



What

You

Need

To

Know

About™

Cancer of the Cervix

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
National Institutes of Health
National Cancer Institute

This booklet is about cervical cancer. The Cancer Information Service can help you learn more about this disease. The staff can talk with you in English or Spanish.

The number is 1-800-4-CANCER (1-800-422-6237). The number for callers with TTY equipment is 1-800-332-8615. Your call is free.

Este folleto es acerca del cáncer de cérvix. Llame al Servicio de Información sobre el Cáncer para saber más sobre esta enfermedad. Este servicio tiene personal que habla español.

El número a llamar es el 1-800-4-CANCER (1-800-422-6237). Personas con equipo TTY pueden llamar al 1-800-332-8615. Su llamada es gratis.

Contents

The Cervix	2
Understanding Cancer	3
Risk Factors	4
Screening	7
Symptoms	10
Diagnosis	11
Staging	13
Treatment	16
Side Effects of Treatment	24
Complementary and Alternative Medicine	27
Nutrition	28
Follow-up Care	29
Sources of Support	29
The Promise of Cancer Research	30
Dictionary	32
National Cancer Institute Information Resources	45
National Cancer Institute Publications	46

What You Need To Know About™ Cancer of the Cervix

This National Cancer Institute (NCI) booklet has important information about *cancer** of the cervix. Cancer of the cervix is also called cervical cancer. You will read about causes, screening, symptoms, diagnosis, and treatment. You will also find ideas about how to cope with the disease.

Scientists are studying cervical cancer to find out more about how it develops. And they are looking at better ways to detect and treat it.

The NCI provides information about cancer, including the publications mentioned in this booklet. You can order these materials by telephone or on the Internet. You can also read them on the Internet and print your own copy.

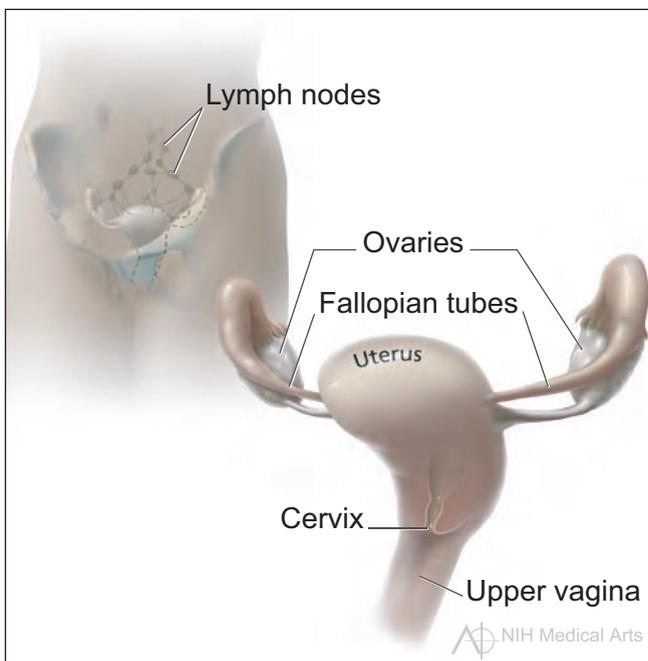
- **Telephone (1-800-4-CANCER):** Information Specialists at NCI's Cancer Information Service can answer your questions about cancer. They also can send NCI booklets, fact sheets, and other materials.
- **Internet (<http://www.cancer.gov>):** You can use NCI's Web site to find a wide range of up-to-date information. For example, you can find many NCI booklets and fact sheets at <http://www.cancer.gov/publications>. People in the United States and its territories may use this Web site to order printed copies. This Web site also explains how people outside the United States can mail or fax their requests for NCI booklets.

*Words that may be new to readers appear in *italics*. The "Dictionary" section explains these terms. Some words in the "Dictionary" have a "sounds-like" spelling to show how to pronounce them.

You can ask questions online and get help right away from Information Specialists through **LiveHelp**. (Click on “Need Help?” at <http://www.cancer.gov>. Then click on “Connect to LiveHelp.”)

The Cervix

The *cervix* is part of a woman’s *reproductive system*. It is the lower, narrow part of the *uterus* (womb). The uterus is a hollow, pear-shaped *organ* in the lower *abdomen*. The cervix connects the uterus to the *vagina*. The vagina leads to the outside of the body.



This picture shows the cervix and nearby organs.

The *cervical* canal is a passageway. Blood flows from the uterus through the canal into the vagina during a woman’s *menstrual period*. The cervix also produces *mucus*. The mucus helps *sperm* move from the vagina into the uterus. During pregnancy, the cervix is tightly closed to help keep the baby inside the uterus. During childbirth, the cervix *dilates* (opens) to allow the baby to pass through the vagina.

Understanding Cancer

Cancer begins in *cells*, the building blocks that make up *tissues*. Tissues make up the organs of the body.

Normally, cells grow and divide to form new cells as the body needs them. When cells grow old, they die, and new cells take their place.

Sometimes, this orderly process goes wrong. New cells form when the body does not need them, and old cells do not die when they should. These extra cells can form a mass of tissue called a growth or *tumor*.

Tumors can be *benign* or *malignant*:

- **Benign tumors** are not cancer:
 - Benign tumors are rarely life-threatening.
 - Generally, benign tumors can be removed, and they usually do not grow back.
 - Cells from benign tumors do not invade the tissues around them.
 - Cells from benign tumors do not spread to other parts of the body.
 - *Polyps*, *cysts*, and *genital warts* are types of benign growths on the cervix.

- **Malignant tumors** are cancer:
 - Malignant tumors are generally more serious than benign tumors. They may be life-threatening.
 - Malignant tumors often can be removed. But sometimes they grow back.
 - Cells from malignant tumors can invade and damage nearby tissues and organs.
 - Cells from malignant tumors can spread (*metastasize*) to other parts of the body. Cancer cells spread by breaking away from the original (*primary*) tumor and entering the bloodstream or *lymphatic system*. The cells invade other organs and form new tumors that damage these organs. The spread of cancer is called *metastasis*.

When cancer spreads from its original place to another part of the body, the new tumor has the same kind of abnormal cells and the same name as the primary tumor. For example, if cervical cancer spreads to the lungs, the cancer cells in the lungs are actually cervical cancer cells. The disease is metastatic cervical cancer, not lung cancer. For that reason, it is treated as cervical cancer, not lung cancer. Doctors call the new tumor “distant” or metastatic disease.

Risk Factors

Doctors cannot always explain why one woman develops cervical cancer and another does not. However, we do know that a woman with certain *risk factors* may be more likely than others to develop cervical cancer. A risk factor is something that may increase the chance of developing a disease.

Studies have found a number of factors that may increase the risk of cervical cancer. These factors may act together to increase the risk even more:

- **Human papillomaviruses (HPVs):** HPV *infection* is the main risk factor for cervical cancer. HPV is a group of *viruses* that can infect the cervix. HPV infections are very common. These viruses can be passed from person to person through sexual contact. Most adults have been infected with HPV at some time in their life. Some types of HPV can cause changes to cells in the cervix. These changes can lead to genital warts, cancer, and other problems. Doctors may check for HPV even if there are no warts or other *symptoms*.

If a woman has an HPV infection, her doctor can discuss ways to avoid infecting other people. The *Pap test* can detect cell changes in the cervix caused by HPV. (See the “Screening” section on page 7 to learn more about the Pap test.) Treatment of these cell changes can prevent cervical cancer. There are several treatment methods, including freezing or burning the infected tissue. Sometimes medicine also helps.

The NCI offers a fact sheet called “Human Papillomaviruses and Cancer: Questions and Answers.”

- **Lack of regular Pap tests:** Cervical cancer is more common among women who do not have regular Pap tests. The Pap test helps doctors find *precancerous* cells. Treating precancerous cervical changes often prevents cancer.
- **Weakened immune system** (the body’s natural defense system): Women with *HIV* (the virus that causes *AIDS*) infection or who take drugs that suppress the immune system have a higher-than-average risk of developing cervical cancer. For these women, doctors suggest regular *screening* for cervical cancer.

- **Age:** Cancer of the cervix occurs most often in women over the age of 40.
- **Sexual history:** Women who have had many sexual partners have a higher-than-average risk of developing cervical cancer. Also, a woman who has had sexual intercourse with a man who has had many sexual partners may be at higher risk of developing cervical cancer. In both cases, the risk of developing cervical cancer is higher because these women have a higher-than-average risk of HPV infection.
- **Smoking cigarettes:** Women with an HPV infection who smoke cigarettes have a higher risk of cervical cancer than women with HPV infection who do not smoke.
- **Using birth control pills for a long time:** Using birth control pills for a long time (5 or more years) may increase the risk of cervical cancer among women with HPV infection.
- **Having many children:** Studies suggest that giving birth to many children may increase the risk of cervical cancer among women with HPV infection.

Diethylstilbestrol (DES) may increase the risk of a rare form of cervical cancer and certain other cancers of the reproductive system in daughters exposed to this drug before birth. DES was given to some pregnant women in the United States between about 1940 and 1971. (It is no longer given to pregnant women.)

Women who think they may be at risk for cancer of the cervix should discuss this concern with their doctor. They may want to ask about a schedule for checkups. For more information about risk factors, see the NCI booklet *Understanding Cervical Changes*.

Screening

Screening to check for cervical changes before there are symptoms is very important. Screening can help the doctor find abnormal cells before cancer develops. Finding and treating abnormal cells can prevent most cervical cancer. Also, screening can help find cancer early, when treatment is more likely to be effective.

For the past several decades, the number of women diagnosed each year with cervical cancer has been falling. Doctors believe this is mainly because of the success of screening.

Doctors recommend that women help reduce their risk of cervical cancer by having regular Pap tests. A Pap test (sometimes called Pap smear or cervical smear) is a simple test used to look at cervical cells. For most women, the test is not painful. A Pap test is done in a doctor's office or clinic during a *pelvic exam*. The doctor or nurse scrapes a sample of cells from the cervix, and then smears the cells on a glass slide. In a new type of Pap test (*liquid-based Pap test*), the cells are rinsed into a small container of liquid. A special machine puts the cells onto slides. For both types of Pap test, a lab checks the cells on the slides under a microscope for abnormalities.

Pap tests can find cervical cancer or abnormal cells that can lead to cervical cancer. Doctors generally recommend that:

- Women should begin having Pap tests 3 years after they begin having sexual intercourse, or when they reach age 21 (whichever comes first).
- Most women should have a Pap test at least once every 3 years.
- Women aged 65 to 70 who have had at least three normal Pap tests and no abnormal Pap tests in the past 10 years may decide, after speaking with their doctor, to stop cervical cancer screening.
- Women who have had a *hysterectomy (surgery)* to remove the uterus and cervix, also called a *total hysterectomy*, do not need to have cervical cancer screening. However, if the surgery was treatment for precancerous cells or cancer, the woman should continue with screening.

Women should talk with their doctor about when they should begin having Pap tests, how often to have them, and when they can stop having them. This is especially important for women at higher-than-average risk of cervical cancer.

Some activities can hide abnormal cells and affect Pap test results. Doctors suggest the following tips:

- Do not *douche* for 48 hours before the test.
- Do not have sexual intercourse for 48 hours before the test.
- Do not use vaginal medicines (except as directed by a doctor) or birth control foams, creams, or jellies for 48 hours before the test.

Doctors also suggest that a woman schedule her Pap test for a time that is 10 to 20 days after the first day of her menstrual period.

Most often, abnormal cells found by a Pap test are not cancerous. However, some abnormal conditions of the cervix may become cancer over time:

- **LSIL** (low-grade *squamous intraepithelial lesion*): LSILs are mild cell changes on the surface of the cervix. Such changes often are caused by HPV infections. LSILs are common, especially in young women. LSILs are not cancer. Even without treatment, most LSILs stay the same or go away. However, some turn into high-grade lesions, which may lead to cancer.
- **HSIL** (high-grade squamous intraepithelial lesion): HSILs are not cancer, but without treatment they may lead to cancer. The precancerous cells are only on the surface of the cervix. They look very different from normal cells.

The NCI booklet *Understanding Cervical Changes* has more information about abnormal Pap test results. You also may want to read the brochure *Having a Pelvic Exam and Pap Test* and the NCI fact sheet “The Pap Test: Questions and Answers.”

You may want to ask the doctor the following questions about screening:

- How soon after the test will I learn the results?
- Do you recommend that I get tested for HPV?
- How much do the tests cost? Will my health insurance help pay for screening tests?

Symptoms

Precancerous changes and early cancers of the cervix generally do not cause pain or other symptoms. It is important not to wait to feel pain before seeing a doctor.

When the disease gets worse, women may notice one or more of these symptoms:

- Abnormal vaginal bleeding
 - Bleeding that occurs between regular menstrual periods
 - Bleeding after sexual intercourse, douching, or a pelvic exam
 - Menstrual periods that last longer and are heavier than before
 - Bleeding after *menopause*
- Increased vaginal discharge
- Pelvic pain
- Pain during sexual intercourse

Infections or other health problems may also cause these symptoms. Only a doctor can tell for sure. A woman with any of these symptoms should tell her doctor so that problems can be diagnosed and treated as early as possible.

Diagnosis

If a woman has a symptom or Pap test results that suggest precancerous cells or cancer of the cervix, her doctor will suggest other procedures to make a diagnosis.

These may include:

- **Colposcopy:** The doctor uses a *colposcope* to look at the cervix. The colposcope combines a bright light with a magnifying lens to make tissue easier to see. It is not inserted into the vagina. A colposcopy is usually done in the doctor's office or clinic.
- **Biopsy:** The doctor removes tissue to look for precancerous cells or cancer cells. Most women have their biopsy in the doctor's office with *local anesthesia*. A *pathologist* checks the tissue with a microscope.
 - *Punch biopsy:* The doctor uses a sharp, hollow device to pinch off small samples of cervical tissue.
 - *LEEP:* The doctor uses an electric wire loop to slice off a thin, round piece of tissue.
 - *Endocervical curettage:* The doctor uses a *urette* (a small, spoon-shaped instrument) to scrape a small sample of tissue from the cervical canal. Some doctors may use a thin, soft brush instead of a *urette*.
 - *Conization:* The doctor removes a cone-shaped sample of tissue. A conization, or cone biopsy, lets the pathologist see if abnormal cells are in the tissue beneath the surface of the cervix. The doctor may do this test in the hospital under *general anesthesia*. Conization also may be used to remove a precancerous area.



Removing tissue from the cervix may cause some bleeding or other discharge. The area usually heals quickly. Women may also feel some pain similar to menstrual cramps. Medicine can relieve this discomfort.

For more information about tests, cell changes, and treatment for these changes, you may want to read *Understanding Cervical Changes*.

You may want to ask the doctor these questions before having a procedure:

- Which test(s) do you recommend?
- How will the test be done?
- Will I have to go to the hospital?
- How long will it take? Will I be awake? Will it hurt?
- Are there any risks? What are the chances of infection or bleeding after the procedure?
- Can the test affect my ability to get pregnant and have children?
- How soon will I know the results? Who will explain them to me?
- If I do have cancer, who will talk to me about the next steps? When?

Staging

If the biopsy shows that you have cancer, your doctor will do a thorough pelvic exam and may remove additional tissue to learn the extent (*stage*) of your disease. The stage tells whether the tumor has invaded nearby tissues, whether the cancer has spread and, if so, to what parts of the body.

These are the stages of cervical cancer:

- **Stage 0:** The cancer is found only in the top layer of cells in the tissue that lines the cervix. Stage 0 is also called *carcinoma in situ*.
- **Stage I:** The cancer has invaded the cervix beneath the top layer of cells. It is found only in the cervix.
- **Stage II:** The cancer extends beyond the cervix into nearby tissues. It extends to the upper part of the vagina. The cancer does not invade the lower third of the vagina or the *pelvic wall* (the lining of the part of the body between the hips).
- **Stage III:** The cancer extends to the lower part of the vagina. It also may have spread to the pelvic wall and nearby *lymph nodes*.
- **Stage IV:** The cancer has spread to the *bladder*, *rectum*, or other parts of the body.
- **Recurrent cancer:** The cancer was treated, but has returned after a period of time during which it could not be detected. The cancer may show up again in the cervix or in other parts of the body.

To learn the extent of disease and suggest a course of treatment, the doctor may order some of the following tests:

- **Chest x-rays:** X-rays often can show whether cancer has spread to the lungs.

- **CT scan:** An x-ray machine linked to a computer takes a series of detailed pictures of your organs. You may receive *contrast material* by *injection* in your arm or hand, by mouth, or by *enema*. (Some people are allergic to contrast materials that contain iodine. Tell your doctor or nurse if you have allergies.) The contrast material makes abnormal areas easier to see. A tumor in the liver, lungs, or elsewhere in the body can show up on the CT scan.
- **MRI:** A powerful magnet linked to a computer is used to make detailed pictures of your pelvis and abdomen. The doctor can view these pictures on a monitor and can print them on film. An MRI can show whether cancer has spread. Sometimes contrast material makes abnormal areas show up more clearly on the picture.
- **Ultrasound:** An ultrasound device is held against the abdomen or inserted into the vagina. The device sends out sound waves that people cannot hear. The waves bounce off the cervix and nearby tissues, and a computer uses the echoes to create a picture. Tumors may produce echoes that are different from the echoes made by healthy tissues. The picture can show whether cancer has spread.

Treatment

Many women with cervical cancer want to take an active part in making decisions about their medical care. It is natural to want to learn all you can about your disease and your treatment choices. However, shock and stress after the diagnosis can make it hard to think of everything you want to ask the doctor. It often helps to make a list of questions before an appointment.

To help remember what the doctor says, you may take notes or ask whether you may use a tape recorder. You may also want to have a family member or friend with you when you talk to the doctor—to take part in the discussion, to take notes, or just to listen.

You do not need to ask all your questions at once. You will have other chances to ask your doctor to explain things that are not clear and to ask for more information.

Your doctor may refer you to a specialist, or you may ask for a referral. *Gynecologists, gynecologic oncologists, medical oncologists, and radiation oncologists* are specialists who treat cervical cancer.

Getting a Second Opinion

Before starting treatment, you might want a second opinion about the diagnosis and treatment plan. Many insurance companies cover a second opinion if you or your doctor requests it. It may take some time and effort to gather medical records and arrange to see another doctor. Usually it is not a problem to take several weeks to get a second opinion. In most cases, the delay in starting treatment will not make treatment less effective. To make sure, you should discuss this delay with your doctor. Some women with cervical cancer need treatment right away.



There are a number of ways to find a doctor for a second opinion:

- Your doctor may refer you to one or more specialists. At cancer centers, several specialists often work together as a team.
- NCI’s Cancer Information Service, at 1–800–4–CANCER, can tell you about nearby treatment centers. Information Specialists also can provide online assistance through *LiveHelp* at <http://www.cancer.gov>.
- A local or state medical society, a nearby hospital, or a medical school can usually provide the names of specialists in your area.

- The American Board of Medical Specialties (ABMS) has a list of doctors who have had training and passed exams in their specialty. You can find this list in the *Official ABMS Directory of Board Certified Medical Specialists*. This Directory is in most public libraries. Or you can look up doctors at <http://www.abms.org>. (Click on “Who’s Certified.”)
- The NCI provides a helpful fact sheet called “How To Find a Doctor or Treatment Facility If You Have Cancer.”

Preparing for Treatment

The choice of treatment depends mainly on the size of the tumor and whether the cancer has spread. If a woman is of childbearing age, the treatment choice may also depend on whether she wants to become pregnant someday.

Your doctor can describe your treatment choices and the expected results of each. You and your doctor can work together to develop a treatment plan that meets your medical needs and personal values.

Methods of Treatment

Women with cervical cancer may be treated with surgery, *radiation therapy*, *chemotherapy*, radiation therapy and chemotherapy, or a combination of all three methods.

At any stage of disease, women with cervical cancer may have treatment to control pain and other symptoms, to relieve the side effects of therapy, and to ease emotional and practical problems. This kind of treatment is called *supportive care*, *symptom management*, or *palliative care*. Information about such treatment is available on NCI’s Web site at

<http://www.cancer.gov/cancerinfo/coping> and from NCI's Cancer Information Service at 1-800-4-CANCER.

You may want to talk to your doctor about taking part in a clinical trial, a research study of new treatment methods. The section on “The Promise of Cancer Research” on page 30 has more information about *clinical trials*.

You may want to ask the doctor these questions before treatment begins:

- What is the stage of my disease? Has the cancer spread? If so, where?
- What are my treatment choices? Which do you recommend for me? Will I have more than one kind of treatment?
- What are the expected benefits of each kind of treatment?
- What are the risks and possible *side effects* of each treatment? What can we do to control my side effects?
- How will treatment affect my normal activities?
- What can I do to take care of myself during treatment?
- How long will treatment last?
- Will I have to stay in the hospital?
- What is the treatment likely to cost? Does my insurance cover this treatment?
- How often should I have checkups?
- Would a clinical trial (research study) be appropriate for me?

Surgery

Surgery treats the cancer in the cervix and the area close to the tumor.

Most women with early cervical cancer have surgery to remove the cervix and uterus (total hysterectomy). However, for very early (Stage 0) cervical cancer, a hysterectomy may not be needed. Other ways to remove the cancerous tissue include *conization*, *cryosurgery*, *laser surgery*, or *LEEP*.

Some women need a *radical hysterectomy*. A radical hysterectomy is surgery to remove the uterus, cervix, and part of the vagina.

With either total or radical hysterectomy, the *surgeon* may remove both *fallopian tubes* and *ovaries*. (This procedure is a *salpingo-oophorectomy*.)

The surgeon may also remove the lymph nodes near the tumor to see if they contain cancer. If cancer cells have reached the lymph nodes, it means the disease may have spread to other parts of the body.

You may want to ask the doctor these questions about surgery:

- What kind of operation will I have? Will my ovaries be removed?
- Do I need to have lymph nodes removed? Will other tissues be removed? Why?
- How will I feel after the operation?
- If I have pain, how will it be controlled?
- How long will I have to stay in the hospital?
- Will I have any lasting side effects? If I don't have a hysterectomy, will I be able to get pregnant and have children? Is there increased risk of miscarriage?
- When will I be able to resume normal activities?
- How will the surgery affect my sex life?

Radiation Therapy

Radiation therapy (also called radiotherapy) uses high-energy rays to kill cancer cells. It affects cells only in the treated area.

Women have radiation therapy alone, with chemotherapy, or with chemotherapy and surgery. The doctor may suggest radiation therapy instead of surgery for the small number of women who cannot have surgery for medical reasons. Most women with cancer that extends beyond the cervix have radiation therapy and chemotherapy. For cancer that has spread to distant organs, radiation therapy alone may be used.

Doctors use two types of radiation therapy to treat cervical cancer. Some women receive both types:

- ***External radiation:*** The radiation comes from a large machine outside the body. The woman usually has treatment as an outpatient in a hospital or clinic. She receives external radiation 5 days a week for several weeks.
- ***Internal radiation (intracavitary radiation):*** Thin tubes (also called implants) containing a *radioactive* substance are left in the vagina for a few hours or up to 3 days. The woman may stay in the hospital during that time. To protect others from the radiation, the woman may not be able to have visitors or may have visitors for only a short period of time while the tubes are in place. Once the tubes are removed, no radioactivity is left in her body. Internal radiation may be repeated two or more times over several weeks.

You may want to ask the doctor these questions before having radiation therapy:

- What is the goal of this treatment?
- How will the radiation be given?
- Will I need to stay in the hospital? If so, for how long?
- When will the treatments begin? When will they end?
- How will I feel during therapy? Are there side effects?
- How will we know if the radiation therapy is working?
- Will I be able to continue my normal activities during treatment?
- How will radiation therapy affect my sex life?
- Will I be able to get pregnant and have children after my treatment is over?

Chemotherapy

Chemotherapy uses anticancer drugs to kill cancer cells. It is called *systemic therapy* because the drugs enter the bloodstream and can affect cells all over the body. For treatment of cervical cancer, chemotherapy is generally combined with radiation therapy. For cancer that has spread to distant organs, chemotherapy alone may be used.

Anticancer drugs for cervical cancer are usually given through a vein. Women usually receive treatment in an outpatient part of the hospital, at the doctor's office, or at home. Rarely, a woman needs to stay in the hospital during treatment.

You may want to ask the doctor these questions before having chemotherapy:

- Why do I need this treatment?
- Which drug or drugs will I have?
- How do the drugs work?
- What are the expected benefits of the treatment?
- What are the risks and possible side effects of treatment? What can we do about them?
- When will treatment start? When will it end?
- How will treatment affect my normal activities?

Side Effects of Treatment

Because cancer treatment often damages healthy cells and tissues, unwanted side effects are common. Side effects depend mainly on the type and extent of the treatment. Side effects may not be the same for each woman, and they may change from one treatment session to the next. Before treatment starts, your health care team will explain possible side effects and suggest ways to help you manage them.

The NCI provides helpful booklets about cancer treatments and coping with side effects. These include *Radiation Therapy and You*, *Chemotherapy and You*, and *Eating Hints for Cancer Patients*.

Surgery

It takes time to heal after surgery, and the recovery time is different for each woman. You may be uncomfortable for the first few days. However, medicine can usually control the pain. Before surgery, you should discuss the plan for pain relief with your doctor or nurse. After surgery, your doctor can adjust the plan if you need more pain relief.

If you have surgery to remove a small tumor on the surface of the cervix, you may have cramping or other pain, bleeding, or a watery discharge.

If you have a hysterectomy, the length of the hospital stay may vary from several days to a week. It is common to feel tired or weak for a while. You may have problems with nausea and vomiting, and you may have bladder and bowel problems. The doctor may restrict your diet to liquids at first, with a gradual return to solid food. Most women return to their normal activities within 4 to 8 weeks after surgery.

After a hysterectomy, women no longer have menstrual periods. They cannot become pregnant.

When the ovaries are removed, menopause occurs at once. Hot flashes and other symptoms of menopause caused by surgery may be more severe than those caused by natural menopause. You may wish to discuss this with your doctor before surgery. Some drugs have been shown to help with these symptoms, and they may be more effective if started before surgery.

After surgery, some women may be concerned about sexual intimacy. Many women find that it helps to share these concerns with their partner. A couple may want to ask a counselor to help them express their concerns.

Radiation Therapy

Side effects depend mainly on the dose of radiation and the part of your body that is treated. Radiation to the abdomen and pelvis may cause nausea, vomiting, diarrhea, or urinary problems. You may lose hair in your genital area. Also, your skin in the treated area may become red, dry, and tender.

You may have dryness, itching, or burning in your vagina. The radiation may also make your vagina narrower. The doctor or nurse may suggest ways to relieve discomfort. There also are ways to expand the vagina, which will help make follow-up exams easier. Your doctor may advise you not to have intercourse during treatment. But most women can resume sexual activity within a few weeks after treatment ends.

You are likely to become very tired during radiation therapy, especially in the later weeks of treatment. Resting is important, but doctors usually advise patients to try to stay as active as they can.

Although the side effects of radiation therapy can be distressing, your doctor can usually find ways to relieve them.

Chemotherapy

The side effects of chemotherapy depend mainly on the specific drugs and the dose. The drugs affect cancer cells and other cells that divide rapidly:

- **Blood cells:** These cells fight infection, help your blood to clot, and carry oxygen to all parts of the body. When drugs affect your blood cells, you are more likely to get infections, bruise or bleed easily, and feel very weak and tired.
- **Cells in hair roots:** Chemotherapy can cause you to lose your hair. The hair will grow back, but it may be somewhat different in color and texture.

- **Cells that line the *digestive tract*:** Chemotherapy can cause a poor appetite, nausea and vomiting, diarrhea, or mouth and lip sores.

The drugs used for cervical cancer also may cause skin rash, hearing problems, loss of balance, joint pain, or swollen legs and feet.

Your doctor can suggest ways to control many of these side effects.

Complementary and Alternative Medicine

Some people with cancer use *complementary and alternative medicine* (CAM) to ease stress or to reduce side effects and symptoms:

- An approach is generally called complementary medicine when it is used along with standard treatment.
- An approach is called alternative medicine when it is used instead of standard treatment.

Acupuncture, massage therapy, herbal products, vitamins or special diets, visualization, meditation, and spiritual healing are types of CAM. Many people say that such approaches help them feel better.

However, some types of CAM, including certain vitamins, may interfere with standard treatment. Combining CAM with standard treatment may even be harmful. Before trying any type of CAM, you should discuss its possible benefits and harmful effects with your doctor.

Some types of CAM are expensive. Health insurance may not cover the cost.

The NCI offers a fact sheet called “Complementary and Alternative Medicine in Cancer Treatment: Questions and Answers.”

Nutrition

It is important to eat well during cancer treatment. Eating well means getting enough calories to maintain a good weight and enough protein to keep up your strength. Good nutrition often helps people with cancer feel better and have more energy.

But eating well can be difficult. You may not feel like eating if you are uncomfortable or tired. Also, the side effects of treatment (such as poor appetite, nausea, vomiting, or mouth sores) can be a problem. Some people find that foods do not taste as good during cancer therapy.

The doctor, a *dietitian*, or another health care provider can suggest ways to maintain a healthy diet. The NCI booklet *Eating Hints for Cancer Patients* has many useful ideas and recipes.



Follow-up Care

Follow-up care after treatment for cervical cancer is important. Even when the cancer seems to have been completely removed or destroyed, the disease sometimes returns because undetected cancer cells remained somewhere in the body after treatment. Your doctor will monitor your recovery and check for *recurrence* of the cancer. Checkups help ensure that any changes in your health are noted and treated as needed. Checkups may include a physical exam as well as Pap tests and chest x-rays. Between scheduled visits, you should contact the doctor right away if you have any health problems.

To help answer questions about follow-up care and other concerns, NCI has a booklet for people who have completed their treatment. *Facing Forward Series: Life After Cancer Treatment* provides tips for making the best use of medical visits. It describes how to talk with the doctor about creating a plan of action for your recovery and future health.

Sources of Support

Living with a serious disease such as cervical cancer is not easy. You may worry about caring for your family, keeping your job, or continuing daily activities. Concerns about treatments and managing side effects, hospital stays, and medical bills are also common. Doctors, nurses, and other members of the health care team can answer questions about treatment, working, or other activities. Meeting with a social worker, counselor, or member of the clergy can be helpful if you want to talk about your feelings or concerns. Often, a social worker can suggest resources

for financial aid, transportation, home care, or emotional support.

Support groups also can help. In these groups, patients or their family members meet with other patients or their families to share what they have learned about coping with the disease and the effects of treatment. Groups may offer support in person, over the telephone, or on the Internet. You may want to talk with a member of your health care team about finding a support group.

Cancer Information Specialists at 1-800-4-CANCER and at **LiveHelp** (<http://www.cancer.gov>) can help you locate programs, services, and publications. Also, you may want to see the NCI fact sheets called “Cancer Support Groups: Questions and Answers” and “National Organizations That Offer Services to People With Cancer and Their Families.”

The Promise of Cancer Research

Doctors all over the country are conducting many types of clinical trials (research studies in which people volunteer to take part). They are studying new ways to treat cervical cancer. Some are also studying therapies that may improve the *quality of life* for women during or after cancer treatment.

Clinical trials are designed to answer important questions and to find out whether new approaches are safe and effective. Research already has led to many advances, and researchers continue to search for more effective methods for dealing with cancer.

Researchers are testing new approaches to treatment, including anticancer drugs and drug combinations. They also are studying different methods, doses, and

schedules of radiation therapy. Some trials are combining chemotherapy, surgery, and radiation therapy. Other trials are researching *biological therapy*.

Researchers also are studying surgery to remove *sentinel lymph nodes*. A sentinel lymph node is the first lymph node to which the cancer is likely to spread. Today, surgeons often have to remove many lymph nodes and check each of them for cancer. But if the research shows that it is possible to identify the sentinel lymph node (the lymph node most likely to have cancer), doctors may be able to avoid more surgery to remove other lymph nodes.

People who join clinical trials may be among the first to benefit if a new approach is effective. And even if participants do not benefit directly, they still make an important contribution to medicine by helping doctors learn more about the disease and how to control it. Although clinical trials may pose some risks, researchers do all they can to protect their patients.

If you are interested in being part of a clinical trial, talk with your doctor. You may want to read the NCI booklet *Taking Part in Clinical Trials: What Cancer Patients Need To Know*. The NCI also offers an easy-to-read brochure called *If You Have Cancer...What You Should Know About Clinical Trials*. These NCI publications describe how clinical trials are carried out and explain their possible benefits and risks.

NCI's Web site includes a section on clinical trials at **http://www.cancer.gov/clinical_trials**. It has general information about clinical trials as well as detailed information about specific ongoing studies of cervical cancer. Information Specialists at 1-800-4-CANCER or at *LiveHelp* at **<http://www.cancer.gov>** can answer questions and provide information about clinical trials.

 Dictionary

Abdomen (AB-do-men): The area of the body that contains the pancreas, stomach, intestines, liver, gallbladder, and other organs.

Acupuncture (AK-yoo-PUNK-chur): The technique of inserting thin needles through the skin at specific points on the body to control pain and other symptoms. It is a type of complementary and alternative medicine.

AIDS: Acquired immunodeficiency syndrome (ah-KWY-erd im-YOON-o-de-FISH-en-see SIN-drome). A disease caused by human immunodeficiency virus (HIV). AIDS is associated with increased risk for certain cancers and for infections that occur rarely except in individuals with a weak immune system.

Benign (beh-NINE): Not cancerous. Benign tumors do not spread to tissues around them or to other parts of the body.

Biological therapy (by-o-LAHJ-i-kul): Treatment to stimulate or restore the ability of the immune system to fight infections and other diseases. Also used to lessen certain side effects that may be caused by cancer treatment. Also known as immunotherapy, biotherapy, or biological response modifier (BRM) therapy.

Biopsy (BY-op-see): The removal of cells or tissues for examination by a pathologist. The pathologist may study the tissue under a microscope or perform other tests. When only a sample of tissue is removed, the procedure is called an incisional biopsy or core biopsy. When an entire lump or suspicious area is removed, the procedure is called an excisional biopsy.

Bladder: The organ that stores urine.

Cancer: A term for diseases in which abnormal cells divide without control. Cancer cells can invade nearby tissues and can spread through the bloodstream and

lymphatic system to other parts of the body. There are several main types of cancer. Carcinoma is cancer that begins in the skin or in tissues that line or cover internal organs. Sarcoma is cancer that begins in bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue. Leukemia is cancer that starts in blood-forming tissue such as the bone marrow, and causes large numbers of abnormal blood cells to be produced and enter the bloodstream. Lymphoma and multiple myeloma are cancers that begin in the cells of the immune system.

Carcinoma in situ (KAR-si-NO-ma in SYE-too): Cancer that involves only the cells in the tissue in which it began and that has not spread to nearby tissues.

Cell: The individual unit that makes up all of the tissues of the body. All living things are made up of one or more cells.

Cervical (SER-vih-kul): Relating to the neck, or to the neck of any organ or structure. Cervical lymph nodes are located in the neck. Cervical cancer refers to cancer of the uterine cervix, which is the lower, narrow end (the “neck”) of the uterus.

Cervix (SER-viks): The lower, narrow end of the uterus that forms a canal between the uterus and vagina.

Chemotherapy (kee-mo-THER-a-pee): Treatment with anticancer drugs.

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

Colposcope (KUL-pah-scope): A lighted magnifying instrument used to examine the vagina and cervix.

Colposcopy (kul-PAHS-ko-pee): Examination of the vagina and cervix using a lighted magnifying instrument called a colposcope.

Complementary and alternative medicine: CAM. Forms of treatment that are used in addition to (complementary) or instead of (alternative) standard treatments. These practices generally are not considered standard medical approaches. CAM may include dietary supplements, megadose vitamins, herbal preparations, special teas, acupuncture, massage therapy, magnet therapy, spiritual healing, and meditation.

Conization (ko-nih-ZAY-shun): Surgery to remove a cone-shaped piece of tissue from the cervix and cervical canal. Conization may be used to diagnose or treat a cervical condition. Also called cone biopsy.

Contrast material: Dye or other substance that helps to show abnormal areas. It is given by injection into the arm or hand, by enema, or by mouth. Contrast material sometimes is used with x-rays, CT scans, MRI, or other imaging tests.

Cryosurgery (KRY-o-SER-juh-ree): Treatment performed with an instrument that freezes and destroys abnormal tissues.

CT scan: Computed tomography scan. A series of detailed pictures of areas inside the body taken from different angles; the pictures are created by a computer linked to an x-ray machine. Also called computerized tomography and computerized axial tomography (CAT) scan.

Curette (kyoo-RET): A spoon-shaped instrument with a sharp edge.

Cyst (sist): A sac or capsule in the body. It may be filled with fluid or other material.

Diethylstilbestrol (dye-ETH-ul-stil-BES-trol): DES. A synthetic form of the hormone estrogen that was prescribed to pregnant women between about 1940 and 1971 because it was thought to prevent miscarriages. DES may increase the risk of uterine, ovarian, or breast cancer in women who took it. DES also has been linked to an increased risk of clear cell carcinoma of the vagina or cervix in daughters exposed to DES before birth.

Dietitian: A health professional with special training in nutrition who can help with dietary choices. Also called a nutritionist.

Digestive tract (dye-JES-tiv): The organs through which food and liquids pass when they are swallowed, digested, and eliminated. These organs are the mouth, esophagus, stomach, small and large intestines, and rectum.

Dilate (DYE-late): To widen or enlarge an opening or hollow structure beyond its usual size, such as the pupil of the eye or a blood vessel.

Douche (DOOSH): A procedure in which water or a medicated solution is used to clean the vagina and cervix.

Endocervical curettage (en-do-SER-vih-kul kyoo-reh-TAHZH): Scraping the mucous membrane of the cervical canal using a spoon-shaped instrument called a curette.

Enema: The injection of a liquid through the anus into the large bowel.

External radiation (ray-dee-AY-shun): Radiation therapy that uses a machine to aim high-energy rays at the cancer. Also called external-beam radiation.

Fallopian tube (fa-LO-pee-in): Part of the female reproductive tract. There are two long slender fallopian tubes through which eggs pass from the ovaries to the uterus. The fallopian tubes are located in the pelvis, one on each side of the uterus.

General anesthesia (an-es-THEE-zha): Drugs that cause loss of feeling or awareness and put the person to sleep.

Genital wart: A raised growth on the surface of the genitals caused by human papillomavirus (HPV). Warts are very contagious and can be spread by skin-to-skin contact, usually during oral, anal, or genital sex with an infected partner.

Gynecologic oncologist (guy-neh-ko-LAH-jik on-KOL-o-jist): A doctor who specializes in treating cancers of the female reproductive organs.

Gynecologist (guy-neh-KAH-lo-jist): A doctor who specializes in treating diseases of the female reproductive organs.

HIV: Human immunodeficiency virus, the cause of acquired immunodeficiency syndrome (AIDS).

HSIL: High-grade squamous intraepithelial lesion. A precancerous condition in which the cells of the uterine cervix are moderately or severely abnormal.

Human papillomavirus (pap-ih-LO-ma-VYE-rus): HPV. A group of viruses that causes abnormal tissue growth (warts) and other changes to cells. Some HPV types are associated with certain types of cancer.

Hysterectomy (hiss-ter-EK-toe-mee): An operation to remove the uterus but not the cervix (partial hysterectomy) or the uterus and cervix (total hysterectomy).

Immune system (im-YOON): The complex group of organs and cells that defends the body against infections and other diseases.

Infection: Invasion and multiplication of germs in the body. Infections can occur in any part of the body, and can spread throughout the body. The germs may be bacteria, viruses, yeast, or fungi. They can cause a fever and other problems, depending on where the infection occurs. When the body's natural defense system is strong, it can often fight the germs and prevent infection. Cancer treatment can weaken the natural defense system.

Injection: Use of a syringe and needle to push fluids or drugs into the body; often called a "shot."

Internal radiation (ray-dee-AY-shun): A procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near a tumor. Also called brachytherapy, implant radiation, or interstitial radiation therapy.

Intracavitary radiation (ray-dee-AY-shun): A radioactive source (implant) placed in a body cavity such as the chest cavity or the vagina.

Laser surgery: A surgical procedure that uses the cutting power of a laser beam to make bloodless cuts in tissue or to remove a surface lesion such as a tumor.

LEEP: Loop electrosurgical excision procedure (eh-LEK-tro-SER-juh-kal ek-SI-zhun). A technique that uses electric current passed through a thin wire loop to remove abnormal tissue. Also called loop excision.

Liquid-based Pap test: A type of Pap test. A Pap test is the collection of cells from the cervix for examination under a microscope. It is used to detect changes that may be cancer or may lead to cancer. A Pap test can also show noncancerous conditions, such as infection or inflammation. In a liquid-based Pap test, the cells are rinsed into a small container of liquid. The cells are then placed onto slides by a special machine and checked under a microscope for abnormalities.

Local anesthesia (an-es-THEE-zha): Drugs that cause a temporary loss of feeling in one part of the body. The patient remains awake but has no feeling in the part of the body treated with the anesthetic.

LSIL: Low-grade squamous intraepithelial lesion. A condition in which the cells of the uterine cervix are slightly abnormal. LSIL is not cancer.

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

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

Malignant (ma-LIG-nant): Cancerous. Malignant tumors can invade and destroy nearby tissue and spread to other parts of the body.

Medical oncologist (MED-i-kul on-KOL-o-jist): A doctor who specializes in diagnosing and treating cancer using chemotherapy, hormonal therapy, and biological therapy. A medical oncologist often is the main health care provider for someone who has cancer. A medical oncologist also provides supportive care and may coordinate treatment provided by other specialists.

Menopause (MEN-o-pawz): The time of life when a woman's menstrual periods stop permanently. Also called "change of life."

Menstrual period (MEN-stroo-al PEER-ee-od):

Periodic discharge of blood and tissue from the uterus. From puberty until menopause, menstruation occurs about every 28 days, but does not occur during pregnancy.

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

Metastasize (meh-TAS-ta-size): To spread from one part of the body to another. When cancer cells metastasize and form secondary tumors, the cells in the metastatic tumor are like those in the original (primary) tumor.

MRI: Magnetic resonance imaging (mag-NET-ik REZ-o-nans IM-a-jing). A procedure in which radio waves and a powerful magnet linked to a computer are used to create detailed pictures of areas inside the body. These pictures can show the difference between normal and diseased tissue. MRI makes better images of organs and soft tissue than other scanning techniques, such as CT or x-ray. MRI is especially useful for imaging the brain, spine, the soft tissue of joints, and the inside of bones. Also called nuclear magnetic resonance imaging.

Mucus (MYOO-kus): A thick, slippery fluid produced by the membranes that line certain organs of the body, including the nose, mouth, throat, and vagina.

Organ: A part of the body that performs a specific function. For example, the heart is an organ.

Ovary (O-va-ree): One of a pair of female reproductive glands in which the ova, or eggs, are formed. The ovaries are located in the pelvis, one on each side of the uterus.

Palliative care (PAL-ee-yuh-tiv): Care given to improve the quality of life of patients who have a serious or life-threatening disease. The goal of palliative care is to prevent or treat as early as possible the symptoms of the disease, side effects caused by treatment of the disease, and psychological, social, and spiritual problems related to the disease or its treatment. Also called comfort care, supportive care, and symptom management.

Pap test: The collection of cells from the cervix for examination under a microscope. It is used to detect cancer and changes that may lead to cancer. Also called a Pap smear.

Pathologist (pa-THOL-o-jist): A doctor who identifies diseases by studying cells and tissues under a microscope.

Pelvic exam: A physical examination of the vagina, cervix, uterus, fallopian tubes, ovaries, and rectum.

Pelvic wall: The muscles and ligaments that line the part of the body between the hips.

Polyp (POL-ip): A growth that protrudes from a mucous membrane.

Precancerous (pre-KAN-ser-us): A term used to describe a condition that may (or is likely to) become cancer. Also called premalignant.

Primary tumor: The original tumor.

Punch biopsy (punch BY-op-see): Removal of a sample of tissue using a sharp, hollow device. The tissue is then examined under a microscope to see if disease is present.

Quality of life: The overall enjoyment of life. Many clinical trials assess the effects of cancer and its treatment on the quality of life. These studies measure aspects of an individual's sense of well-being and ability to carry out various activities.

Radiation oncologist (ray-dee-AY-shun on-KOL-o-jist): A doctor who specializes in using radiation to treat cancer.

Radiation therapy (ray-dee-AY-shun THER-ah-pee): The use of high-energy radiation from x-rays, gamma rays, neutrons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy, implant radiation, or brachytherapy). Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. Also called radiotherapy.

Radical hysterectomy (hiss-ter-EK-toe-mee): Surgery to remove the uterus, cervix, and part of the vagina. The ovaries, fallopian tubes, and nearby lymph nodes may also be removed.

Radioactive (RAY-dee-o-AK-tiv): Giving off radiation.

Rectum: The last several inches of the large intestine.

Recurrence: The return of cancer, at the same place as the original (primary) tumor or in another location, after the tumor had disappeared.

Recurrent cancer: Cancer that has returned after a period of time during which the cancer could not be detected. The cancer may come back to the same place as the original (primary) tumor or to another place in the body.

Reproductive system: In women, this system includes the ovaries, the fallopian tubes, the uterus (womb), the cervix, and the vagina (birth canal). The reproductive system in men includes the prostate, the testes, and the penis.

Risk factor: Something that may increase the chance of developing a disease. Some examples of risk factors for cancer include age, a family history of certain cancers, use of tobacco products, certain eating habits, obesity, exposure to radiation or other cancer-causing agents, and certain genetic changes.

Salpingo-oophorectomy (sal-PIN-go o-o-for-EK-toe-mee): Surgical removal of the fallopian tubes and ovaries.

Screening: Checking for disease when there are no symptoms.

Sentinel lymph node: The first lymph node to which cancer is likely to spread from the primary tumor. When cancer spreads, the cancer cells may appear first in the sentinel node before spreading to other lymph nodes.

Side effect: A problem that occurs when treatment affects healthy tissues or organs. Some common side effects of cancer treatment are fatigue, pain, nausea, vomiting, decreased blood cell counts, hair loss, and mouth sores.

Sperm: The male reproductive cell, formed in the testicle. A sperm unites with an egg to form an embryo.

Squamous intraepithelial lesion (SKWAY-mus in-tra-eh-pih-THEEL-ee-ul LEE-zhun): SIL. A general term for the abnormal growth of squamous cells on the surface of the cervix. The changes in the cells are described as low grade or high grade, depending on how much of the cervix is affected and how abnormal the cells appear.

Stage: The extent of a cancer within the body. If the cancer has spread, the stage describes how far it has spread from the original site to other parts of the body.

Supportive care: Care given to improve the quality of life of patients who have a serious or life-threatening disease. The goal of supportive care is to prevent or treat as early as possible the symptoms of the disease, side effects caused by treatment of the disease, and psychological, social, and spiritual problems related to the disease or its treatment. Also called palliative care, comfort care, and symptom management.

Surgeon: A doctor who removes or repairs a part of the body by operating on the patient.

Surgery (SER-juh-ree): A procedure to remove or repair a part of the body or to find out whether disease is present. An operation.

Symptom: An indication that a person has a condition or disease. Some examples of symptoms are headache, fever, fatigue, nausea, vomiting, and pain.

Symptom management: Care given to improve the quality of life of patients who have a serious or life-threatening disease. The goal of symptom management is to prevent or treat as early as possible the symptoms of the disease, side effects caused by treatment of the disease, and psychological, social, and spiritual problems related to the disease or its treatment. Also called palliative care, comfort care, and supportive care.

Systemic therapy (sis-TEM-ik THER-a-pee): Treatment using substances that travel through the bloodstream, reaching and affecting cells all over the body.

Tissue (TISH-oo): A group or layer of cells that work together to perform a specific function.

Total hysterectomy (hiss-ter-EK-toe-mee): Surgery to remove the entire uterus, including the cervix. Sometimes, not all of the cervix is removed. Also called complete hysterectomy.

Tumor (TOO-mer): A mass of excess tissue that results from abnormal cell division. Tumors perform no useful body function. They may be benign (not cancerous) or malignant (cancerous).

Ultrasound: A procedure in which high-energy sound waves (ultrasound) are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissues called a sonogram. Also called ultrasonography.

Uterus (YOO-ter-us): The small, hollow, pear-shaped organ in a woman's pelvis. This is the organ in which a fetus develops. Also called the womb.

Vagina (vuh-JYE-na): The muscular canal extending from the uterus to the exterior of the body. Also called the birth canal.

Virus (VYE-rus): A microorganism that can infect cells and cause disease.

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

National Cancer Institute Information Resources

You may want more information for yourself, your family, and your doctor. The following National Cancer Institute (NCI) services are available to help you.

Telephone

The Cancer Information Service (CIS) provides accurate, up-to-date information on cancer to patients and their families, health professionals, and the general public. Information Specialists translate the latest scientific information into understandable language and respond in English, Spanish, or on TTY equipment. Calls to the CIS are free.

Telephone: 1-800-4-CANCER (1-800-422-6237)

TTY: 1-800-332-8615

Internet

The NCI's Web site (<http://www.cancer.gov>) provides information from numerous NCI sources. It offers current information on cancer prevention, screening, diagnosis, treatment, genetics, supportive care, and ongoing clinical trials. It has information about NCI's research programs and funding opportunities, cancer statistics, and the Institute itself. Information Specialists provide live, online assistance through *LiveHelp*.

National Cancer Institute Publications

National Cancer Institute (NCI) publications can be ordered by writing to the address below:

Publications Ordering Service
 National Cancer Institute
 Suite 3035A
 6116 Executive Boulevard, MSC 8322
 Bethesda, MD 20892–8322

Many NCI publications can be viewed, downloaded, and ordered from <http://www.cancer.gov/publications> on the Internet. In addition, people in the United States and its territories may order these and other NCI publications by calling the Cancer Information Service at 1–800–4–CANCER.

Booklets and Fact Sheets About Cervical Changes, Their Causes, and Screening

- *What You Need To Know About Cancer of the Cervix* (also available in Spanish: *Lo que usted necesita saber sobre™ el cáncer de cervix*)
- *Understanding Cervical Changes*
- *Having a Pelvic Exam and Pap Test*
- *Pap Test for Older Women: A Healthy Habit for Life*
- *The Pap Test: It Can Save Your Life ... For You and Your Family* (also available in Spanish: *Hágase la prueba Pap: hágalo hoy...por su salud y su familia*)
- “The Pap Test: Questions and Answers” (also available in Spanish: “La prueba de Papanicolau: preguntas y respuestas”)
- “Human Papillomaviruses and Cancer” (also available in Spanish: “Los virus del papiloma humano y el cáncer”)

- “Oral Contraceptives and Cancer Risk” (also available in Spanish: “Las píldoras anticonceptivas y el riesgo de cáncer”)
- “DES: Questions and Answers”

Booklets and Fact Sheets About Cancer Treatment

- *Radiation Therapy and You: A Guide to Self-Help During Treatment* (also available in Spanish: *La radioterapia y usted: una guía de autoayuda durante el tratamiento del cancer*)
- *Chemotherapy and You: A Guide to Self-Help During Treatment* (also available in Spanish: *La quimioterapia y usted: una guía de autoayuda durante el tratamiento del cancer*)
- *Helping Yourself During Chemotherapy: 4 Steps for Patients*
- *Biological Therapy: Treatments That Use Your Immune System to Fight Cancer*
- *Eating Hints for Cancer Patients: Before, During & After Treatment* (also available in Spanish: *Consejos de alimentación para pacientes con cáncer: antes, durante y después del tratamiento*)
- *Understanding Cancer Pain* (also available in Spanish: *El dolor relacionado con el cáncer*)
- *Pain Control: A Guide for People with Cancer and Their Families* (also available in Spanish: *Control del dolor: guía para las personas con cáncer y sus familias*)
- *Get Relief From Cancer Pain*
- *Taking Part in Clinical Trials: What Cancer Patients Need To Know* (also available in Spanish: *La participación en los estudios clínicos: lo que los pacientes de cáncer deben saber*)

- *If You Have Cancer...What You Should Know About Clinical Trials* (also available in Spanish: *Si tiene cáncer...lo que debería saber sobre estudios clínicos*)
- “Cryosurgery in Cancer Treatment: Questions and Answers”
- “Complementary and Alternative Medicine in Cancer Treatment: Questions and Answers” (also available in Spanish: “La medicina complementaria y alternativa en el tratamiento del cáncer: preguntas y respuestas”)
- “Biological Therapies: Questions and Answers” (available in Spanish as: “Terapias biológicas: el uso del sistema inmune para tratar el cáncer”)

Booklets and Fact Sheets About Living With Cancer

- *Advanced Cancer: Living Each Day*
- *Facing Forward Series: Life After Cancer Treatment* (also available in Spanish: *Siga adelante: la vida después del tratamiento del cancer*)
- *Facing Forward Series: Ways You Can Make a Difference in Cancer*
- *Taking Time: Support for People With Cancer and the People Who Care About Them*
- *When Cancer Recurs: Meeting the Challenge*
- “How To Find a Doctor or Treatment Facility If You Have Cancer” (also available in Spanish: “Cómo encontrar a un doctor o un establecimiento de tratamiento si usted tiene cáncer”)
- “Followup Care: Questions and Answers”
- “Understanding Prognosis and Cancer Statistics” (also available in Spanish: “La interpretación de los pronósticos y las estadísticas del cáncer”)

- “Cancer Support Groups: Questions and Answers”
- “National Organizations That Offer Services to People With Cancer and Their Families” (also available in Spanish: “Organizaciones nacionales que brindan servicios a las personas con cáncer y sus familias”)
- “How To Find Resources in Your Own Community If You Have Cancer” (also available in Spanish: “Cómo encontrar recursos en su comunidad si usted tiene cáncer”)

The National Cancer Institute (NCI) is part of the National Institutes of Health. NCI conducts and supports basic and clinical research in the search for better ways to prevent, diagnose, and treat cancer. NCI also supports the training of scientists and is responsible for communicating its research findings to the medical community and the public.

The written text of NCI material is in the public domain. It is not subject to copyright restrictions. You do not need our permission to reproduce or translate NCI written text. However, we would appreciate a credit line and a copy of your translations.

Private sector designers, photographers, and illustrators retain copyrights to artwork they develop under contract to NCI. You must have permission to use or reproduce these materials. In many cases, artists will grant permission, but they may require a credit line and/or usage fees. To inquire about permission to reproduce NCI artwork, please write to: Office of Communications, Communication Services Branch, National Cancer Institute, 6116 Executive Boulevard, Room 3066, MSC 8323, Rockville, MD 20892–8323.



**NATIONAL[®]
CANCER
INSTITUTE**

NIH Publication No. 04-2047
Revised September 2004
Printed December 2004

