

RADIATION THERAPY FOR GYNECOLOGIC CANCERS

Facts to Help Patients Make an Informed Decision



ASTRO

TARGETING CANCER CARE

AMERICAN SOCIETY FOR RADIATION ONCOLOGY

FACTS ABOUT GYNECOLOGIC CANCERS

Gynecologic cancers include malignancies of the female genital tract involving the vulva, vagina, cervix, uterus, fallopian tubes or ovaries. According to the American Cancer Society, 88,750 women in 2012 will be diagnosed with some form of gynecologic cancer. Cancers of the uterus, cervix and ovary are most common. They account for 81,000 new cases each year. Widespread screening with the Pap test has allowed doctors to find pre-cancerous changes in the cervix and vagina. This has helped catch some invasive cancers early.

TREATING GYNECOLOGIC CANCERS

Treatment for gynecologic cancers depends on several factors, including the type of cancer, its extent (stage), its location and your overall health. It is important to talk with several cancer specialists before deciding on the best treatment for you, your cancer and your lifestyle. Sometimes, your cancer may be treated by using only one type of treatment. In other cases, your cancer may be best cured using a combination of surgery, radiation therapy and chemotherapy.

Radiation Therapy

Radiation therapy, sometimes called **radiotherapy**, is the careful use of radiation to treat cancer safely and effectively. **Radiation oncologists** use radiation therapy to try to cure cancer, to control cancer growth or to relieve symptoms, such as pain.

Radiation therapy works within cancer cells by damaging their ability to multiply. When these cells die, the body naturally eliminates them. Healthy tissues are also affected by radiation, but they can repair themselves in a way that cancer cells cannot.

There are two types of radiation therapy. **External beam radiation therapy** delivers treatment from a machine outside your body and **internal radiation therapy**, or **brachytherapy**, delivers treatment using radioactive sources placed into the vagina, uterus and/or surrounding tissues to kill the cancer cells.

Surgery

Surgery is the main curative treatment for many tumors of the female reproductive system. A **gynecologic oncologist** is a doctor who specializes in surgically removing gynecologic cancers. While radiation therapy is effective enough to eliminate the need for surgery in some diseases, such as many cervical cancers, surgical removal of the tumor is often still an important part of treatment.

For internal gynecologic cancers, surgery usually involves some kind of removal of the uterus and cervix, called a hysterectomy. Often the surgeon may remove lymph nodes and check for any cancer cells as well. For less common tumors like vulvar cancer, surgery is more likely not inside the pelvis but may still involve sampling lymph nodes.

Surgery and radiation can be combined to help lower the risk of recurrence, but it varies based upon the disease and stage (how much the tumor seems to have spread). In cases where radiation is the main treatment, it is often still important to keep your surgeon involved for follow-up.

Medical Therapy

While surgery and radiation focus directly on treating a particular part of the body, medication is often recommended in gynecologic cancer to improve cure rates by treating the whole body. A **medical oncologist** will evaluate you and determine what medications may be most helpful in accomplishing those goals. Sometimes gynecologic oncologists also prescribe chemotherapy. Talk with your surgeon about whether you need an appointment with a medical oncologist.

Chemotherapy has the ability to destroy cancer cells by different methods. The dose and schedule for treatment varies, but chemotherapy can be done either alone or with radiation therapy. Because the different drugs may be helpful in different situations, ask your medical oncologist what may be best for you.

EXTERNAL

RADIATION THERAPY

External beam radiation therapy involves a series of daily outpatient treatments to deliver radiation to the cancer accurately. Treatments are painless and are similar to getting an X-ray. They are usually given in a series of daily sessions, each taking less than half an hour, Monday through Friday, for five to six weeks.

Before beginning treatment, you will be scheduled for a planning session to map out the area your radiation oncologist wishes to treat. This procedure is called a **simulation**. Simulation involves having **X-rays** and/or a **CT scan**. You may also receive tiny marks on your skin, like a permanent tattoo, to help the radiation therapist precisely position you for daily treatment. Typically, radiation therapy is done with high energy X-rays, or photons, for the bulk of the treatment.

Different techniques can be used for treatment. **Three-dimensional conformal radiotherapy (3-D CRT)** combines multiple radiation treatment fields to deliver precise doses of radiation to the affected area. Tailoring each of the radiation beams to focus on

the tumor delivers a high dose of radiation to the tumor and avoids nearby healthy tissue. **Intensity modulated radiation therapy (IMRT)** is the most recent advance in the delivery of radiation.

Modifying the intensity of the radiation within each of the beams allows more precise adjustment of doses delivered to the tissues within the target area. This technique is currently being studied to determine whether it is better than 3-D CRT.

INTERNAL RADIATION THERAPY

Sometimes radiation is placed inside the body to get the source of the radiation as close to the tumor as possible. This type of radiation is called **brachytherapy**. In gynecologic cancers, this is a very important part of treatment, and it is common for this type of radiation to be used. Other names for this type of treatment besides internal radiation therapy or brachytherapy include interstitial implants and intracavitary radiotherapy. Brachytherapy can be done alone or in combination with external radiation therapy.

Usually, the radiation source is placed inside the body for short periods of time and then taken out. Your radiation oncologist will discuss with you whether brachytherapy will be used on its own or together with standard radiation therapy from outside the body to treat your type of cancer.

Low-dose-rate (LDR) brachytherapy is delivered over the course of 48 to 72 hours. You will be admitted to the hospital to receive this treatment. **High-dose-rate (HDR) brachytherapy** does not usually require you be admitted to the hospital. The entire procedure typically takes a few hours. In some simple cases, treatment can take less than an hour. Depending on your type of cancer, you may need to have several sessions of brachytherapy.





POSSIBLE SIDE EFFECTS

The side effects you may experience will depend on the area being treated and the type of radiation used. Before treatment, ask your doctor to describe what you can expect. Some patients experience minor or no side effects and can continue their normal routines.

Side effects following radiation therapy can include symptoms that happen during and/or just after completing radiation therapy (acute effects) and symptoms that develop several months to years after your cancer has been treated (late effects).

Short-term side effects for radiation delivered to the pelvic area include feeling tired, skin irritation or redness of the skin, loose bowel movements or more frequent bowel movements, the urge to urinate more often or discomfort when urinating, having a bloating sensation, nausea and decreases in the number of cells in your blood.

Long-term side effects that could happen after radiation therapy to the pelvis include changes in your bowel or bladder habits (e.x., going to the bathroom more often), narrowing of the vaginal canal, discomfort with sexual intercourse due to the vagina being drier and less flexible, and the very rare chance of a new cancer forming due to the radiation therapy. If at any time you develop side effects, tell your doctor or nurse.

Don't be embarrassed to talk to your doctor about sexual side effects. Although side effects can sometimes decrease interest in or pleasure with sexual activity, most women are able to resume sexual relations. Ask your doctor or nurse how to manage these changes as medications, vaginal dilators and moisturizers may help.

Radiation to your pelvic area may affect your ability to have children. Your doctor will have recommendations on fertility preservation options if you are interested. The group Fertile Hope (www.fertilehope.org) is also a good resource for information.

CARING FOR YOURSELF DURING TREATMENT

It is important to care for yourself as well as possible during radiation therapy because the normal parts of your body that are near the tumor are also receiving some radiation, although not as much as the cancer. These normal parts of your body need time and support to heal. A balanced diet, mild amount of physical activity and taking time to rest are all important parts of your cancer treatment. Follow your doctor's orders, and if you are unsure of anything, ask your nurse or doctor any question you may have about your treatment. Be sure to tell your radiation oncologist about any vitamins or dietary supplements that you are currently taking to make sure they are safe to take during radiation therapy.

During and even after radiation therapy is over, you will need to take special care of your skin. Stay out of the sun, avoid hot or cold packs, and do not use lotions or ointments without checking with your doctor or nurse first. You should also be sure to clean the skin over the areas receiving radiation therapy with warm water and mild soap.

Completing treatment and recovery can be challenging. Seek out help from support groups and friends ahead of time. If you have a support network in place before and during treatment, it will be easier to get through side effects since people you can count on will be around to help you. If you need additional support, let your doctor and nurse know.



LEARNING ABOUT CLINICAL TRIALS

The radiation oncology treatment team is constantly exploring new ways to treat gynecologic cancers through studies called clinical trials. Today's standard treatments are the result of clinical trials completed years ago. For more information on clinical trials, ask your doctor or visit:

National Cancer Institute

www.cancer.gov/clinicaltrials

Radiation Therapy Answers

www.rtanswers.org

Radiation Therapy Oncology Group

www.rtog.org

Clinical Trials.gov

www.clinicaltrials.gov

Gynecologic Oncology Group

www.gog.org

HELPFUL WEBSITES ON GYNECOLOGIC CANCERS

- **RT Answers**
www.rtanswers.org
- **Cancer.net**
www.cancer.net
- **National Cervical Cancer Coalition**
www.nccc-online.org
- **Women's Cancer Network**
www.wcn.org

ABOUT THE RADIATION ONCOLOGY TEAM

Radiation oncologists are the doctors who oversee the care of each person undergoing radiation treatment. Other members of the treatment team include radiation therapists, radiation oncology nurses, medical physicists, dosimetrists, social workers and nutritionists. To locate a radiation oncologist near you, visit www.rtanswers.org.

ABOUT ASTRO

The American Society for Radiation Oncology is the largest radiation oncology society in the world with more than 10,000 members who specialize in treating cancer with radiation therapies. ASTRO is dedicated to improving patient care through education, clinical practice, advancement of science and advocacy. Visit www.astro.org for more information.

