You may also need an IV line through which you will get a different kind of contrast dye. The dye can cause some redness and warm feeling. Some people are allergic to the contrast. Be sure to tell the doctor if you have any allergies or if you have ever had a reaction to any contrast dye used for x-rays.

CT scans can also be used to guide a biopsy needle into a tumor outside the bladder if the cancer may have spread.

**Magnetic resonance imaging (MRI):** MRI scans use radio waves and strong magnets instead of x-rays to make detailed pictures. They can be used to look at the urinary
system or to look for signs that the cancer has spread outside of the bladder into nearby tissues or lymph nodes.

For some scans, a contrast material (dye) may be put into your vein to help show some structures better.

MRI scans take longer than CT scans—often up to an hour. Also, for most MRI scans you will be inside a tight tube-like machine. This can upset people with fear of enclosed spaces. Newer, more open MRI machines can sometimes be used instead.

**Ultrasound:** Ultrasound uses sound waves to make pictures of your insides. It can help show the size of a bladder cancer and whether it has spread beyond the bladder. It can also be used to look at the kidneys.

This is an easy test to have. You simply lie on a table while a kind of wand is placed on the skin over the part of your body being looked at. No radiation is used.

Ultrasound can also be used to guide a biopsy needle into an area where cancer may have spread.

**Chest x-ray:** A chest x-ray may be done to look for spread of bladder cancer to the lungs. This test is not needed if a CT scan of the chest has been done.

**Bone scan:** A bone scan can help look for cancer that has spread to bones. For this test, a small amount of a radioactive substance is put into a vein. This substance collects in areas of bone that are damaged. A scanner can spot these places and show them on a picture. Doctors don’t usually order this test unless you have symptoms such as bone pain, or if blood tests show the cancer may have spread to the bones.

## Staging of bladder cancer

The stage of a bladder cancer describes how far it has spread. The stage is important when choosing the best treatment. The stage can also help predict the patient’s outlook (prognosis).

- **The clinical stage** of bladder cancer is based on the results of the physical exam, imaging tests, and biopsies (described in “How is bladder cancer found?”). The clinical stage is used to help plan treatment.

- **The pathological stage** of bladder cancer is based on the results of these tests plus the results of surgery to remove the bladder and nearby lymph nodes. Sometimes the cancer has spread further than the estimate of the clinical stage. Because the pathological stage is based on what was found at surgery, it more accurately predicts the patient’s outlook for survival.
A staging system is a standard way for the cancer care team to describe the extent of the cancer. The most common staging system for bladder cancer is the AJCC staging system, also known as the TNM system. It uses 3 key pieces of information:

- **T** is how far the main tumor has grown into the wall of the bladder and into nearby structures.
- **N** describes spread to nearby lymph nodes.
- **M** tells whether the cancer has spread (metastasized) to other parts of the body.

The T, N, and M categories are combined to get an overall stage, using 0 and the Roman numerals I through IV (1-4). The lower the number, the less the cancer has spread. A higher number, such as stage IV (4), means a more advanced 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.

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**How is bladder 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 bladder cancer is found and staged, your doctor will talk to you about your treatment options. 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. You
may feel that you need to make a decision quickly. But give yourself time to absorb the
information you have learned. Talk to your doctor. Look at the list of questions in the
section “What are some questions I can ask my doctor about bladder cancer?” to get
some ideas. Then add your own.

If time permits, you might want to get a second opinion about the best treatment option
for you. Doing so can give you more information and help you feel better about the
treatment plan you choose. You will want to weigh the benefits of each treatment against
side effects and risks.

The main types of treatment for bladder cancer are:

- Surgery
- Intravesical therapy
- Chemotherapy
- Radiation therapy

Sometimes, more than one type of treatment might be used. Surgery, alone or along
with other treatments, is used in nearly all cases.

You might have different types of doctors on your treatment team. The types of doctors
who treat bladder cancers include:

- Urologists: surgeons who treat diseases of the urinary system
- Radiation oncologists: doctors who treat cancer with radiation
- Medical oncologists: doctors who treat cancer with medicines such as
  chemotherapy

Other experts might be part of your treatment team as well, including physician
assistants, nurse practitioners, nurses, psychologists, social workers, rehabilitation
specialists, and others. See Health Professionals Associated With Cancer Care for more
on this.

**Surgery for bladder cancer**

Surgery is part of the treatment for most bladder cancers. The type of surgery depends on
the stage of the cancer.

**Transurethral surgery**

For many early stage bladder cancers, a transurethral resection (TUR), also known as a
transurethral resection of the bladder tumor (TURBT), is the most common treatment.
Most people have early-stage cancer when it is first found, so this is usually the first treatment they get.

Tumors in the bladder are removed using a slender tube with a lens and a light on the end that is put into the bladder through the urethra. This tube is called a **resectoscope**. You will be in a deep sleep (under general anesthesia) or the lower part of your body will be numbed (regional anesthesia) for this. There is no need to cut into the belly.

After surgery, other things may be done to get rid of any remaining cancer. These could include burning the base of the tumor through a cystoscope or treating it with a laser.

The side effects of this surgery are often mild and do not usually last long. You might have some bleeding or mild pain when you urinate after surgery. You can usually go home the same day or the next day. In less than 2 weeks you should be able to go back to your normal activities.

This treatment usually works well, but bladder cancer still often returns in other parts of the bladder. If this surgery has to be done several times, there is a chance that the bladder can become scarred and not able to hold much urine. This means having to urinate often and the chance of losing control of your urine (incontinence).

In patients whose non-invasive, low-grade tumors tend to come back, the surgeon may sometimes just burn small tumors that are seen during cystoscopy (rather than taking them out). This can often be done using numbing medicine in the doctor’s office. It is safe but can be somewhat uncomfortable.

**Cystectomy**

When bladder cancer is invasive (the cancer has spread beyond the layer of cells where it started and deeper into the bladder wall), all or part of the bladder may need to be removed. This operation is called a **cystectomy**.

When only the tumor and part of the bladder is removed, it is called a **partial cystectomy**. Nearby lymph nodes are also removed. This surgery allows the person to keep part of their bladder, but it will be smaller so they might have to go more often. The cancer might also come back in a different part of the bladder.

Surgery to remove the whole bladder is called a **radical cystectomy**. Nearby lymph nodes are also taken out. In men, the prostate is removed as well. In women, the womb (uterus), ovaries, fallopian tubes, and a small part of the vagina are often removed.

These procedures are usually done through a cut (incision) in the belly (abdomen) to get to the bladder. In some cases, the surgery may be done through several smaller cuts using special long, thin instruments, one of which has a tiny video camera on the end. This is known as **laparoscopic**, or “keyhole” surgery. This type of surgery may result in less pain and a quicker recovery because of the smaller cuts. But it has not been around as long as
the standard type of surgery, so it’s not yet clear if it works as well. For either operation, you will be given drugs to put you into a deep sleep.

It is important that the surgeon doing any type of cystectomy be experienced in treating bladder cancer. If the surgery is not done well, the cancer is more likely to come back.

**Reconstructive surgery after cystectomy**

If the whole bladder is removed, you will need another way to store and remove urine. There are several ways to do this.

**Incontinent diversion:** To do this, a short piece of the small intestine (bowel) is removed and used to connect the ureters to a small opening (called a urostomy or a stoma) in the skin of your belly. This is known as an ileal conduit. A small bag is placed over the stoma to catch the urine. The bag will need to be emptied when it fills up. This approach is called an incontinent diversion because you no longer control the flow of urine out of the body.

** Continent diversion:** This method does not require a bag outside the body. Instead, the surgeon creates a sac from a piece of intestine. One end is attached to the ureters, and the other end has a small valve where it is attached to a small hole (stoma) in the skin over your belly. Urine is stored in the pouch. You then empty the pouch several times a day by putting a drainage tube (catheter) into the hole (stoma) of the diversion and through the valve.

**Neobladder:** A newer method of surgery can route the urine back into the urethra by creating a new bladder (called a neobladder) out of a piece of intestine. The neobladder is sewn to the urethra, which lets the patient urinate normally. Over time, most people will be able to urinate normally during the day, but many people might still have some incontinence at night.

**Possible side effects of surgery**

Cystectomy is a major operation, and the side effects can be serious. Immediate risks include problems from anesthesia, bleeding, blood clots, and infections. Most people will have some pain, which most often is helped by pain medicines.

Aside from changing how urine leaves the body, problems from having a urostomy could include infections, urine leaks (incontinence), pouch stones, and blocked urine flow. There can be an emotional impact as well. You can find more information in our document *Urostomy: A Guide*.

**Sexual effects in men:** After radical bladder surgery, a man no longer makes semen. So the orgasm will be “dry”– that is, there will not be any semen.
Many men have nerve damage that makes them unable to have an erection. Newer types of surgery may lower the chances of this problem, and sometimes the problem improves over time. As a rule, the younger a man is, the more likely he is to be able to have full erections. This is something men should talk to their doctors about before surgery.

To find out more about dealing with sexual issues, please see our document *Sexuality for the Man With Cancer*.

**Sexual effects in women:** A radical cystectomy often removes the front part of the vagina. This can make sex less comfortable for some women, but most of the time intercourse is still possible. One option is to have the vagina rebuilt. This is known as *vaginal reconstruction*. There is more than one way to do this, so talk with your doctor about the pros and cons of each.

Radical cystectomy can also affect a woman’s ability to have an orgasm if the nerve bundles that run along each side of the vagina are damaged. Talk with your doctor about whether these nerves can be left in place.

If the doctor takes out the end of the urethra where it opens outside the body, the clitoris can lose some of its blood supply, which might affect sexual arousal. Talk with your doctor about whether the end of the urethra can be spared.

To learn more about ways to cope with these and other sexual issues, see our document *Sexuality for the Woman With Cancer*.

**Sexual effects of urostomy:** For both men and women, it is normal to be concerned about your sex life with a urostomy. Having your ostomy pouch fit right and emptying it before sex lowers the chances of a major leak. A pouch cover or small ostomy pouch can be worn with a sash to keep the pouch out of the way. Wearing a snug fitting shirt may work even better. To reduce rubbing against the pouch, choose positions for sex that keep your partner’s weight off of it. For more on this, see our document *Urostomy: A Guide*.

For more about surgery as a treatment for cancer, see our document *Understanding Cancer Surgery: A Guide for Patients and Families*.

**Intravesical therapy for bladder cancer**

With intravesical treatment the doctor puts a liquid drug right into the bladder rather than giving it by mouth or putting it into a vein. Drugs given this way mainly affect the cells lining the inside of the bladder, with little to no effect on cells elsewhere. For this reason, intravesical therapy is only used for some early-stage bladder cancers.

**Intravesical immunotherapy**

*Bacillus Calmette-Guerin therapy* (BCG) is a type of immunotherapy that is useful for treating early-stage bladder cancer. BCG is a type of germ that is usually harmless. It is
given right into the bladder through a thin, flexible tube called a catheter. The body’s immune system cells are drawn to the bladder and attack the cancer. BCG is usually started a few weeks after a transurethral resection of the tumor and is given once a week for 6 weeks. Sometimes BCG is given long-term.

BCG treatment may cause flu-like symptoms (fever, chills, and tiredness) as well as a burning feeling in the bladder. Rarely, a high fever that does not get better when you take a pain reliever could mean a serious spread of BCG throughout the body. If this happens, you should call your doctor right away. These infections can be treated with antibiotics.

**Interferons** are substances normally made by the body to turn on the immune system. They can also be made in the lab and given as medicine in the intravesical treatment of bladder cancer. Other drugs are often given with the interferon to relieve common side effects such as muscle aches, bone pain, headaches, tiredness, nausea, and vomiting.

**Intravesical chemotherapy**

In this treatment, chemotherapy (chemo) drugs are put into the bladder through a thin, flexible tube called a **catheter**. Drugs given this way reach cancer cells in the bladder lining without affecting cells elsewhere, which helps limit side effects.

The main side effects of intravesical chemo are irritation and a burning feeling in the bladder.

**Chemotherapy for bladder cancer**

Chemotherapy (chemo) is the use of drugs to kill cancer cells. The drugs can be given in different ways. Intravesical chemo, where the drug is put right inside the bladder, was described in the previous section.

Often chemo drugs are given into a vein or by mouth. Once the drugs enter the bloodstream, they spread throughout the body. This type of chemo can be used at different times:

- Chemo might be used to shrink a large tumor so it is easier to remove during surgery. When used this way it is called **neoadjuvant therapy**.
- Chemo can be given after surgery or radiation to try to prevent the growth of stray cancer cells still in the body. This is called **adjuvant therapy**. It can lower the chance that the cancer will come back later.
- Chemo is often the main treatment for advanced cancers, such as those that have spread to distant parts of the body.

Sometimes chemo is given along with radiation to help the radiation work better. This can increase the side effects of radiation.
Many chemo drugs can be used to treat bladder cancer. The drugs may be used alone or combined with other drugs, based on why they’re being used. Doctors give chemo in cycles, with each round of treatment followed by a rest period to give the body time to recover. Each chemo cycle typically lasts for a few weeks.

While chemo for bladder cancer can be hard to endure, especially for older patients who have other medical problems, older age itself doesn’t mean that you can’t get chemo.

**Side effects of chemo**

Chemo drugs kill cancer cells, but they also damage some normal cells, which can lead to side effects. These depend on the type of drugs used, the amount taken, and the length of treatment. Short-term side effects might include:

- Nausea and vomiting
- Loss of appetite
- Hair loss
- Mouth sores
- Diarrhea or constipation
- Greater 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 (from low red blood cell counts, called anemia)

Some chemo drugs can cause other, less common side effects. For example, some drugs can damage nerves, which can lead to pain, numbness, or burning or tingling in the hands and feet.

Most side effects go away over time when treatment ends. If you have any problems with side effects, be sure to tell your doctor or nurse, as there are often ways to help. To find out more about chemotherapy, please see the Chemotherapy section on our website, or our document *A Guide to Chemotherapy*.

**Radiation therapy for bladder cancer**

Radiation therapy is treatment with high-energy rays (such as x-rays) to kill cancer cells or shrink tumors. The type of radiation most often used to treat bladder cancer uses radiation from outside of the body on the cancer.

Before your treatments start, careful measurements will be done to decide on the correct angles for aiming the radiation beams and the proper dose of radiation. The treatment is
much like getting an x-ray, but the dose is stronger. The treatment itself is painless and lasts only a few minutes, but the setup time – getting you into place for treatment – usually takes longer. Most often, radiation treatments are given 5 days a week for several weeks.

Radiation can be used:

- As part of the treatment for early stage bladder cancer, after surgery
- As the main treatment for people with early stage cancers who can’t have surgery
- As part of the treatment for advanced bladder cancers
- To help prevent or treat symptoms caused by advanced bladder cancers

Radiation is often combined with chemotherapy to help it work better.

**Side effects of radiation**

Side effects of radiation depend on the dose given and the place being treated. They tend to be worse if chemotherapy is given with the radiation. Side effects can include:

- Skin changes in areas getting radiation, ranging from redness to blisters and sores
- Nausea and vomiting
- Bladder symptoms, like burning or pain when you urinate, feeling the need to go often, or blood in the urine
- Diarrhea
- Tiredness
- Low blood counts, which can lead to fatigue, easy bruising or bleeding, or increased risk of infection

These problems usually go away after treatment ends. Some people can have long-term side effects such as problems holding urine, blood in the urine, or pain when urinating. If you have any side effects, you should talk to your doctor. Often there are ways to help.

For more on radiation therapy, see the [Radiation therapy section](#) of our website, or our document *Understanding Radiation Therapy: A Guide for Patients and Families*.

**Clinical trials for bladder cancer**

You may have had to make a lot of decisions since you’ve been told you have bladder 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 bladder 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 learn more about promising new treatments or procedures.

Clinical trials are one way to get state-of-the-art cancer treatment. Sometimes they might be the only way to get some newer treatments. They are also the best way for doctors to learn better ways to treat cancer. Still, they are not right for everyone.

If you would like to learn more about clinical trials, 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 studies that meet your medical needs. You can reach this service at 1-800-303-5691 or on our website 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 at 1-800-4-CANCER (1-800-422-6237) or by visiting the NCI clinical trials website at www.cancer.gov/clinicaltrials.

You need to meet requirements to take part in any clinical trial. But if you do qualify for a clinical trial, you will get to decide whether or not to enter (enroll in) it.

To learn more, see the Clinical Trials section on our website, or our document Clinical Trials: What You Need to Know.

Complementary and alternative therapies for bladder cancer

When you have bladder 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 websites might 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 could 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’s 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 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 or read our document Complementary and Alternative Methods and Cancer to learn more about complementary and alternative methods.** You can also find out about the specific methods you are looking at by calling us or visiting the Complementary and Alternative Medicine section of our website.

**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 about bladder cancer?**

As you cope with cancer and its treatment, you need to have honest, open talks with your doctors. You should feel free to ask any question, 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.
• Would you please write down the exact type of cancer I have?
• Do you think the cancer has spread beyond my bladder?
• What is the stage and grade of my cancer? What does that mean?
• Do I need other tests before we can decide on treatment?
• Do I need to see other doctors?
• How much experience do you have treating this type of cancer?
• Should I get a second opinion? Can you recommend a doctor or cancer center?
• What are my treatment choices? What do you recommend? Why?
• What is the goal of each treatment?
• What are the chances my cancer can be cured?
• How soon do I need to start treatment?
• What should I do to prepare for treatment?
• How long will treatment last? What will it be like? Where will it be done?
• What are the risks or side effects of treatment? How long are they likely to last?
• How likely is it that the cancer will come back? Is there anything I can do to lower this risk?
• What would we do if the treatment doesn’t work or if the cancer comes back?
• What type of follow-up will I need after treatment?

Add your own questions below:

Keep in mind that doctors are not the only ones who can give you information. Other health care professionals, such as nurses and social workers, may have the answers to some of your questions. You can find more information about communicating with your health care team in our document Talking With Your Doctor.
Moving on after treatment for bladder cancer

For some people with bladder cancer, treatment can 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 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 leading full lives. To learn more about this, see our document *Living With Uncertainty: The Fear of Cancer Recurrence*.

For other people, the bladder cancer might never go away completely. These people may get regular treatments with chemotherapy, radiation, or other treatments to help keep the cancer in check. Learning to live with cancer as more of a 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. People who have had bladder cancer are at high risk of getting a second bladder cancer, so it’s very important to go to all of your follow-up visits. Your doctors will ask questions about any problems you might be having and may do exams, lab tests (such as urine cytology), and imaging tests. These tests are described in the section “How is bladder cancer found?”

In people with no signs of cancer left, most doctors will repeat exams every 3 to 6 months to see if the cancer is growing back or if there is a new cancer within the urinary system. Your schedule of exams and tests will depend on the extent and grade of the cancer when it was found, what treatments you’ve had, and other factors. Be sure to follow your doctor’s advice about follow-up tests. The time between doctor visits may be longer after a few years if no new cancers are seen.

Almost any cancer treatment can have side effects. Some can last for weeks or months, but others can last the rest of your life. 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 questions and discuss any concerns you might have.

It is also important to keep your health insurance. While you hope your cancer won’t come back, it could. 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* can help you manage and cope with this phase of your treatment.
For patients with a urostomy

If you have a urostomy, you may worry about even everyday activities at first. You might have to change some of your daily (and nightly) routines because of changes in how you urinate. Other issues such as having sex might also cause concerns.

It’s normal to have worries and concerns when getting used to such a major change, but it’s important to know there are health care experts with special training to help people with urostomies. They can teach you how to take care of your urostomy and help you cope with the changes it brings. You can also ask the American Cancer Society about programs offering information and support near you. For more information, see our document *Urostomy: A Guide*.

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’s important to be able to give your new doctor the exact details of your diagnosis and treatment. Gathering these details soon after treatment may be easier than trying to get them at some point in the future. 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 can usually be stored digitally (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 other treatments, a list of your drugs, drug doses, and when you took them

Lifestyle changes after bladder cancer

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 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 positive 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 can be hard for most people, but it can get even tougher during and after cancer treatment. Treatment may change your sense of taste. Nausea can be a problem. You may not feel like eating and lose weight when you don’t want to. Or you may have gained weight that you can’t seem to lose. All of these things can be very hard to deal with.

If treatment caused weight changes or eating or taste problems, do the best you can and keep in mind that these problems usually get better over time. You may find it helps to eat small portions every 2 to 3 hours until you feel better. You may also want to ask your cancer team about seeing a dietitian, an expert in nutrition who can give you ideas on how to deal with these treatment side effects.

One of the best things you can do after cancer treatment is to start healthy eating habits. 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. You can get more information in our document Nutrition and Physical Activity During and After Cancer Treatment: Answers to Common Questions.

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 often 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’s OK to rest when you need to. To learn more about fatigue, please see our documents *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. A person who has never exercised will not be able to do as much as someone who plays tennis twice a week. If you haven’t been active in a few years, you will have to start slowly – maybe just by taking short walks. 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 heart fitness.
- It can help you get to and stay at a healthy weight.
- It makes your muscles stronger.
- It reduces fatigue.
- It can help lower anxiety and depression.
- It can make you feel happier.
- It helps you feel better about yourself.

In the long run, 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 my risk of the cancer growing or coming back?**

Most people want to know if there are lifestyle changes they can make to reduce the risk of their cancer growing or coming back. Unfortunately, for most cancers there isn’t much solid evidence to guide people. This doesn’t mean that nothing will help – it’s just that for the most part this is an area 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.

Not enough is known about bladder cancer to say for sure if there are things you can do that will be helpful. But because bladder cancer often comes back or new bladder cancers develop, this is an active area of study. Clinical trials are now looking to see if certain vitamins, minerals, supplements, or medicines might lower the risk of bladder cancer returning (see “What’s new in bladder cancer research and treatment?”). Healthy behaviors such as not smoking, eating well, and staying at a healthy weight may help, but
no one knows for sure. But we do know that these types of changes can have healthy
effects that can extend beyond your risk of cancer.

How might having bladder cancer affect your
emotional health?

During and after treatment, you may be surprised by the flood of emotions you go
through. This happens to a lot of people.

You may find yourself thinking about death and dying. Or maybe you’re more aware of
the effect the cancer has on your family, friends, and career. You may take a new look at
your relationships with those around you. Money may be a concern if medical bills pile
up. You may see your health care team less often after treatment and have more time on
your hands. These changes can make some people anxious.

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 groups, 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 to 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 also read our document Distress in People with Cancer
or see the Emotional Side Effects section of our website for more information.

What if bladder cancer treatment is no longer
working?

When a person has had many different treatments and the cancer has not been cured, over
time even newer treatments might no longer be helpful. At this time you may have to
weigh the possible benefits of trying 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 might offer you
new treatment, but you will need to talk about whether the treatment is likely to improve
your health or change your outlook.

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 care. 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 hospice care is given in your home. Your cancer may be causing symptoms or problems that need to be treated. Hospice care focuses on your comfort. But 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 focus 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.

You can learn more about the changes that occur when treatment stops working, and about planning ahead for yourself and your family, in our documents *Advance Directives* and *Nearing the End of Life*. You can read them online or call us at 1-800-227-2345 to have free copies mailed to you.

**What’s new in bladder cancer research?**

Research into bladder cancer is being done right now in many hospitals and medical centers around the world.

**Genetic changes in bladder cancer**

Scientists have learned a lot about how bladder cancer cells differ from normal cells. Some changes in the DNA of bladder cancers have been found. Now they are working to find out if tests that find the DNA changes are useful in predicting the course of the disease. This information may be useful in choosing treatments. Other studies are aimed at finding bladder cancers that come back after treatment.

**Urine tests to look for bladder cancer**

Several newer urine tests look for substances in the urine that might show that a person has bladder cancer. These tests are also used to look for cancer that has come back in people who have already been treated. Researchers are now looking to see if these tests might be helpful even earlier, to screen for bladder cancer in people without symptoms.

**Reducing the risk of bladder cancer coming back**

People who have had one bladder cancer are at risk for having a new cancer in the urinary tract (the bladder, lining of the kidneys, ureters, and urethra). Studies are being
done to see if certain foods, vitamins (such as vitamin E), minerals (such as selenium), supplements (such as green tea extract and broccoli sprout extract), or drugs could reduce the risk of cancer coming back or getting a second cancer. Researchers are also looking for newer types of vaccines to help lower the risk of a second cancer.

**Bladder cancer treatments**

**Surgery**

Some surgeons are using a newer approach to cystectomy in which they sit at a control panel in the operating room and move robotic arms to do the surgery. This approach, known as **robotic-assisted surgery**, lets the surgeon work through several small cuts (incisions) instead of one large one. This may help patients recover more quickly from surgery. This approach is being studied to see if it is as good as standard surgery.

**Intravesical therapy**

Researchers are looking at a number of new medicines to see if putting them into the bladder after surgery can help lower the risk of the cancer coming back. The hope is to find some that are better and/or safer than the drugs now used.

**Photodynamic therapy (PDT)**

PDT is a newer treatment method that is now being studied to see if it is useful in treating early stages of bladder cancer. A chemical is put into the blood. It collects in cancer cells over a few days. Then a special type of laser light is focused on the bladder lining through a cystoscope. This light changes the chemical so that it can kill cancer cells. One drawback is that this method only works for cancers near the surface of the bladder. The advantage is that PDT does very little harm to normal cells.

The main side effect of PDT is that it makes people very sensitive to the sun for a few weeks. Even small amounts of sunlight can cause severe burns in a short time, so it is very important to be careful while getting this treatment.

Read more about this kind of treatment in our document *Photodynamic Therapy*.

**Targeted drugs**

Researchers are learning more about the parts of bladder cancer cells that control their growth and spread in order to develop new drugs called *targeted therapies*. These new drugs work differently from standard chemo drugs. They may work in some cases when chemo drugs do not, and they tend to have different (and often less severe) side effects. These drugs have been found to be useful in other cancers, such as lung cancer and
colorectal cancer. Studies are being done to test some of these drugs against bladder cancer.

Some of these drugs target blood vessels that allow tumors to grow. These are known as anti-angiogenesis drugs. They are now being studied for use against bladder cancer, usually along with chemotherapy.

**Gene therapy**

Gene therapy is another new method being tested for bladder cancer. One of these methods uses special viruses that have been changed in the lab. The changed virus is put into the bladder and infects the bladder cancer cells. When this happens, the virus puts a gene into the cancer cell that may help the immune system to attack it.

**More information about bladder cancer**

**From your 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 website, www.cancer.org.

Bladder Cancer: Detailed Guide (also in Spanish)

**Dealing with diagnosis and treatment**

[AFTER Diagnosis: A Guide for Patients and Families](#) (also in Spanish)

[Talking With Your Doctor](#) (also in Spanish)

[Health Professionals Associated With Cancer Care](#)

[Nutrition for the Person With Cancer During Treatment: A Guide for Patients and Families](#) (also in Spanish)

[Coping With Cancer in Everyday Life](#) (also in Spanish)

[Distress in People With Cancer](#)

[Anxiety, Fear, and Depression](#)

**Family and caregiver concerns**

[Talking With Friends and Relatives About Your Cancer](#) (also in Spanish)
Helping Children When a Family Member Has Cancer: Dealing With Diagnosis (also in Spanish)

What It Takes to Be a Caregiver

Insurance and financial issues

In Treatment: Financial Guidance for Cancer Survivors and Their Families (also in Spanish)

Health Insurance and Financial Assistance for the Cancer Patient (also in Spanish)

More on cancer treatments

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

A Guide to Chemotherapy (also in Spanish)

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

Stem Cell Transplant (Peripheral Blood, Bone Marrow, and Cord Blood Transplants)

Clinical Trials: What You Need to Know

Cancer and treatment side effects

Caring for the Patient With Cancer at Home: A Guide for Patients and Families (also in Spanish)

Nausea and Vomiting

Guide to Controlling Cancer Pain (also in Spanish)

Anemia in People With Cancer

Fatigue in People With Cancer

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 websites*

Along with the American Cancer Society, other sources of information and support include:
Urology Care Foundation  
Toll-free number: 1-800-828-7866  
Website:  [www.urologyhealth.org](http://www.urologyhealth.org)  
Information about bladder cancer and other cancers of the urological system.  
Some available in Spanish.

Bladder Cancer Advocacy Network (BCAN)  
Website: [www.bcan.org](http://www.bcan.org)  
Toll-free number: 1-888 901 2226  
Offers information on bladder cancer, dealing with diagnosis, resources for patients and families, online support group and a quarterly e-newsletter.

National Cancer Institute  
Toll-free number: 1-800-4-CANCER (1-800-422-6237)  
Website: [www.cancer.gov](http://www.cancer.gov)  
Offers free, accurate, up-to-date information about many types of cancer to patients, their families, and the general public; has information about coping and family; and can also help people find clinical trials in their area.

United Ostomy Associations of America, Inc. (UOAA)  
Toll-free number: 1-800-826-0826  
Website: [www.ostomy.org](http://www.ostomy.org)  
A network of support groups committed to quality of life for people with ostomies; online support for teens and others, discussion boards, conferences.

International Ostomy Association  
Website: [www.ostomyinternational.org](http://www.ostomyinternational.org)  
Dedicated to improving the quality of life of people with ostomies, offers help in forming new associations, lists regional associations on their website.

*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](http://www.cancer.org).

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